

Sky Brief Summary

2024-03 (September 2024)

Introduction and Instructions

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Recommended Changes to Your IOPM

2.1.4.2 Commercial Space Activity

- A. As new technologies are developed and space operations are refined, it is expected that there will be an increase in commercial space entry. Such activity has the potential to disrupt air traffic, particularly in oceanic areas intended for re-entry of space vehicles / rockets / debris.
- B. Accordingly, operators should be aware that restrictions or advisories may be issued in the future on the basis of such commercial space activity. Such information, if or when provided, should be factored into preflight planning along with weather information.
- C. It is expected that such notification will be issued primarily via NOTAM ([Appendix I](#)) using phraseology such as space, suborbital, re-entry vehicle, or rocket launch, and will include standardized NOTAM coding for dangerous or restricted areas, if applicable, such as:
 - QRDCA for "danger area."
 - QRTCA for "temporary restricted area."
 - QWMLW for "missile or rocket firing."
 - QRALW for "airspace reservation."

2.2.1.1 North Atlantic (NAT) Region

[Paragraphs A-F omitted from Sky Brief]

G. PBCS Implementation

- ATC has implemented reduced separation in the North Atlantic based on PBN and PBCS (e.g., RCP240 and RSP180) as follows:

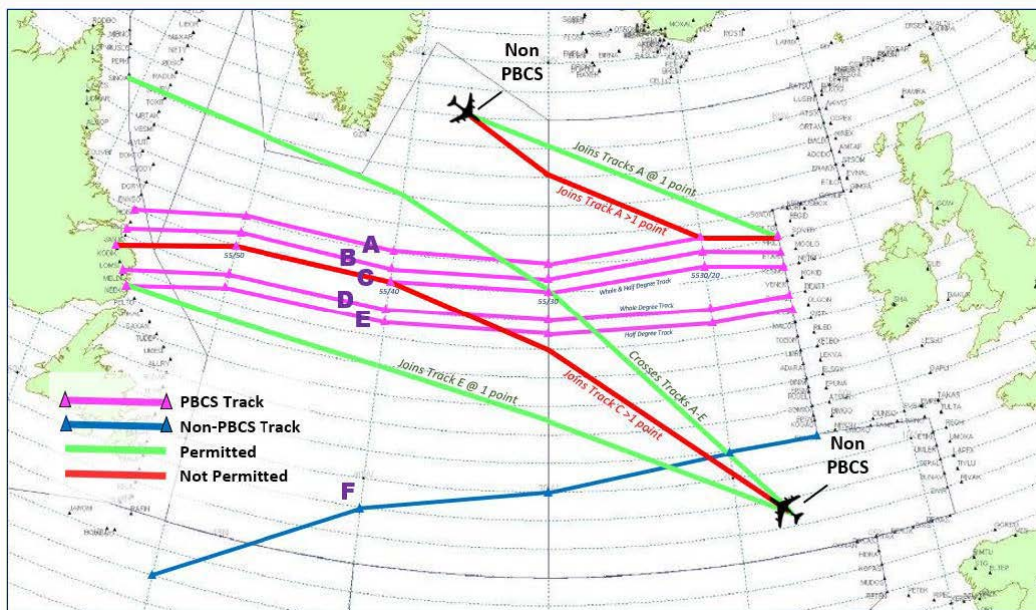
[Bullets omitted from Sky Brief]

- "PBCS Tracks" in the NAT OTS, in which lateral separation will be implemented as 42.6km (23 NM) lateral spacing through whole and half degrees of latitude between tracks between FL340-FL400 inclusive, except when the OTS occurs in the New York East OCA.

[Bullets omitted from Sky Brief]

- Only eligible operators and aircraft may operate on Tracks designated as PBCS. Tracks will be established by publishing one track defined by ½ degree waypoints between two adjacent tracks defined by whole degree waypoints.
- Non-PBCS operators may, on a case-by-case / tactical basis, be permitted to:

1. Infringe PBCS tracks at FL340 – FL400 (inclusive) at only one point, including the Oceanic Entry / Exit Point (i.e., cross but not join a PBCS track); and
2. Climb or descend through FL340–FL400 on a PBCS Track, provided the climb or descent is continuous.



Source: ICAO NAT Ops Bulletin #2024-001

[In the interest of clarity as to the applicable geographic regions, we recommend renaming the section titles for 2.2.1.5 and 2.2.1.6 as indicated below in yellow highlighting. No revisions are recommended at this time for the actual text of Section 2.2.1.6.]

2.2.1.5 South Atlantic (South America to Europe)

- A. RVSM has been implemented in the European / South American (EUR / SAM) corridor between FL290 - FL410.
- B. RNP-10 has been implemented on ATS route structures in the EUR / SAM corridor.
- C. CPDLC is supported, but is not mandated, in the Atlantico FIR.
- D. PBCS
 - Reduced separation will be implemented in the Atlantico FIR for appropriately fitted aircraft (CPDLC / PBCS / RNP-4) according to the following schedule:
 1. Phase 1: Starting in December 2025, 5 minutes longitudinal and 50 NM lateral, separation.
 2. Phase 2: Starting in April 2026, 30 NM longitudinal and 23 NM lateral separation.

Note: In this phase, the ADS-C Climb and Descent Procedure (CDP) will also be implemented, which will allow the reduction of longitudinal separation between aircraft during route crossings.

- In anticipation of PBCS, ATC has been testing the CPDLC latency monitoring capability of air traffic and may continue to do so with CPDLC / PBCS capable aircraft. When aircraft log on with CPDLC, ATC will send the message "RCP 240 TRIALS PLEASE ANSWER ROGER." Pilots are expected to send the positive response, "ROGER."

