

**FLIGHT TECHNOLOGIES AND PROCEDURES DIVISION**

# ***Oceanic and Remote Continental Operations***

***Oceanic Required Navigation Performance (RNP)***

## **Application Guide**

*Version 2.24*

*Guide to Assist Part 91 Operators with:*

***B036, B039, and B054***



## FLIGHT TECHNOLOGIES AND PROCEDURES DIVISION



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## Document Changes

Version	Date	Description of Change
7.23	7/23/2023	<i>Initial Operating Capability (IOC)</i>
9.23	9/7/2023	Added statement to cover to open guide with Adobe software for proper functionality
2.24	2/13/2024	Added WY to state drop-down field

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## Section 1: Introduction

This application guide is for Part 91 operators applying for the following Letters of Authorization (LOA):

- B036, Oceanic and Remote Continental Navigation using Multiple Long-Range Navigation Systems (LRNS);

- B039, Operations in North Atlantic High Level Airspace (NAT HLA); and

- B054, Oceanic RNP 10 Operations Using a Single Long-Range Navigation System (LRNS)

This guide was developed by the Federal Aviation Administration (FAA) [Flight Technologies and Procedures Division](#) (AFS-400) to provide operators with an organized method for submitting required content as part of an application package for Oceanic and Remote Continental Operations/Oceanic Required Navigation Performance (RNP) authorization(s), as applicable. This guide is optional. However, we recommend its use because when the applicant has filled it out correctly and has included sufficient supporting documentation it will help expedite the application process. Note that we provide an “Application Checklist” at [A.3](#).

For new applications, operators should schedule a pre-application or “kickoff” meeting/teleconference with your Flight Standards (FS) Office. Your Principal Inspector (PI) will provide the appropriate guidance (FAA Inspector reference is [Order 8900.1 Vol 4, Chapt 12, Sec. 1](#), par. 4-1297).



***We encourage you to contact your PI for a “kick-off” meeting prior to submitting an application to help you through the process and answer any questions.***





## 1.1 Applicability

This guide may be used by operators conducting aircraft operations under 14 CFR Part 91.

## 1.2 Terms and Symbols

**Current AC:** The current AC is indicated by “( )” in place of the version letter. For example AC 90-105A will be shown in this guide as AC 90-105( ).

**Identically Equipped:** “Identically equipped” means that an aircraft are identical in every way including MMS, avionics, software, flight deck configuration, and performance as the initial authorization. Minor differences may be accepted as “identically equipped” on a case by case basis by the PI.

**Long-Range Navigation System (LRNS):** By definition, an LRNS includes an electronic navigation unit that computes for the pilots steering commands to fly the intended route of flight. In many transport aircraft, the electronic navigation unit is the flight management computer (FMC), the term used throughout in this document. An LRNS also needs a navigation sensor such as an Inertial Reference System (IRS) and/or a Global Navigation Satellite System (GNSS). Your airplane flight manual may refer to the electronic navigation unit by a different term.

**Operator:** An “operator” refers to an operator, certificate holder, program manager, and operator/company.

**Principal Inspector (PI):** This document uses the term “Principal Inspector (PI)” which may be a Principal Operations Inspector (POI), Principal Avionics Inspector (PAI) or Principal Maintenance Inspector (PMI).

## 1.3 Aircraft/Fleet

This application guide is for submitting a single-make, model and series (MMS) of an aircraft. If an operator who already holds a B036 or B054 authorization submits an application to add identically equipped MMS aircraft to that authorization, then no additional PI review and authorization is necessary (see paragraph 1.4). For clarifications on what constitutes identically equipped MMS aircraft, consult with your PI and/or specialists in the Flight Technologies and Procedures Division (AFS-400). Use separate application(s) for different MMS aircraft or for those **not** identically equipped.

## 1.4 Upgrades in Aircraft or Equipage or adding to Aircraft Fleet

For those operators with an existing B036 or B054 authorizations, this guide may be used to update FMS and/or avionic components and/or RNP capability. This application guide may also be used to add additional aircraft to your current authorization. See the selection of these options in [Section 2](#).

## 1.5 B036, Oceanic and Remote Continental Navigation using Multiple LRNS

The part 91 B036 authorizes Required Navigation Performance (RNP) 2, RNP 4 or RNP 10 navigation specifications. An operator receives a B036 based on their aircraft’s RNP capability and after demonstrating their overall competence for oceanic RNP operations. RNP 4 and RNP 10 are strictly oceanic and remote continental navigation specifications. RNP 2 has both a “domestic” (continental) authorization and an oceanic/remote continental authorization.





B036 authorizes IFR en route operations in oceanic and remote continental airspace on a worldwide basis. To operate in North Atlantic (NAT) High Level Airspace (HLA), it will be necessary to also apply for a B039, Operations in NAT HLA.

As part of the bundling concept described in [AC 90-105\(\)](#), B036 includes advanced RNP (A-RNP) which is defined in the United States as having the operational and functional capability of performing scalability, radius to fix (RF), and parallel offset. However, ICAO does not require specific approval for A-RNP capabilities in oceanic areas (high seas).

## 1.6 B039, Operations in North Atlantic (NAT) High Level Airspace (HLA)

A B039 LOA authorizes aircraft operations within the airspace designated by the International Civil Aviation Organization (ICAO) as North Atlantic (NAT) High Level Airspace (HLA). This area extends across the Atlantic between flight level (FL) 285 and FL 420 within oceanic control areas of Bodo Oceanic, Gander Oceanic, New York Oceanic East, Reykjavik, Santa Maria, and Shanwick, excluding the Shannon and Brest Ocean Transition Areas. RNP 10 is the minimum navigation performance required but operators are encouraged to pursue RNP 4 authorization to be eligible for more favorable routing and altitudes. Operators will have to provide documentation of their procedures and training for NAT HLA airspace. **A B036 or a B054 authorization is a prerequisite for a B039.** For this authorization, fill out the form in [Section 2](#) and attach documentation requested in Section 4, [4.5](#) and Section 5, 5.2, [TNG-2](#).

## 1.7 B054, Oceanic RNP 10 Operations Using a Single LRNS

The part 91 B054 authorizes oceanic RNP 10 in airplanes using only a single LRNS. B036 holders (flying airplanes with multiple LRNS) could obtain a B054 to enable minimum equipment list (MEL) relief to operate with only a single LRNS.

## 1.8 Streamlined Part 91 Operational Approval Process

The [Streamlined Part 91 Operational Approval Process](#) allows Part 91 operators to request up to 10 LOAs using capability documentation from aircraft manufacturers and compliance documentation from training and procedures providers. This streamlined process is for eligible Part 91 operators **who have taken delivery of newly assembled aircraft directly from the manufacturer.** Part 91 operators using this streamlined process **should continue that process** to completion and **not** use this application guide for B036, B054, and/or B039. As part of the streamlined process there are three primary documents:

1. Aircraft Statement of Capability (ASOC),
2. Procedural Statement of Compliance (PSOC), and
3. Training Statement of Compliance (TSOC)

This application guide allows use of two of those documents, the PSOC and the TSOC. The PSOC may be included instead of some the requested attachments in [Section 4](#) and the TSOC helps with evaluation of documents provided in TNG-2 in [Section 5](#). As long as the PSOC and/or TSOC are available for the aircraft in use, these documents may be used for this application guide regardless of whether the operator is the original owner of a newly delivered aircraft.



## 1.9 Guidance Documents

Refer to the following suggested guidance for oceanic and remote continental operations:

- [AC 91-70\(\)](#), *[Oceanic and Remote Continental Airspace Operations](#)*. This document provides detailed guidance for operators planning flights in oceanic and remote continental airspace. As is true for all ACs, [AC 91-70](#) is not mandatory but does contain internationally accepted best practices. You may choose something other than [AC 91-70](#) as a source of guidance, but your inspector will expect your procedures and training to cover the subject matter of this AC.
- [AC 90-105\(\)](#), *[Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace](#)*. This AC is the primary source of guidance on aircraft qualification, operating procedures and pilot training/knowledge on RNP operations. It provides the aircraft eligibility requirements for RNP 2, 4 and 10. The level of detail on aircraft requirements provided in [AC 90-105](#) is primarily for aircraft manufacturers but you may be required to provide Original Equipment Manufacturer (OEM) statements from your Airplane Flight Manual (AFM) and other documents to verify aircraft eligibility.
- [AC 20-138\(\)](#), *[Airworthiness Approval of Positioning and Navigation Systems](#)*. As indicated by the title, this is primarily manufacturer guidance for airworthiness of position and navigation systems.
- [AC 20-150\(\)](#), *[Airworthiness Approval of Satellite Voice \(SATVOICE\) Equipment Supporting Air Traffic Service \(ATS\) Communication](#)*. This advisory circular (AC) provides guidance on airworthiness approval for designers, manufacturers, and installers of Satellite Voice (SATVOICE) equipment supporting air traffic service (ATS).

## 1.10 Instructions

1. **Fill-in-the-Blank.** Use the fill-in-the-blank portion of this guide, [Section 2](#), and include a letter or email of request explaining your intentions.
2. **Adding Aircraft.** If adding aircraft to an existing authorization(s) that are not the same make/model/series, or identically equipped, then fill out a separate application for each aircraft or fleet and include [Section 3](#). See [paragraph 1.4](#).
3. **Attachments.** With each attachment, include the corresponding reference number (e.g. SOC-1) next to each excerpt in a .pdf format and include the document title, page number and paragraph number. If an item is not applicable, provide a brief explanation as to why it does not apply.
4. **Final Application Package Preparation.** See [Appendix A](#) for instructions on using Adobe Acrobat to attach files and the naming convention for submitting this application guide with attachments. This appendix includes a checklist to aid you in making sure your application is complete.





## Section 2: Application Form

### 2.1 Application Type

Date:

Letter or Email of Request is Attached

Select one of the following application types below:

**Initial LOA** (i.e. B036, B039 and/or B054)

*Use the yellow box below to select the specific or combination of authorizations.*

**Upgrading FMS /Avionics/RNP.** Select existing LOA

*Applying for RNP*

*(For avionics or RNP upgrades complete [Section 3](#))*

**Adding a Different MMS or not Identically Equipped Aircraft to:**

**Note:** If adding an identically equipped aircraft, no application guide is needed. STOP! NO APPLICATION REQUIRED. Just inform your PI of the additional aircraft. “Identically equipped” means that an aircraft are identical in every way including MMS, avionics, software, flight deck configuration, and performance as the initial authorization. Minor differences may be accepted as “identically equipped” on a case by case basis by the PI.

**Select the option(s) that apply:**

Two or more LRNS	Single LRNS
B036 or B036 and B054 ( <i>B054 is for MEL contingencies</i> )	B054
If applicable, add: B039	



## 2.2 Contact Information

Company/Operator Name:

FAA Location Designation:

Operator 4-Character Designator:

Address:

Suite:

Country:

City:

State:

/ Province:

Zip Code:

*Responsible person for oceanic and remote continental operations*

Contact Name:

Contact Phone:

Contact Email:

### **FAA POI:**

Principal Inspector (PI) First Name:

Principal Inspector (PI) Last Name:

PI Email Address:

PI Phone:



## 2.3 Description of Operation

Briefly describe your operation as it relates to oceanic and remote continental airspace. Include any other possible Letter of Authorizations that you intend to obtain.

## 2.4 Aircraft/Fleet and Navigation Equipage

B036 requires a minimum of two LRNS. It is important to emphasize here that a single FMC receiving navigational inputs from two or more independent sources (e.g. GPS, inertial system) is considered only a single LRNS. For oceanic RNP 2, you must have at least two LRNS with each system receiving a GNSS source. For RNP 4, at least one of the two LRNS must have a GNSS source. For RNP 10, both LRNS may have any combination of GNSS and inertial sources. Though not a part of the B036 or B054 authorization, the aircraft's communication systems must be adequate for over-water operations.

### Aircraft Registration and Serial Number(s)

Make:

Model:

Series:







## 2.5 Avionics

**Table 2-1: Communication/Navigation/Surveillance (CNS) Equipment Information**

Relevant regulations are Part 91, §§[91.511](#) and [91.703](#). Your aircraft must have voice two-way radio communication that is adequate for maintaining a continuous air-to-ground voice communication watch on the appropriate communication channel in order to comply with [ICAO Annex 2](#), paragraph 3.6.5.

Number Installed	Type	Manufacturer(s)	Model(s)	Additional Notes/Limitations	ATC Flight Plan Field 10A/B	ATC Flight Plan Field 18
	FMS					
	GNSS					
	IRS					
	HF					
	SATVOICE					
	TCAS					
	FANS					

**Notes:**

1. Reference [Appendix 4](#) of the US Aeronautical Information Manual or [FAA Flight Planning Information](#)
2. Approved SATVOICE must be installed in accordance with [AC 20-150\(\)](#)
3. For the IRS row, include RNP time limit in the “Additional Notes/Limitations” column.