2.2.1.6 South Atlantic (South America to Africa / Indian Ocean)

[Text omitted from Sky Brief]

2.3.2.1a Oceanic Clearance to Enter Oceanic Airspace (Temporary)

- A. The OCAs in the NAT region have implemented a piecemeal schedule regarding the use / removal of an Oceanic Clearance procedure. Accordingly, the procedures in this section should be followed in the OCAs below until the dates specified. Thereafter – or in an OCA not specified in the list below – crews should follow the procedures described in Section 2.3.2.1b.

- Bodo OCA: December 10, 2024;
- Shanwick OCA: December 4, 2024;
- Gander OCA: December 4, 2024; and
- New York OCA East: No date specified; however, procedures in Section 2.3.2.1b should generally be followed.

4.5.0 Auckland Oceanic FIR

- A. The Auckland Oceanic FIR is fully FANS compliant. The Logon address is "NZZO." Auckland Oceanic Control will accept ADS-C and CPDLC position reports.
- Aircraft fitted with and authorized for PBCS may receive reduced lateral and longitudinal separation in the Auckland FIR.
 - Aircraft fitted with ADS-C capability may be given access to optimum flight levels when no ATS surveillance service is available by way of the ADS-C Climb and Descent Procedure (CDP) implemented by ATC. The CDP provides for reduced separation to allow for preferential routing.
- B. SELCAL checks are not required for CPDLC-equipped aircraft when entering NZZO FIR. Such aircraft filing a SELCAL code in item 18 of their flight plan will be assumed to have a serviceable SELCAL and to be maintaining a SELCAL watch on HF primary frequency.

5.3.1 Electronic Passport Programs

- A. eu-LISA, the agency responsible for software systems related to security in the European Union, is establishing two programs that will effectively replace the physical stamping of passports for entry / exit into EU states: EES (Entry / Exit System) and ETIAS (European Travel Information and Authorization System). Any carrier operating to the EU will be required to register with eu-LISA for mandatory participation in these programs.

Note: As used by eu-LISA, the term “carrier” includes any pilot / flight department that is compensated for their duties, regardless of whether or not their operations are broadly defined as “private” or “non-commercial.”

- B. Beginning in November 10, 2024, all non-EU travelers will be required to participate in the EES to verify whether or not they have exceeded their allowed entries / exits for entry into to EU states. Travelers will automatically be entered into the EES and do not need to apply for anything prior to traveling. However, if they are entering the EU for the first time after EES is implemented, they should expect a delay while customs staff collects information, fingerprints, and a photograph. Travelers can optionally submit data in advance of their flight to save time. Further information can be found on the EES website below:

https://travel-europe.europa.eu/ees_en

- C. Participation will be required in ETIAS once it becomes operational, which is expected sometime in 2025. This participation will be required of all citizens of visa-exempt nations (including the United States, Canada, and Mexico) traveling to an EU member country. ETIAS requires each traveler to submit an ETIAS application, which will be linked to their passport and remain valid for up to three years. Further information can be found on the ETIAS website below:

https://travel-europe.europa.eu/etias_en

- D. Operators who have not registered with eu-LISA can do so by digitally completing their registration form and emailing it to carriers_onboarding@eulisa.europa.eu. A copy of the registration form and more information can be found on the following site:

<https://www.eulisa.europa.eu/About-Us/Organisation/working-group-for-carriers>

5.4.3 New Zealand

A. Implementation of Special Areas of Operation

- PBN, requiring authorization, has been implemented as follows:
 - Q, Y, Z, and T routes are designated as RNAV-2.
 - RNAV-1 and RNP-1 SIDs and STARs are available at locations with 24/7 surveillance.
 - RNP APCH approaches are provided at ATC-controlled locations.
 - Some continental routes may be designated as RNP-2 when deemed operationally advantageous and will be named as "Navigation Requirement: RNP 2" on the applicable chart(s).
- Note: Operators who wish to utilize any of the above routes must ensure that, in addition to holding the appropriate authorizations (LOAs / OpSpecs), their flight plan includes all appropriate equipment codes (e.g., "NAV/RNP2" in Item 18 to demonstrate continental RNP-2 capability).
- ADS-B: Within Auckland Oceanic FIR (West of 180°) and the New Zealand Domestic FIR, aircraft equipped with 1090ES ADS-B must disable ADS-B transmissions unless:
 - The aircraft emits position information of an accuracy and integrity consistent with the transmitted value of the position quality indicator; or
 - The aircraft always transmits a value of 0 for one or more of the position quality indicators (NUC, NIC, NAC, or SIL); or
 - The operator has received special approval from the Director of Civil Aviation.
- PBCS: Reduced lateral and longitudinal separation are provided to PBCS aircraft in the Auckland Oceanic FIR. Refer to Section 4.5.0 for more information.

- B. Altimetry: Aircraft entering the New Zealand FIR are required to remain on 1013.2 hPa. Aircraft entering the Auckland Oceanic FIR from the New Zealand FIR, must, if on QNH, change to 1013.2 hPa at the FIR boundary.

5.8.2 Brazil

[Paragraph A omitted from Sky Brief]

- B. ADS-B Out Implementation and Mandates: ADS-B Out (via 1090ES, DO 260B standards) is supported in the Recife FIR at FL245 and above and will eventually be implemented throughout Brazil according to the timeline below:

- *December 2024*: ADS-B will be supported in the Curitiba FIR at FL245 and above;
- *August 2025*: ADS-B will be supported in the Brazilia FIR at FL245 and above;
- *May 2026*: ADS-B will be supported in the Amazonica FIR at FL245 and above;
- *February 8, 2030*: ADS-B will be required for all aircraft operating in Brazilian airspace at FL245 and above.

Appendix I: Weather / NOTAM Procedures

Notice to Airmen (NOTAM)

Decoding

A list of international NOTAM codes (e.g., “Q Codes”) compiled by the FAA can be found here:

https://www.faa.gov/air_traffic/publications/atpubs/notam_html/appendix_b.html

Appendix N: Automatic Dependent Surveillance – Broadcast

Equipage Requirements

Below is a brief overview of known areas and routes where ADS-B equipage is mandatory. This list should not in any way be understood as comprehensive or complete. Additional regions / countries are implementing ADS-B infrastructure according to their own schedules and availability of resources, and crews must be aware of the potential for new mandates to arise. Flight crews must confirm any relevant ADS-B requirements during preflight planning by reviewing the applicable state AIPs / AICs and other published data.