## 2.6 Sample Table 1

Table 2-2 is a representation of Table 1 in the actual B036 LOA authorization. Table 1 lists the major components of an LRNS, which are considered to be the flight management computer (FMC) and the navigation sensor(s) (Global Navigation Satellite System (GNSS) and/or inertial navigation system (INS)). B036 uses “bundling” which is a hierarchy of navigation capabilities starting with the most stringent and combining it with lesser capabilities. For example, if your aircraft is capable of A-RNP and RNP 4 then you would also be authorized for A-RNP, RNP 4 and RNP 10. RNP 2 can also be authorized, though it is not currently in use for oceanic operations.

- For applications for both the B036 and the B054, provide two corresponding tables. Include the quantity of the components in parentheses immediately prior to the manufacturer name (e.g., “(2) Honeywell”).
- For a B054 application, use the table below and select RNP 10 for the navigation specification.
- For the Manufacturer and Model/ HW Part #, column, provide the model name or hardware part number of the LRNS. Make entries for each of the major components of the LRNS, and include the quantity in parentheses immediately prior to the manufacturer name (e.g., “(2) Honeywell”).
- Hardware part number is optional. Inspectors can list a model name instead of a part number, for the hardware components in Table 1. Continued use of a part number is also acceptable.

**Table 2-2: Sample Authorization Table – Authorized Airplane(s), Equipment**

Airplane M/M/S	Long-Range Navigation Systems (LRNS)			Navigation Specification(s)	Additional Capabilities	Limitations	RNP Time Limits
	Manufacturer	Model/HW Part #	Software Part/ Ver #				

A P P L I C A T I O N F O R M



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## Section 3: Aircraft Eligibility Attachments

For each attachment, identify the necessary page(s)/paragraph(s) to establish compliance. It is not necessary to attach an entire document if the excerpted pages adequately can establish compliance. Include the corresponding reference numbers with each attachment in a separate PDF document. Specific airworthiness guidance is provided in [AC 20-138\(\)](#).

An Aircraft Statement of Capability (ASOC) used in the [Streamlined Part 91 Operational Approval Process](#) is not applicable for authorizations using this application guide. The streamlined process was discussed in [paragraph 1.8](#) and is only available for authorizations with new aircraft.

### 3.1 Statement of Compliance (SOC)

Check Box	Reference Number	SOC Attachments
	SOC-1	<p>Attach a page/paragraph showing a SOC , for your specific aircraft, indicating the RNP value, with installation in accordance with Advisory Circular (<a href="#">AC 20-138()</a>), Airworthiness Approval of Positioning and Navigation Systems. The SOC may be in your Airplane Flight Manual (AFM), Airplane Flight Manual Supplement (AFMS), pilot's operating handbook (POH), avionics operating manual or manufacturer's service letter. This SOC may be provided from the manufacturer, the entity that owns the design approval for the installed navigation systems or an alternative authority approved by the FAA.</p> <p><i>Source: <a href="#">AC 90-105()</a>, Appendices: E,F, and G, paragraphs: E.2.1, F.2.1, G.2.1</i></p>





### 3.2 Equipage:

Check Box	Reference Number	Equipage Attachments
	EQP-1	<p><b>RNP 2:</b></p> <p>If you are applying for <b>Oceanic RNP 2</b>, then provide documentation that your aircraft has at least two independent LRNS with at least two independent GNSS navigation sensors. These systems must be installed in accordance with <a href="#">AC 20-138()</a>.</p> <p><b>Note:</b> Qualifying documentation showing equipment installation should be identified with tail/serial number and be submitted via maintenance log, equipment list, CAMP report or similar reference.</p> <p><i>Source: <a href="#">AC 90-105()</a>, paragraph E.3</i></p>
	EQP-2	<p><b>RNP 4:</b></p> <p>If you are applying for RNP 4, then provide documentation that your aircraft has at least two independent LRNS. Global Navigation Satellite System (GNSS) must be used as either a stand-alone navigation system, as one of the sensors in a multi-sensor system, or as part of an integrated GNSS/inertial system. These systems must be installed in accordance with <a href="#">AC 20-138()</a>.</p> <p><b>Note 1:</b> Qualifying documentation showing equipment installation should be identified with tail/serial number and be submitted via maintenance log, equipment list, CAMP report or similar reference.</p> <p><i>Source: <a href="#">AC 90-105()</a>, paragraph F.2</i></p>
	EQP-3	<p><b>RNP 10:</b></p> <p><b>B036</b></p> <p>Provide documentation that your aircraft has at least two independent LRNS receiving inputs from GNSS or inertial navigation sources.</p> <p><i>Source: <a href="#">AC 90-105()</a>, paragraph G.2-G.7</i></p> <p><b>B054</b></p> <p>Provide documentation that your aircraft has one LRNS receiving inputs from GNSS or inertial navigation sources.</p> <p><b>Note 1:</b> All navigation systems must be installed in accordance with <a href="#">AC 20-138()</a>.</p> <p><b>Note 2:</b> Qualifying documentation showing equipment installation should be identified with tail/serial number and be submitted via maintenance log, equipment list, CAMP report or similar reference.</p>





Check Box	Reference Number	Equipment Attachments
	EQP-4	<p>As defined by <a href="#">AC 90-105()</a>, advanced RNP (A-RNP) is the operational and functional capability of performing:</p> <ol style="list-style-type: none"> <li>1. Scalability,</li> <li>2. Radius to Fix (RF), and</li> <li>3. Parallel offset.</li> </ol> <p>If your AFM or other OEM documentation includes all of these capabilities, provide the excerpt(s) from those documents. If your aircraft is not capable of all from the above list, then enter N/A for this attachment reference number.</p> <p><b>Note:</b> ICAO does not require specific approval for A-RNP for oceanic (high seas) areas.</p> <p><i>Source: <a href="#">AC 90-105()</a>, Appendix H, paragraph H.3</i></p>
	EQP-5	<p>Provide documentation if your aircraft has any of the following additional capabilities:</p> <ul style="list-style-type: none"> <li>• Fixed Radius Transition (FRT) and/or</li> <li>• Time of Arrival Control (TOAC)</li> </ul> <p><b>Note:</b> These capabilities are not currently used in United States domestic airspace but may be utilized internationally.</p> <p><i>Source: <a href="#">AC 90-105()</a>, Appendix H, paragraph H.3</i></p>
	EQP-6	<p>Provide documentation that if a SATVOICE system is to be used as MEL relief for an inoperative HF radio, that it is installed in accordance with <a href="#">AC 20-150B</a> (or subsequent edition) and include appropriate Field 10A code (M1/M3; see FLP-1). MEL relief is only available for approved systems.</p> <p><b>Note:</b> Aircell systems, and systems with only a handset are not compliant with <a href="#">AC 20-150B</a> or later and do not qualify as SATVOICE.</p>
	EQP-7	<p>Provide installation documentation that your aircraft is equipped with TCAS II, V7.1.</p> <p><b>Note:</b> Requirement is for flights operating in European Union (EU) and in North Atlantic (NAT).</p> <p><i>Sources: Commission Regulation <a href="#">No 1332/2011</a>, 'ACAS II Regulation and ICAO Regional Supplementary Procedures (Doc 7030), NAT para 5.3.1.</i></p>





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## Section 4: Operational Attachments

If you have an International Operations Manual (IOM) please attach it with your application package, in accordance with item IOM-1 below. Please **highlight** the page(s)/paragraph(s) to address each of the items OPS-1 through OPS-9 below, and if able, hyperlink the reference number to the appropriate section using the Adobe Acrobat attachment feature. Please also enter the page/paragraph number(s) from your IOM (or other supporting document/excerpt) in the provided text fields in each of blocks OPS-1 through OPS-9.

### Attaching a Procedural Statement of Compliance (PSOC).

If you have a PSOC from your procedures manual provider, attach it under PSOC-1. A PSOC can be used in lieu of all the attachments of this section with the exception of providing a sample flight plan described in [FLP-1](#). For more information click on the [Streamlined Part 91 Operational Approval Process](#).



### 4.1 Procedural Statement of Compliance (PSOC)

Check Box	Reference Number	PSOC Attachment
	PSOC-1	<p>If available, attach a PSOC and the cover sheet from the IOM that cross references the approved PSOC version.</p> <p>If there is no PSOC, then continue with the attachment requests below and include each corresponding reference number with each attachment. See <a href="#">paragraph 1.8</a></p>





## 4.2 International Operations Manual (IOM)

Check Box	Reference Number	IOM Attachment
	IOM-1	If available, attach the complete International Operations Manual (IOM) so references/ excerpts can be evaluated in context. If there is no IOM, then do not attach anything here, and instead provide appropriate attachments of the relevant documents/excerpts for the OPS items below.

## 4.3 Operational Procedures

Check Box	Reference Number	Operational Attachments
	OPS-1	<p>Provide IOM/procedural references of RNP system procedures and how those procedures are controlled. Include references for flight manual checklist(s) for LRNS operation, and for RNP alerting associated with degraded navigation capabilities.</p> <p><i>Source: <a href="#">AC 90-105()</a>, Chapter 7, paragraph 7.5.1., Item 2 and 3</i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>
	OPS-2	<p>If your aircraft is equipped with Global Navigation Satellite System (GNSS) only systems, provide IOM/procedural references of an approved GNSS availability prediction program ensuring the requisite availability of the GNSS Fault Detection and Exclusion (FDE) function.</p> <p><i>Source: <a href="#">AC 90-105()</a>, Appendices: E, F, and G, paragraphs E.8.2.1, F.4.3.1 and G.7.1</i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>





Check Box	Reference Number	Operational Attachments
	OPS-3	<p>Provide IOM/procedural references of pilot procedures for the manual entry of waypoints (i.e., latitude and longitude) for <u>flexible route structures</u> if applicable to your operation. Include references of how such manually entered points are displayed on the navigation display and in the FMS (i.e., how they are labeled/named).</p> <p><i>Source: <a href="#">AC 90-105()</a>, Appendices: E, F, and G, paragraphs: E.9.5, F.8.3, and G.11.3.1</i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>
	OPS-4	<p>Provide IOM/procedural references of LRNS preflight procedures and pilot procedures to confirm the correct route is loaded.</p> <p><i>Source: <a href="#">AC 90-105()</a>, Appendix F and G, paragraph: F.8.3.1 and G.11.3.2; <a href="#">AC 91-70()</a>, Chapter 6, paragraph 6.3, Chapter 7, paragraph 7.4.2</i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>
	OPS-5	<p>Provide IOM/procedural references of operational procedures for performing Strategic Lateral Offset Procedures (SLOP).</p> <p><i>Source: <a href="#">AC 90-105()</a>, Appendices: E, and F: paragraph E.9.5.8 and F.8.3.8; <a href="#">AC 91-70()</a>, paragraph 6.4.3.4.2, <a href="#">US-AIP</a> and <a href="#">FAA International Notices</a></i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>
	OPS-6	<p>For multi-sensor systems, provide IOM/procedural references of pilot procedures to verify the correct sensor is being used for position computation.</p> <p><i>Source: <a href="#">AC 90-105()</a>, Appendices: E, F, and G, paragraphs: E.9.6, F.8.3.11, and G.11.3.10</i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>





Check Box	Reference Number	Operational Attachments
	OPS-7	<p>Provide IOM/procedural references of pilot cross-checking procedures to identify navigation errors in sufficient time to prevent an inadvertent deviation from ATC-cleared routes. Your procedures should include cross-checking aircraft position at a point approximately 10 minutes after oceanic waypoint passage using one of the following methods:</p> <ul style="list-style-type: none"> <li>• Plotting or e-plot on a chart or</li> <li>• Use of aircraft FMS-driven navigation displays and indications</li> </ul> <p><i>Source: <a href="#">AC 90-105()</a>, Appendices E and F, paragraphs: E.9.5.6 and F.8.3.5; <a href="#">AC 91.70()</a>, Chapter 6, paragraph 6.4.8.2 ; guidance for use of Electronic Flight Bag (EFB) plotting applications is in note under paragraph 6.3.1.11.2.</i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>
	OPS-8	<p>Provide your checklist used for oceanic operations.</p> <p><i>Source: <a href="#">AC 91-70()</a>, Appendix D</i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>
	OPS-9	<p>Provide IOM/procedural references of emergency and contingency procedures. These procedures may be due to:</p> <ul style="list-style-type: none"> <li>• Inability to comply with assigned clearance due to meteorological conditions, aircraft performance, or pressurization failure.</li> <li>• En route diversion across the prevailing traffic flow.</li> <li>• Loss of, or significant reduction in, the required navigation capability when operating in airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations.</li> </ul> <p>Include references of contingency procedures for performing turn backs, diversions, and weather deviations.</p> <p><i>Source: <a href="#">AC 91-70()</a>, Appendix F, <a href="#">US-AIP</a> and <a href="#">FAA International Notices</a></i></p> <p><i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i></p>



## 4.4 MEL

If using an FAA MMEL (i.e., you have a D095 LOA), check the MEL-1 box. If you are not using an FAA MMEL, complete MEL-2.