Region	Link Required	Where Required
Australia	1090ES	At or above FL290
Brazil	1090ES	Beginning February 8, 2030: At or above FL245
Canada	1090ES ¹	Currently: 18,000 feet and above (Class A airspace) and 12,500 feet and above (Class A and B airspace) 2026 or later: Below 12,500 feet (Class C, D, and E airspace)
China (Taipei FIR)	1090ES	At or above FL290 on all routes



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Recommended Changes to Your IOPM

[We recommend moving the content currently found in Section 2.6.0 regarding Equal Time Points to the Preflight Planning section, as a subsection to 2.1.5. The content will be renumbered as shown below.]

2.1.5.6 Equal Time Point (ETP) Calculations / Wet Footprints

- A. All flights must be planned to avoid a wet footprint. Equal Time Point (ETP) calculations are required on all flights when the nearest suitable airport exceeds one (1) hour cruise.

[Content omitted from Sky Brief]

2.1.5.7 Point of Safe Return (PSR)

A Point of Safe Return (PSR) should be calculated when the destination airport has no usable alternate. *A notation will be made on the Master Document when the flight proceeds beyond the PSR.*

2.3.2.1a Oceanic Clearance to Enter Oceanic Airspace (Temporary)

- A. The OCAs in the NAT region have implemented a piecemeal schedule regarding the use / removal of an Oceanic Clearance procedure. Accordingly, the procedures in this section should be followed in the OCAs below until the dates specified. Thereafter – or in an OCA not specified in the list below – crews should follow the procedures described in Section 2.3.2.1b.

- **Shanwick OCA: Unknown at this time;**
- New York OCA East: No date specified; however, procedures in Section 2.3.2.1b should generally be followed.

[Further content omitted from Sky Brief]

2.3.2.1b Clearances After Entering Oceanic Airspace (Long-Term)

- A. Prior to March 21, 2024, crews were required to obtain an Oceanic Clearance prior to oceanic entry in the NAT **in the Reykjavik, Santa Maria, Bodo, and Gander OCAs.** That requirement is no longer in effect. Instead, pilots should proceed according to their flight plan or, if alternate instructions have been issued by ATC, in accordance with ATC's instructions.

[Due to the uncertainty regarding Shanwick's schedule to remove the Oceanic Clearance requirement, we recommend re-incorporating the following Shanwick-specific procedures which were removed by a previous Sky Brief.]

2.3.4.6 Shanwick Oceanic FIR

A. Oceanic Clearance (Westbound)

1. When operating from the UK FIR / UIR and Northern part of the France UIR request the oceanic clearance from "Shanwick Oceanic" on VHF.
2. Overflights are to request clearance when they consider that they are within the specified VHF coverage.

Note: UK departures are to request clearance as soon as possible after departure.

3. Shanwick can provide clearances via data link to properly-equipped operators. The term "ORCA" (Oceanic Route Clearance Authorization) is used to refer to these data link transmissions.

B. While in communication with Shanwick for oceanic clearance, aircraft must also maintain communication with the ATC authority for the airspace within which they are operating.

1. Aircraft unable to contact "Shanwick Oceanic" on VHF or via ORCA should request clearance on a NARTEL HF frequency and thereafter maintain a SELCAL watch for receipt of clearance.
2. Aircraft unable to contact "Shanwick Oceanic" on VHF, via ORCA, or on NARTEL HF should request the ATC authority for the airspace in which they are operating to relay their request for oceanic clearance to Shanwick.

C. Due to the short flying times between certain airports and the Shanwick OCA boundary, pilots may be required to request and receive an oceanic clearance prior to departure.

D. NAT Flights departing Irish airports, excluding Dublin, Weston and Casement (Baldonnel) airports, planned to enter NAT Airspace between GOMUP and BEDRA (inclusive) should request oceanic clearance from Shanwick Oceanic via ORCA prior to departure.

Note: Aircraft departing Dublin, Weston and Casement (Baldonnel) planned to enter the NAT should request oceanic clearance when airborne using ORCA or Shanwick Radio 127.9 MHz.

E. Shannon ACC will, on request, obtain oceanic clearance from Shanwick Oceanic and pass the clearance to the flight prior to departure. Departures flight planned to enter NAT airspace north of GOMUP, or at OMOKO or LASNO, shall obtain clearance when airborne on the appropriate frequency or via ORCA.

F. Shannon Departures should contact Shannon ACC via telephone (+353 61-770-700) or on 121.7 MHz 45 minutes before ETD to request oceanic clearance. Pilots should contact Shannon ACC on 121.7 MHz at least 15 minutes before start up, to obtain oceanic clearance.