Check Box	Reference Number	MEL Attachment
	MEL-1	Check the box here if you have an LOA D095 (meaning you are using an FAA approved MMEL). No attachments are required in this case.
	MEL-2	If you do not have an LOA D095, provide Long-Range Communication System (LRCS) and LRNS MEL documentation from sections 23 and 34, including M & O procedures. Operators can use CPDLC compliant with RCP 240 as relief for one inoperative HF radio, as long as one HF radio remains operative, However in accordance with 14 CFR §91.511, part 91 subpart F operators need only one HF radio for overwater operations, as long as they have 2 VHF radios. <i>Source: Part 91, §91.213, AC 90-105(), Chapter 8, paragraph 8.3; Appendix E, paragraph E.8.2; Appendix F, paragraph F.7.2.</i>

## 4.5 B039, NAT HLA

If you are applying for LOA B039, then include your operational procedures that relate to operating within NAT HLA airspace.

**Note:** Operators must have been issued or are in the process of applying for a LOA B036 or LOA B054 in order to be considered for B039. This application guide can be used to apply for both authorizations.

Check Box	Reference Number	NAT HLA Attachment
	HLA-1	If PSOC-1 was provided above, attach the cover sheet from the IOM that cross-references the approved PSOC version and that confirms inclusion of NAT procedures. Otherwise, provide operating procedures that are specific to operating in the NAT HLA airspace. Leave unchecked if this attachment does not apply. <i>Sources: U.S. AIP, ENR 7, NAT Doc 007, NAT Ops Bulletins, ICAO Doc 7030, Regional Supplementary Procedures</i> <i>Applicant notes/references. Please provide the name of the supporting document as well as page(s)/paragraph(s) references, e.g., "IOM, paragraphs 3.5 and 3.6."</i>



## 4.6 Flight Plans

Check Box	Reference Number	Flight Plan Attachment
	FLP-1	<p>Provide below-listed documents pertaining to a representative oceanic crossing through the requested airspace (e.g., if requesting B039, route of flight should be through NAT HLA, between FL 285 and FL 420) Include the following:</p> <ul style="list-style-type: none"> <li>→ A sample Master Document OFP/crew flight plan/computer flight plan.</li> <li>→ A sample ATC flight plan (FAA Form 7233-4) with codes entered in Fields 10 and 18 supported by installed and authorized equipment (EQP section) (e.g., A056 authorization required for Item 10a Code P2 (RCP 240) and C384 authorization required for Item 18 Code T1 or T2 (RNP AR approach with and without RF, respectively)).</li> <li>→ Equal Time Point (ETP) analysis for the oceanic flight plan.</li> <li>→ Fuel planning in accordance with ICAO <a href="#">Annex 6, Part II</a> as applicable.</li> <li>→ Additionally, provide the following, as applicable: <ul style="list-style-type: none"> <li>• Sample Track Message, normally provided with Operational Flight Plan (OFP), and</li> <li>• Sample graphic depiction of tracks and Equal Time Points (ETPs) normally provided with OFP - Sample applicable NOTAMs, GPS NOTAMS and RAIM prediction.</li> </ul> </li> </ul> <p>Below are resources to aid in your flight planning:</p> <ul style="list-style-type: none"> <li>→ <a href="#">AC 91-70</a>( ) (addresses Master Document)</li> <li>→ FAA <a href="#">Form 7233-4</a></li> <li>→ <a href="#">FAA Flight Planning Information</a></li> </ul>





## Section 5: Training Attachments

This section is to provide documentation from your training program that addresses the operational practices in oceanic and remote continental operations. For each attachment, provide the relevant page(s)/ paragraph(s) reference to establish compliance. It is not necessary to attach an entire document if the excerpted pages can adequately establish compliance. Please **highlight** the requested documentation and if able, hyperlink the reference number to the appropriate section using the Adobe Acrobat attachment feature.

If you have a TSOC available for your aircraft, attach it under TSOC-1. A TSOC helps with evaluation of documents provided in TNG-2. Note that for this application, the TSOC that includes “B036” in parenthesis following the title is the relevant one. Title of that TSOC is: “TRAINING STATEMENT OF COMPLIANCE (For LOA B036, B039, B046, and B054)”.

### 5.1 Training Statement of Compliance (TSOC) Attachment

Check Box	Reference Number	TSOC Attachment
	TSOC-1	If available, attach a TSOC with “B036” in parenthesis following the title as the TSOC-1 attachment. A TSOC helps with evaluation of documents provided in TNG-2. See <a href="#">paragraph 1.8</a>

### 5.2 Training Attachments

Check Box	Reference Number	Training Attachments
	TNG-1	Provide a record of completed training for the minimum approved flight crew that includes oceanic and remote continental operations and the use of long-range navigation equipment and procedures. <b>Note:</b> Operators who hire contract pilots must provide your process of verifying acceptable training for oceanic and remote continental operations and the use of long-range navigation equipment and procedures in accordance with LOA B036 or LOA B054 as appropriate.
	TNG-2	This attachment is only for those operators applying for B039. Provide documentation of training pilots for operations specific to the NAT HLA. The operator’s training and pilot procedures must address responses to a partial or complete loss of long-range navigation capability, and include NAT regional procedures on oceanic clearances and communication failure.



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## Section 6: Additional Attachments/Information

### 6.1 Additional PI Requested Documentation

This section is included for any additional information that may be requested by your PI. For each attachment, provide the necessary page(s)/paragraph(s) to establish compliance. It is not necessary to attach an entire document if the excerpted pages can adequately establish compliance. Include the corresponding reference number with the attachment.

Check Box	Reference Number	Additional PI Requested Documentation
	POI-1	If requested, attach additional documentation requested by your PI.

### 6.2 Document Review

Check each document below to indicate you are knowledgeable with each.

Check Box	Document List
	<a href="#">AC 90-105()</a> , Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace
	<a href="#">AC 20-138()</a> , Airworthiness Approval of Positioning and Navigation Systems.
	<a href="#">AC 91-70()</a> , Oceanic and Remote Continental Airspace Operations
	U.S. Aeronautical Information Publication (AIP), <a href="#">Part 2, ENR 7, Oceanic Operations</a> .
	Other States' Aeronautical Information Publications (AIP). <a href="#">Eurocontrol link</a> to other AIPs
	Performance-based Communication and Surveillance (PBCS) Manual ( <a href="#">Doc 9869</a> ), ICAO.
	State Notices to Air Missions (NOTAM). ( <a href="#">U.S. Link</a> )
	<a href="#">FAA chart supplements</a> , Oceanic Errors Safety Bulletin (OESB) ( <a href="#">NAT OPS Bulletins</a> ).




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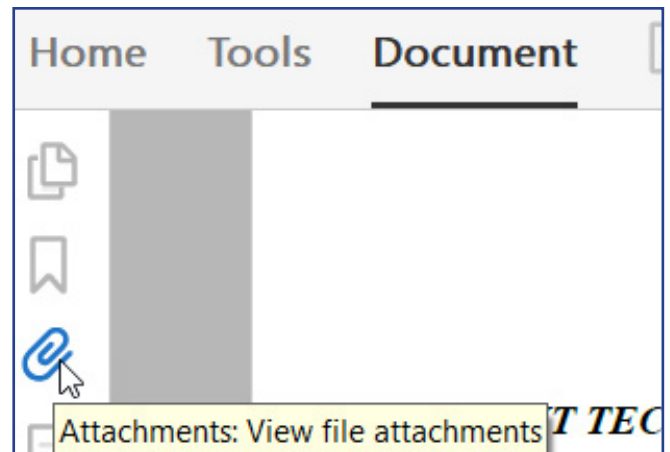



## Appendix A | Final Application Preparations

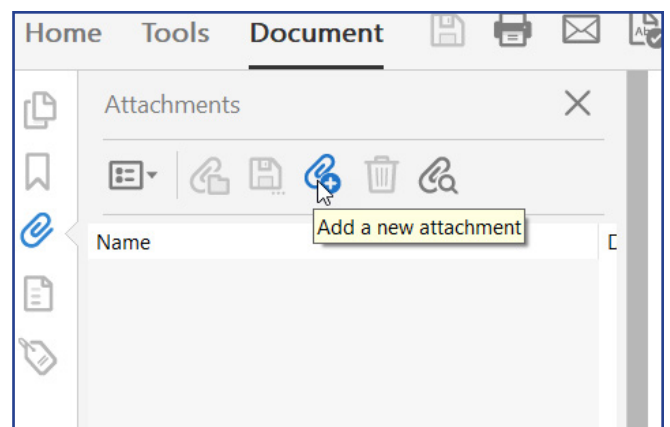
### A.1 How to Attach Documents using Adobe Acrobat

Attach files to this PDF using the Acrobat attachment feature. Send your application with all the attachments in one file. Use the naming convention described in paragraph [A.2](#) for your file name. This method will result in ONE PDF WITH ATTACHMENTS and is highly recommended. If do not have Acrobat, then use the naming convention in paragraph [A.2](#) and provide the attachments as separate documents. Attach document with Acrobat as follows:

1. Click the Paper Clip icon  in the left margin of this application guide:















2. To Add Files click the  and browse for the file attachments on your computer.











3. Click on the files to attach to your application.















Name	Date modified	Type	Size
 DAT-1	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 DCT-1	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 EQP-1	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 EQP-2	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 EQP-3	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 EQP-4	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 OPS-1	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 OPS-2	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 OPS-3	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 OPS-4	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 PRF-1	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB
 TMP-1	4/5/2021 3:22 PM	Adobe Acrobat D...	15,378 KB

4. Make sure you have added all the necessary files including any addendum attachments needed for the LOAs which are to be included in your application.

Attachments

Name

 DAT-1.pdf  
 DCT-1.pdf  
 EQP-1.pdf  
 EQP-2.pdf  
 EQP-3.pdf  
 EQP-4.pdf  
 OPS-1.pdf  
 OPS-2.pdf  
 OPS-3.pdf  
 OPS-4.pdf  
 PRF-1.pdf  
 TMP-1.pdf  
 VRT-1.pdf  
 VRT-2.pdf



## A.2 Naming Convention

Use the following file naming convention when submitting this document for B036, B039, and B054 applications and for the folder if using the Acrobat option to attach documents. The following examples are for a B036 application and attachments:

**B036\_Application\_Company/Name\_Date(XX\_XX\_XXXX)\_Version\_Number\_(VX)**

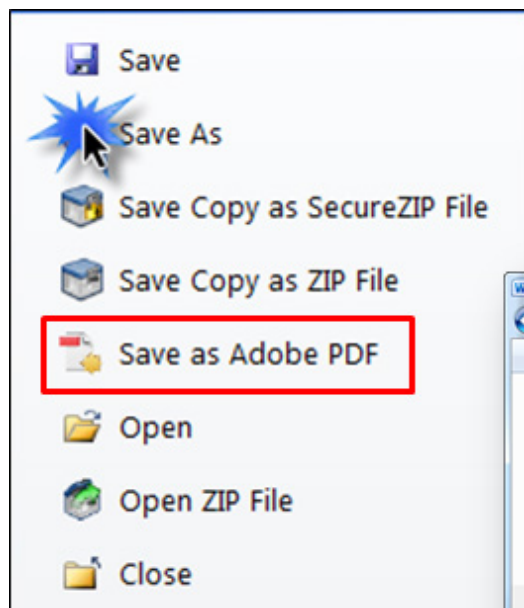
**Example: B036\_Application\_ABCAirlines\_02\_29\_2016\_V2**

Use the following file naming convention when submitting your attachments.

**B036\_Attachments\_Company/Name\_Date(XX\_XX\_XXXX)\_Version\_Number\_(VX)**

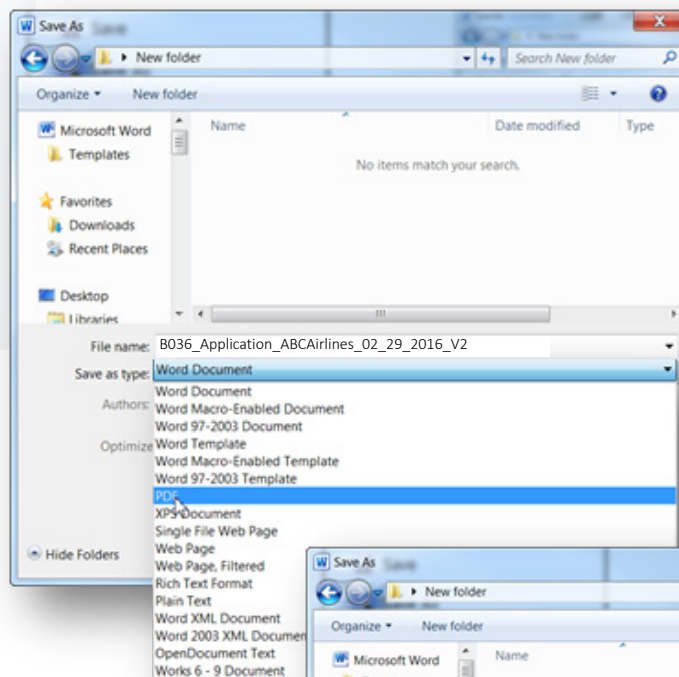
**Example: B036\_Attachments\_ABCAirlines\_02\_29\_2016\_V2**

**Note:** Version numbers are used in order for the PI to distinguish between a re-submittal of an application and the original which should be labeled beginning with V1.