- G. At other airports contact local ATS unit 45 minutes before ETD for oceanic clearance.
1. Departures from Belfast Aldergrove, Belfast/City, Londonderry / Eglinton, Glasgow and Prestwick: If flight planned to enter Shanwick at GOMUP, oceanic clearance required prior to departure. If flight planned to enter Shanwick at all other entry points, request when airborne. Non-jet departures request oceanic clearance when airborne.
 2. Departures from all other airports: If the elapsed time to the Shanwick entry point is 40 minutes or less, oceanic clearance is required prior to departure.
- H. If oceanic clearance is not required prior to departure, pilots are reminded that they should request clearance between 90 and 30 minutes prior to the Shanwick boundary. At civil airports where ATC is provided, request clearance directly by telephone to Shanwick or ask local ATC to relay the requests. Pilots departing from Prestwick should contact Shanwick directly using the appropriate VHF frequency.
- Note: At Military airports and civil airports where ATC is NOT provided, request clearance by using ORCA or HF RTF.
- I. Pilots are reminded that the oceanic clearance (including level allocation) is valid only from the OCA Entry Point. It is the responsibility of the pilot to obtain from the appropriate ATC authority any necessary clearance or re-clearance to enable the pilot to comply with the oceanic clearance, especially in cases where the flight crosses the Shanwick OCA boundary at the FL contained in the clearance, or when necessary to remain clear of Oceanic Airspace while awaiting oceanic clearance.
- J. Flights entering Shanwick directly from the Madrid FIR/UIR should request the oceanic clearance on HF at least 40 minutes before the ETA for 45°N. If unable on HF, request the oceanic clearance through the Madrid Domestic ATC frequency.
- K. Flight crews should be aware that a clearance, issued by Shanwick to an aircraft entering Shanwick OCA from domestic airspace, becomes effective only at the Shanwick OCA boundary.
1. It is the responsibility of the pilot to obtain from the appropriate ATC authority any necessary clearance or reclearance so as to comply with the oceanic clearance or, when necessary, to remain clear of Shanwick's oceanic airspace while awaiting oceanic clearance.
 2. While in contact with "Shanwick Oceanic" for oceanic clearance, flight crews will maintain communication with the domestic ATC authority for the airspace within which the aircraft is operating.
 3. If unable to contact "Shanwick Oceanic" on either VHF or HF, flight crews will request ATC to relay the request for oceanic clearance to Shanwick.
- L. If pilots have not received their oceanic clearance prior to reaching the Shanwick OCA boundary, they must contact Domestic ATC and request instructions to enable them to remain clear of Oceanic Airspace while awaiting such clearance.

[Due to the content that was previously entered as "Section 2.6.0" being relocated, the content currently entered as Sections 2.7.0 to the end of Section 2 will be renumbered, as shown below.]

2.6.0 Approaching Landfall

- A. The PM shall tune the radio facility to the first landfall NAVAID to monitor the accuracy of the FMS / LRNS steering. Should a discrepancy exist, the PF shall consider the short range (raw data) NAVAID as the primary navigation source and the FMS as secondary for the remainder of the flight. *All discrepancies will be recorded on the Master Document or LRNS Performance Log (Appendix G).*
- B. Should any long range navigation sensor generate a warning message, the sensor may be deselected. This action will prevent the FMS from using that sensor for position computations.
- C. Flight crews will utilize the ground mapping capability of the onboard radar or EGPWS to observe any land masses as an aid to determining the accuracy of their navigation.

4.2.9 Oakland OCA Island Airports

A. Clearances

- When requesting an IFR clearance while on the ground, make every effort to communicate through San Francisco Radio or CPDLC. If unable to contact San Francisco Radio, a request for an IFR clearance can be made via direct communications with the sector controller via telephone.
- If the crew is unable to receive a clearance through any of the above means and elects to depart VFR in accordance with ICAO procedures, continue efforts to establish communication and obtain a clearance as soon as possible.

B. Hazards

- Kwajalein Atoll–Dyess AAF: Electromagnetic radiation will exist 24 hours daily within 2.17 NM radius of Dyess AAF from the surface to 13,000 feet. Aircraft within this airspace may be exposed to direct radiation, which may be harmful to personnel and equipment.
- Kwajalein Atoll–Bucholz AAF: Electronic radiation may exist 24 hours daily within 5 NM radius of Bucholz AAF from surface to 30,000 feet.
- Kwajalein Atoll–180 NM Radius: Hazardous military activity will be conducted which affect aircraft at all altitudes and flight levels within a 180 NM radius of 0843.3N/16743.8E until further notice. All nonparticipating VFR pilots are advised to remain well clear of the area. IFR flights under ATC jurisdiction may expect possible reroute to and from Bucholz Airport. For further information, contact Kwajalein Range Safety Officer at 805–355–1516.

4.3.1 User Preferred Route (UPR) Guidelines

[Paragraphs A-D omitted from Sky Brief]

- E. North America – Asia PACOTS UPR Guidelines: These guidelines are applicable to the Oakland, Fukuoka and Anchorage Oceanic FIRs.
- The UPR route must enter or exit the Oakland Oceanic FIR over a published waypoint on the FIR boundary offshore of North America.
 - The UPR must comply with the procedures published by Japan and Anchorage ARTCC.
 - The UPR must follow the guidelines published above in Section 4.3.0.
- F. Hawaii – Asia PACOTS UPR Guidelines: These guidelines are applicable to the Oakland and Fukuoka Oceanic FIRs.

4.4.0 NOPAC Route System

- A. The NOPAC Route System is comprised of four routes that transit the North Pacific between Alaska and Japan with traffic directed as follow:

R220	One-Way	Southwest Bound	FL180 to FL400 or FL410 and above CPDLC, PBCS (RCP 240 / RSP 180), and RNP-4 are required at FL340-FL400. ^{Note 1}
M523	One-Way	Southwest Bound	Only available at FL340-FL400. CPDLC, PBCS (RCP 240 / RSP 180), and RNP-4 are required. ^{Note 2}
R580	One-Way	Northeast Bound	FL180-FL330 or FL410 and above CPDLC, PBCS (RCP 240 / RSP 180), and RNP-4 are required at FL340-FL400. ^{Note 1}
A590	One-Way	Northeast Bound	Odd Altitudes FL190 to FL410, also FL300, FL320, FL340, and FL450
N507	n/a	n/a	n/a ^{Note 3}

Note 1: The NOPAC routes are undergoing a redesign throughout 2024 to become amenable to (and to promote) reduced lateral separation below 25 NM. Upon completion of this redesign, operators should expect FL340-FL400 to be reserved only for aircraft fitted with and authorized for CPDLC, PBCS (RCP 240 / RSP 180), and RNP-4 throughout the entirety of the NOPAC. Aircraft without such capabilities or authorizations may continue to fly these routes at FL300 and below or at FL410 and above.

Note 2: Currently the route structure does not provide any option for non-capable aircraft to fly above or below the range of FL340-FL400 on route M523.