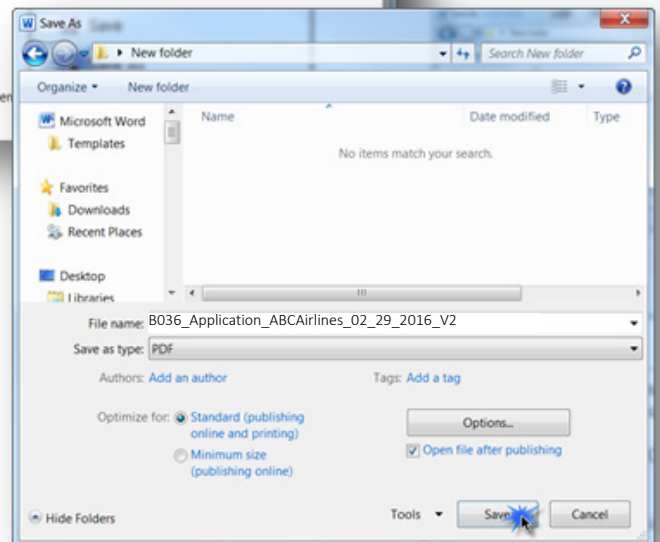
### Step 1:

In MS Word, select “Save As” under File Menu or select “Save as Adobe PDF” and skip Step 2



### Step 2:

Select “PDF” under “Save as type”



### Step 3: Saving file with naming convention.

Use the following naming convention with underlines “\_” as shown:

**B036\_Application\_Your\_Company/Name\_Date\_Version**

**Example:**

**B036\_Application\_ABCAirlines\_02\_29\_2016\_V2**





## A.3 Application Checklists

**B036 or B054 Checklist** *(Also, for adding a different MMS aircraft or not identically equipped to existing B036)*

### Checklist

Ensure all the applicable items have been completed.

Attach your letter or email of request along with all the documents below for your PI.

[Section 2](#), Application Form,

[Section 3](#), Aircraft Eligibility Attachments,

[Section 4](#), Operational Attachments,

[Section 5](#), Training Attachments, and

[Section 6](#), Additional Attachments/Information

Attached files to this application guide and use the naming convention described in this appendix.

### B039 Checklist

[Section 2](#), Application Form,

[Section 4](#), Operational Attachment, [4.3](#)

[Section 5](#), Training Attachment, 5.2, [TNG-2](#)





## Appendix B: Definitions and Acronyms

### B.1 Definitions

#### A

**Area Navigation (RNAV).** A method of navigation (formerly known as “Random Navigation”) which permits aircraft operation on any desired flightpath within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

**Area Navigation (RNAV) System.** A navigation system which permits aircraft operation on any desired flightpath within the coverage of ground or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these. A RNAV system may be included as part of a flight management system (FMS).

**Aircraft Statement of Capability (ASOC).** The ASOC provides evidence of aircraft capabilities. An applicant obtains an ASOC from the aircraft manufacturer.

**Air Traffic Control (ATC) Service:**

1. Area Control Service,
2. Approach Control Service, and
3. Airport Control Service.

#### D

**Distance Measuring Equipment (DME) DME/DME (D/D) RNAV.** Refers to navigation using DME ranging from at least two DME facilities to determine position.

**DME/DME/Inertial (D/D/I) RNAV.** Refers to use of DME/DME positioning augmented by integration with an aircraft’s inertial navigation system(s) to support RNAV or RNP operations. D/D/I can provide more flexibility and continuity than D/D positioning supporting continuous RNAV operations where gaps in DME facility availability exist or when GPS is lost (for any reason). Aircraft with advanced multi-sensor RNP capability often include a higher level of D/D/I capability through use of multiple DME facilities, integration with multiple inertial navigation systems and complex filtering (e.g., Kalman filtering). These aircraft can support continuous RNAV and RNP operations when GPS is lost (for any reason).

#### F

**Fault Detection and Exclusion (FDE).** A software algorithm a GNSS sensor requires that automatically detects and excludes a faulty satellite from the GNSS position solution when a sufficient number of satellites are available.

**Fixed Radius Transition (FRT).** An arc at a constant (specified) radius that is tangent to both the inbound and outbound en route path segments at an en route fix. FRT apply during en route operations on published

RNP routes and serve to provide aircraft a means to connect from one route to a new route at a transition fix via a published FRT. Like RF turns, FRTs may offer reliable, repeatable paths for all aircraft.

**Flight Management System (FMS).** An integrated system, consisting of airborne sensor, receiver and computer with both navigation and aircraft performance databases, which provides performance and area navigation guidance to a display and automatic flight control system (AFCS).

**Flight Technical Error (FTE) or Path Steering Error (PSE).** Accuracy with which an aircraft is controlled, as measured by the indicated aircraft position with respect to the indicated command or desired position. It does not account for procedural blunder errors.

## G

**Global Navigation Satellite System (GNSS).** GNSS is a generic term for a worldwide position, velocity, and time determination system, which includes one or more satellite constellations, aircraft receivers, and system integrity monitoring. GNSS includes GPS, Satellite-based Augmentation Systems (SBAS) such as the wide area augmentation system (WAAS), Ground Based Augmentation System (GBAS). Global Orbiting Navigation Satellite System (GLONASS), Galileo, and any other satellite navigation system approved for civil use. GNSS can be augmented as necessary to support the Required Navigation Performance (RNP) for the actual phase of operation.

**Global Positioning System (GPS).** GPS is a U.S. satellite-based radio navigation system that provides a positioning service anywhere in the world. The service provided by GPS for civil use is defined in the GPS Standard Positioning System Signal Specification. GPS is the U.S. core GNSS satellite constellation providing space-based positioning, velocity, and time. GPS is composed of space, control, and user elements.