Note 3: Route N507 does not exist yet, but is expected to be established sometime **in the near future**. Once implemented, it is expected that N507 will be an eastbound route 25 NM south of (and with the same equipage requirements as) M523.

[Paragraphs B-C omitted from Sky Brief]

D. Separation Standards

- Vertical: RVSM is applied from FL290 to FL410 inclusive.

2. Lateral: Except as described above in areas where reduced lateral separation will be applied, the primary form of lateral separation within the NOPAC Route system is 25 NM lateral either side of centerline based on RNP-10. Non-RNP-10 aircraft and any aircraft below FL180 will be provided with standard 50 NM lateral separation.
3. Longitudinal:
 - Aircraft equipped with ADS-C will be separated longitudinally at 50 NM (14 minute aircraft reporting rate) or 30 NM (9.6 minute aircraft reporting rate).
 - All other aircraft will be provided standard oceanic longitudinal separation, e.g., 15 minutes "in trail." This standard separation may be reduced to five (5) minutes when MNT (Section 2.3.10.1) is utilized.

E. Flight Planning

[Bullets omitted from Sky Brief]

- To minimize flight crew and controller workload, information should be carried for routes other than the one being flown. This material should include route data, reporting points, fuel burn, winds aloft, time en route, etc., for those routes compatible with the direction of flight. Data for routes R591 and G344 should also be carried regardless of the direction of flight as they are used for both eastbound and westbound traffic.

4.4.2 Communications and Position Reporting

[Paragraphs A-B omitted from Sky Brief]

C. VHF Communications

1. Air-to-Ground: Oceanic radio stations will normally have VHF capability within 200 NM of their geographic locations.
2. Air-to-Air: Frequency 123.45 MHz has been designated for use in air-to-air communications between aircraft operating in the Pacific area out of range of VHF ground stations to exchange operational information and facilitate resolution of operational problems.
3. The normal VHF (119.1 MHz) initial contact points with Anchorage ARTCC for eastbound flights established in the NOPAC are:
 - On A9590, 150 NM west of PINSO; and
 - South of A590, 150NM west of Shemya (SYA) or 150NM west of waypoint CHIPT.

Note: Initial contact may be attempted on 128.2 MHz, as a backup to 119.1.
4. Westbound PACOTS flights will be advised of the appropriate Anchorage ARTCC VHF frequency by San Francisco ARINC.

[We recommend moving the content that is currently entered as Appendix L, the IATA Inflight Broadcast Procedures for AFI, to become a subsection to 5.10.0 as shown below.]

5.10.2 IATA Inflight Broadcast Procedures for African and Indian Ocean (AFI) Region

A. The IFBP in AFI

- In many FIRs in the AFI Region, communications both fixed and mobile have either not been implemented or operate well below the required reliability. This has an impact on the proper provision of Air Traffic Services, especially flight information service.
- Consequently, the AFI Regional Technical Conference has decided that the IATA Inflight Broadcast Procedure (IFBP) should be used within designated FIRs in the region as an interim measure until such time as communications facilities affecting the FIRs in question have been improved.

[Remainder of content omitted from Sky Brief]

[We recommend retitling Appendix L and entering new content as shown below.]

Appendix L: Low Visibility Operations

General

- A. The term "Low Visibility Operation" (LVO) applies to any takeoff or landing procedure where visibility at an airport is reduced to a point where a takeoff / landing may not commence unless supplementary procedures are followed. LVO applies at a threshold established and published by the airport. In the EU, this threshold is commonly an RVR of 550 m or less, and in the US, this threshold is typically an RVR of 600 m or less.
- B. LVO may sometimes be further divided into the terms Low Visibility Takeoff (LVTO) and Low Visibility Approach (LVA), and the acronym LVP is often used to describe the Low Visibility Procedures established by the airport (in accordance with state regulations) to ensure safety of operations. The term Surface Movement Guidance and Control Systems (SMGCS) is also used to describe the systems designed by the airport to support low visibility procedures. For all intents and purposes, the acronym LVO will be used throughout this appendix as an umbrella term to cover all of these procedures.
- C. The PIC and flight crew are responsible for confirming the weather conditions and minimums of the intended airports of operation (both departure and destination), as well as the applicable LVO procedures at each airport.
- D. Unless otherwise permitted by an available LVO procedure at the airport, Operator Name will adhere to the following basic standards regarding conditions of reduced visibility:
 - A takeoff will not proceed below a visibility of RVR 600 m unless the crew has confirmed that LVO procedures exist and are appropriate for the aircraft and operation.
 - If there is no control tower at the destination airport, a takeoff will not proceed unless there is a visibility of 800 m (half a mile).

- An instrument approach will not be continued below 300 m above the airport if the reported RVR is below the minimum published for that approach.

E. Prior to conducting any kind of LVO, Operator Name will ensure that:

- Crews have been trained on LVO procedures during recurrent type training;
- The aircraft is fitted with any necessary equipment (such as RAAS, EFVS, or more), if any is required by the procedure;
- The crew has reviewed any information published by the airport regarding the LVO procedure, including familiarity with ground movement areas, lighting systems, and other visual aids on the ground; and
- If any authorizations (e.g., LOAs / OpSpecs) are required, they are held and carried onboard the aircraft prior to departure.

Enhanced Flight Vision Systems

- A. An Enhanced Flight Vision System (EFVS) is any aircraft system that uses sensor-derived or enhanced imagery to display the forward external scene to the pilot (including flight information, features, and position data for the flight path) and which can be used in lieu of natural vision to permit LVO procedures. Most commonly, EFVS is used in support of reduced visibility approaches and is physically accomplished via a Head-Up Display (HUD).

Note: A Head-Down Display (HDD) is not acceptable as an EFVS, as it does not allow the pilot to seamlessly incorporate external visual cues with natural vision.