## L

**Long-Range Navigation System (LRNS).** An electronic navigation unit that is approved for use under instrument flight rules (IFR) as a primary means of navigation, and has at least one source of navigational input, such as inertial navigation system (INS) and/or GPS.

## N

**Navigation Specification (Nav Spec).** A set of aircraft and aircrew requirements needed to support PBN operations within a defined airspace. There are two kinds of Nav Spec:

1. RNAV specification. A Nav Spec based on RNAV that does not include the requirement for onboard performance monitoring and alerting, designated by the prefix RNAV (e.g., RNAV 5, RNAV 1).
2. RNP specification. A Nav Spec based on RNAV that includes the requirement for onboard performance monitoring and alerting, designated by the prefix RNP (e.g., RNP 4, RNP APCH).

**Navigation System Error (NSE).** NSE or Position Estimation Error (PEE) is the difference between the true position and estimated position.

## O

**Oceanic.** Oceanic airspace is defined as international airspace over oceans where separation and procedures are in accordance with the International Civil Aviation Organization (ICAO). Responsibility for the provision of ATC service in this airspace is delegated to various countries.

**Offshore.** Offshore airspace is defined by Title 14 of the Code of Federal Regulations (14 CFR) part 71, §§ 71.31 and 71.71. It is designated in international airspace within areas of domestic radio navigational signal or ATC radar coverage, and within which domestic ATC procedures are applied.



## P

**Performance-Based Navigation (PBN).** RNAV-based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure (IAP), or in a designated airspace.

**Procedural Statement of Compliance (PSOC).** The PSOC provides evidence of procedures compliance. An applicant obtains a PSOC from the company contracted by the operator for procedural publication services.

## R

**Receiver Autonomous Integrity Monitoring (RAIM).** An algorithm that verifies the integrity of the position output using GPS measurements, or GPS measurements and barometric aiding.

**Remote Continental.** Remote continental airspace is defined as airspace above terrain where line-of-sight communications, independent surveillance and reliable ground-based NAVAIDs are not available. Controllers provide air traffic services utilizing procedural control and procedural separation.

**Required Navigation Performance (RNP).** RNP is a statement of the 95 percent navigation accuracy performance that meets a specified value for a particular phase of flight or flight segment and incorporates associated onboard performance monitoring and alerting features to notify the pilot when the RNP for a particular phase or segment of a flight is not being met.

**RNAV.** See Area Navigation (RNAV) above.

**RNP/RNAV Procedure.** An RNP/RNAV Procedure includes instrument departure procedures (DP), standard terminal arrivals (STAR), and instrument approaches based on PBN.

**RNP Value.** The RNP value designates the 95 percent LNAV performance (in NM) and the related monitoring and alerting requirements associated with an RNP instrument flight operation or a particular segment of that instrument flight.

**RNP System.** An RNAV system which supports onboard performance monitoring and alerting.

## T

**Training Statement of Compliance (TSOC).** The TSOC provides evidence of training compliance. An applicant obtains a TSOC from the company contracted by the operator for training.

## W

**Waypoints.** A waypoint is a predetermined geographical position that is defined in terms of latitude/longitude coordinates. Waypoints may be a simple named point in space or associated with existing NAVAIDs, intersections, or fixes. A waypoint is most often used to indicate a change in direction, speed, or altitude along the desired path. RNAV procedures make use of both flyover and flyby waypoints.



## B.2 Acronyms

Acronym	Meaning
14 CFR	Title 14 of the Code of Federal Regulations
AC	Advisory Circular
AEG	Aircraft Evaluation Group
AFCS	Automatic Flight Control System
AFM	Airplane Flight Manual
AFMS	Airplane Flight Manual Supplement
AGL	Above Ground Level
AIP	Aeronautical Information Publication
AIR	Aircraft Certification Service
AMC	Acceptable Means of Compliance
ANP	Actual Navigation Performance
A RNP	Advanced Required Navigation Performance
ASOC	Aircraft Statement of Capability
ATC	Air Traffic Control
CEP	Central East Pacific
CHDO	Certificate Holding District Office
CMO	Certificate Management Office
CPDLC	Controller Pilot Data Link Communications
CTA/FIR	Control Area/Flight Information Region
DME	Distance Measuring Equipment
DP	Departure Procedure
DTK	Desired Track
FAA	Federal Aviation Administration
FDE	Fault Detection and Exclusion
FGS	Flight Guidance System
FIR	Flight Information Region
FMC	Flight Management Computer
FMS	Flight Management System
FRT	Fixed Radius Transition
FS	Flight Standards Service
FSDO	Flight Standards District Office
GNSS	Global Navigation Satellite System
GOM	General Operations Manual
GPS	Global Positioning System
HLA	High Level Airspace
ICAO	International Civil Aviation Organization
INS	Inertial Navigation System
IOM	International Operations Manual



Acronym	Meaning
IRS	Inertial Reference System
IRU	Inertial Reference Unit
LNAV	Lateral Navigation
LOA	Letter of Authorization
LRNS	Long Range Navigation System
MEL	Minimum Equipment List
MMS	Make, Model, Series
Nav Spec	Navigation Specification
NM	Nautical Mile
NOPAC	North Pacific
NOTAM	Notice to Air Missions
NSE	Navigation System Error
OEM	Original Equipment Manufacturer
PBN	Performance Based Navigation
PF	Pilot Flying
PI	Principal Inspector
POH	Pilot's Operating Handbook
POI	Principal Operations Inspector
PSOC	Procedural Statement of Compliance
RAIM	Receiver Autonomous Integrity Monitoring
RNAV	Area Navigation
RNP	Required Navigation Performance
SAO	Special Areas of Operation
SB	Service Bulletin
SBAS	Satellite Based Augmentation System
SIS	Signal in Space
SLOP	Strategic Lateral Offset Procedures
SOC	Statement of Compliance
STC	Supplemental Type Certificate
TC	Type Certificate
TOAC	Time of Arrival Control
TSE	Total System Error
TSO	Technical Standard Order
TSOC	Training Statement of Compliance
WGS	World Geodetic System



## Please Provide Feedback

*In our continuing effort to improve the quality of service we provide to you, the Federal Aviation Administration would appreciate any feedback you may have on this guide and how we can improve it:*



Please Indicate “Oceanic and Remote Continental Application Guide” in the Subject Line

Mail to: [9-AWA-AVS-AFS-400-flight-technologies-procedures-division@faa.gov](mailto:9-AWA-AVS-AFS-400-flight-technologies-procedures-division@faa.gov)

[Flight Technologies & Procedures Division](#)