B. EFVS typically permits operators to conduct one of two procedures:

1. EFVS to 100 Feet Above TDZE: In this operation, the crew may utilize EFVS to descend below the DA/DH or MDA down to as low as 100 feet above the airport ("TouchDown Zone"), but the rest of the operation must rely on natural vision.
2. EFVS to Touchdown and Rollout: In this operation, the crew may utilize EFVS not only below the DA/DH, but also below 100 feet until the aircraft physically lands.

C. Use of EFVS will permit crews to conduct approaches in cases of reduced RVR below what would otherwise be a restricted operation. However, prior to conducting any EFVS operation, the PIC must ensure:

- The crew has been trained on the use of EFVS systems during their aircraft type / sim training and has completed any necessary recency / currency checks;
- The EFVS equipment is operational and approved for use in the desired operation (e.g., whether or not the AFM permits EFVS below 100 feet);
- The airport permits LVO by means of EFVS, as published on the applicable approach chart;
- A suitable authorization (e.g., LOA / OpSpec) has been issued, if one is required by the local authorities.

D. Operational authorization for EFVS varies from one country to another, and as such, crews must ensure they either hold an applicable authorization or they have vetted the applicable AIPs or other publications of the destination country to verify that authorization is not required. In the United States, no LOA is required for non-commercial operators to use EFVS to 100 ft Above TDZE; however, authorization is required for any operator to use EFVS to Touchdown and Rollout. In much of Europe, an LOA is required for any EFVS operation, regardless of whether or not the operator is a commercial or non-commercial operator.

E. Use of EFVS does not preclude or supersede any other authorization or equipage requirements that may be published for the approach, such as Category II/III operations or baro-VNAV Nonprecision Approaches (NPA) that use an MDA as a DA/DH. The crew must review the published approach procedure carefully as multiple authorizations may be required.



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Sky Brief Summary

2025-01 (March 2025)

Introduction and Instructions

Thank you for your continued subscription to Nimbl's IOPM Revision Service!

To assist with the management of your IOPM content, we are providing this Sky Brief Summary to collate all changes recommended for your IOPM from the last three months. This Summary collects all IOPM changes from Sky Briefs released in the past quarter.

A digital copy of this Sky Brief Summary can also be found on the Docs section of your Nimbl account (my.gonimbl.com) in a folder labeled "Sky Brief Summary Library."

The following pages contain recommended revisions to your IOPM. Wherever possible, explanatory notes are provided in italicized text. The recommended revisions are also indicated by yellow highlighting.

All of these recommended revisions will be automatically incorporated into your manual the next time it is reissued by Nimbl, excepting any requests otherwise. You can also verify whether or not this Sky Brief Summary has already been incorporated into your manual by looking at the inside cover page. The most recently incorporated Summary will be listed on that page.

If you would like more information about your subscription or your manual, please contact us at iom@gonimbl.com.

Terminology Change Alert!

Please note that moving forward, Nimbl will be using some modified terminology with reference to manual updates that we provide. During a recent internal manual review, we discussed the use of the terms "Reissue" and "Revision" with respect to IOPM updates. The term "Reissue" was part of a previous process for manual updates that no longer applies, and so our team has determined that this term is redundant.

Therefore, any future updates logged for your IOPM, whether in whole or in part, will be notated simply as a "Revision" to simplify the document control process. If you wish to retain the use of "Reissue," please advise our team during your next scheduled IOPM update and we will proceed accordingly.

Recommended Changes to Your IOPM

1.1.3 Manual Organization and Updates

[Paragraph A omitted from Sky Brief Summary]

- B. This manual has a Table of Contents for easy reference. Each page is numbered and has a date of original issue or **revision** to ensure validity of the contents. This manual has a Record of Revision and a List of Effective Sections identifying section numbers and dates of entry.
- C. Whenever the information provided in the Sky Briefs (paragraph A above) is incorporated into this manual, all pages will be formally notated as a "Revision" with a progressive numbering scheme (e.g., "Revision 1"). Older versions of the manual will be archived or destroyed. Changes from one Revision to the next will be indicated with yellow highlighting.

2.1.3 Equipment

[Paragraphs A-B omitted from Sky Brief Summary]

- C. If any pilot is required to wear corrective lenses, they must ensure that they carry a spare set of the appropriate prescription whenever acting as a crewmember on any international flights.
- D. To ensure compliance with international requirements and practical application of all oceanic procedures (including contingencies), the crew must ensure that all navigation displays, indicators, and controls are visible and operable from either pilot seat / duty station in the cockpit. If any such equipment is inoperable (either wholly or inaccessible from a pilot's station), then any applicable MEL provisions must be followed.
- E. During preflight planning, the crew will review all available maintenance documentation (e.g., Aircraft Discrepancy Log, CAMP, etc) to identify any recent maintenance or open discrepancies (and corresponding MEL deferral requirements thereof). Such maintenance activity, particularly when the MEL has been enacted, may affect the aircraft's suitability for the intended flight.

2.1.5.5 GNSS Jamming / Spoofing

A. In or near geographic areas where there is active conflict, operators should be aware of and on alert for the possibility of intentional disruption of GNSS sensors, i.e., “GNSS jamming.” This is a situation in which actors on the ground will intentionally interfere with GNSS data, resulting in degradation or even total loss of GNSS signals. As a result of GNSS jamming, the aircraft may be unable to conduct or maintain a variety of operations, including PBN and/or ADS-B Out.

B. During preflight planning, crews should make use of any available databases and resources that track observed GNSS degradation, jamming, and/or interference. Such resources may not always provide confirmation that such disruptions are intentional but will still provide a valuable warning about areas where GNSS data may be potentially unreliable. Free online resources include Flight Radar 24’s map at <https://www.flightradar24.com/data/gps-jamming> and Stanford University’s map at https://waas-nas.stanford.edu/#/heatmap/2025_01_20/.

Note: Subscribers to Nimbl’s revision service described in Section 1.1.3 are also eligible for complimentary access to [Osprey Flight Solutions Atlas Module](#), which can be used to review current alerts and notifications regarding GNSS interference. If crews will not utilize this software, an equivalent source should be used instead.

C. To the extent possible, crews should avoid planning flights into areas where a risk of GNSS jamming is known and reported. If a flight must be planned in an area of high risk, crews must ensure a thorough safety analysis of the flight is conducted, including an assessment of all available information, as well as checking on the availability of alternative (i.e., non-GNSS) procedures / approaches in the area.

D. The following areas have been identified as having a persistent risk of GNSS jamming:

1. Kaliningrad region, surrounding Baltic Sea and neighboring States (e.g., Poland, Belarus, Estonia, Latvia, and Lithuania);
2. Eastern Finland;
3. The Black Sea;
4. The Eastern Mediterranean area near Cyprus, Türkiye, Lebanon, Syria and Israel; and
5. Northern Iraq.

2.1.5.3 Fuel Considerations

- A. The PIC must ensure that sufficient fuel is carried in accordance with ICAO Annex 6, any ETP / PSR calculations, applicable state regulations, and/or any unique flight department practices.

Note: A more detailed description of ICAO Annex 6 fuel requirements is included in Appendix A.

- B. Flights to Europe: US crewmembers must be aware that the rules for use of runways in the EU differs from their use in the United States. In the US, the same runway (if available and with ATC coordination) can be used for procedures from either end, providing flexibility for flights that are planned without a destination alternate. However, in the EU, this is not available. When a flight is planned in the EU under Instrument Flight Rules (IFR) and a destination alternate is not selected, the PIC must ensure sufficient fuel will be carried to use at least two separate runways at the destination airport, with at least one of those planned runways having an operational instrument approach procedure.

2.2.1.1 North Atlantic (NAT) Region

[Paragraphs A-C omitted from Sky Brief]

D. DLC Airspace

- FANS 1/A capable DLC systems are required from FL290 to FL410 (inclusive) throughout the NAT region.

Note: These DLC systems must utilize either Inmarsat or Iridium SATCOM equipment to remain fully compliant with NAT DLC requirements. DLC via HF is not sufficient and VHF coverage is not available over much of the NAT.

- The following airspace is not included in the DLC Mandate for the NAT region:

- Corridors used for special routing and contingencies (Refer to Section 2.2.1.2);
- Airspace north of 80°N; and
- The New York East OCA.

Note: The New York West OCA is not part of the NAT region, and is accordingly also not included in the DLC Mandate.

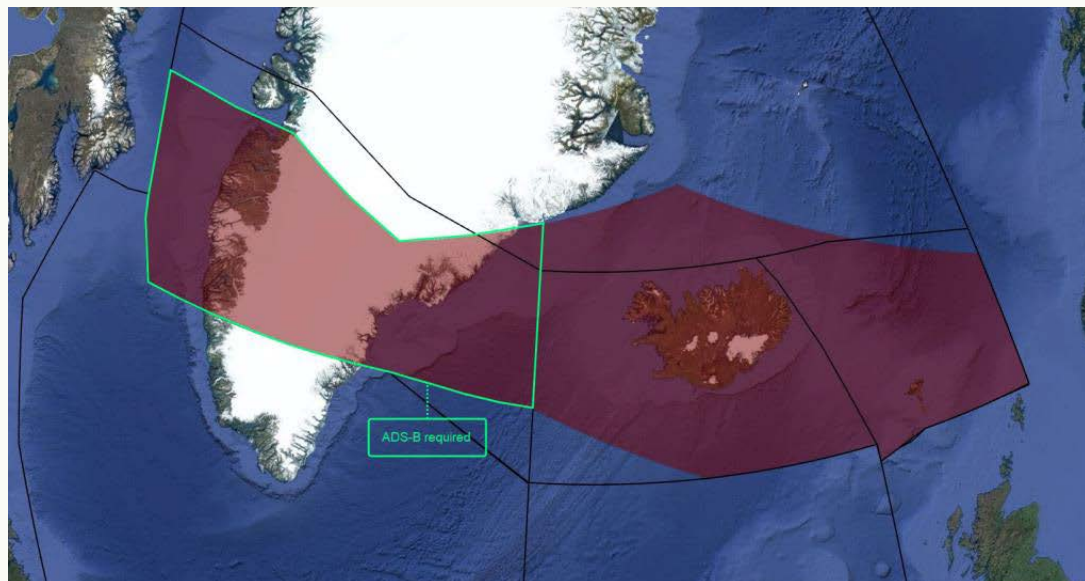
- CPDLC as Primary Means of Communication: Although at least one of the two LRCSs required in the NAT must be an HF radio ([Section 2.2.2.1](#)), CPDLC-equipped aircraft should expect that CPDLC will generally be the primary means of communication in the NAT whenever the aircraft is operating beyond the range of VHF voice communications, and voice (HF) will be used as the alternative means of communication. Within VHF coverage, CPDLC may be used to alleviate frequency congestion. Accordingly, crews must ensure their DLC system is logged on to the appropriate control center even if they are currently using voice communications.
- E. ADS-B Airspace: Although ADS-B coverage exists in parts of the NAT, ADS-B equipage is not mandated except in the "Contingency Corridors" (Section 2.2.1.2).

[We recommend adding a new section immediately after 2.2.1.1, as shown below, which will affect section numbering thereafter.]

2.2.1.2 Special Routing Corridors in the NAT (“Contingency Corridors”)

- A. Several blocks of airspace in the NAT are identified as areas that should be prioritized in the event of equipment failure, or which can be used by aircraft that do not otherwise meet the requirements for unrestricted NAT operations as described in Section 2.2.1.1. These “Contingency Corridors” include:
- The Greenland Corridor (connecting Canada, Greenland, Iceland, and the northernmost part of the UK);
 - The Azores Corridor in the Santa Maria OCA;
 - The Bodo Corridor off the coast of Norway; and
 - The T-Routes off the western coast of Europe, between the UK and Spain.
- Note: Some of this airspace was previously known as the “Blue Spruce Routes,” but that terminology is no longer being used.
- B. Although these corridors do provide an alternative for certain equipment configurations, the following capabilities are still required without exception:
- VHF;
 - TCAS 7.1;
 - SSR Mode A/C;
 - RVSM (between FL285 and FL420); and
 - ADS-B Out via Extended Squitter.
- C. Aircraft that fall into one of the equipage categories described below may operate in these corridors, except when otherwise indicated:
- Aircraft fitted with only a Single Long Range Navigation System (S-LRNS – [Section 2.2.2.4](#))
 - Aircraft fitted with only a Single Long Range Communication System (S-LRCS – [Section 2.2.2.5](#));
 - Aircraft experiencing a navigation or communication failure that effectively renders them as an S-LRNS or S-LRCS aircraft (either in accordance with any applicable MEL deferrals or if such failure occurs inflight); and
 - Aircraft without compliant CPDLC equipment.

D. The Greenland Corridor:



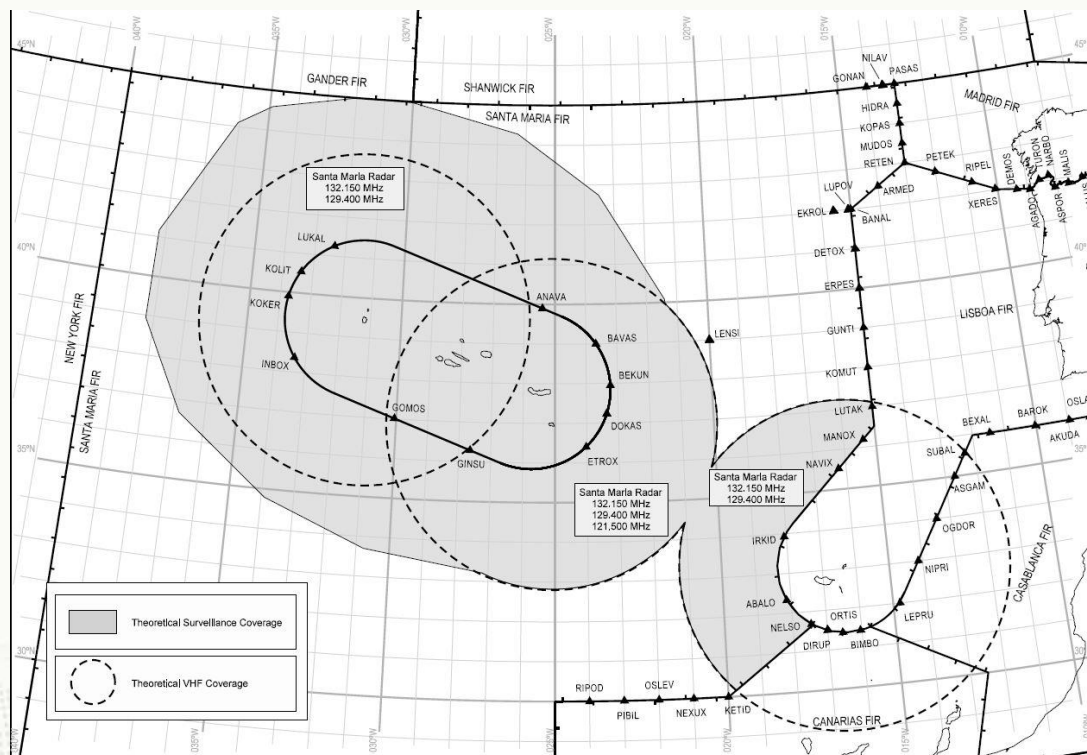
Source: ICAO NAT Doc #007, Version 2024-1

The airspace indicated on this graphic is defined by the following boundaries:

- Northern boundary: 65N000W - 67N010W - 69N020W - 68N030W - 67N040W - 69N050W - 69N060W - BOPUT
- Southern boundary: GUNPA (61N000W) - 61N007W - 6040N010W - RATSU (61N010W) - 61N020W - 63N030W - 6330N040W - 6330N050W - EMBOK

Note: As this area is within VHF coverage, it may be used by ADS-B equipped aircraft that are fitted with either only a single or no LRCSs to cross the North Atlantic at or above FL290.

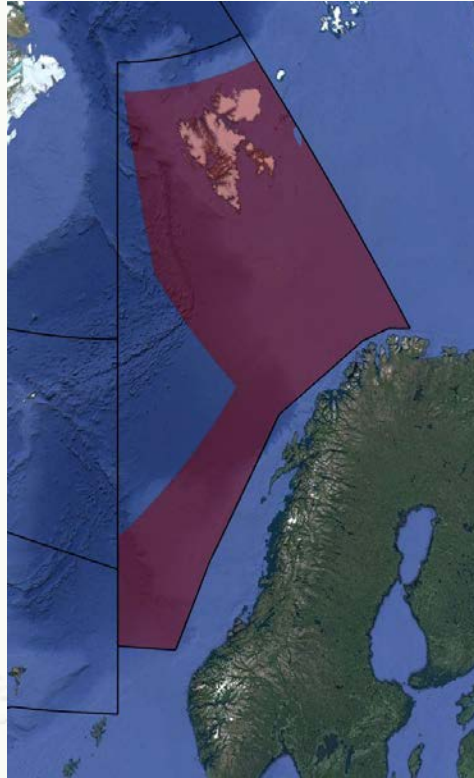
E. The Azores Corridor:



Source: ICAO NAT Doc #007

- Traffic flying to / from Azores Islands is allowed to operate in the NAT HLA, when the oceanic portion of the planned route is contained inside Santa ATC surveillance airspace and within VHF coverage.
- This will typically be achieved via MANOX, NAVIX or IRKID direct 350000N 0200000W or 360000N 0200000W direct Azores Islands.

F. The Bodo Corridor:

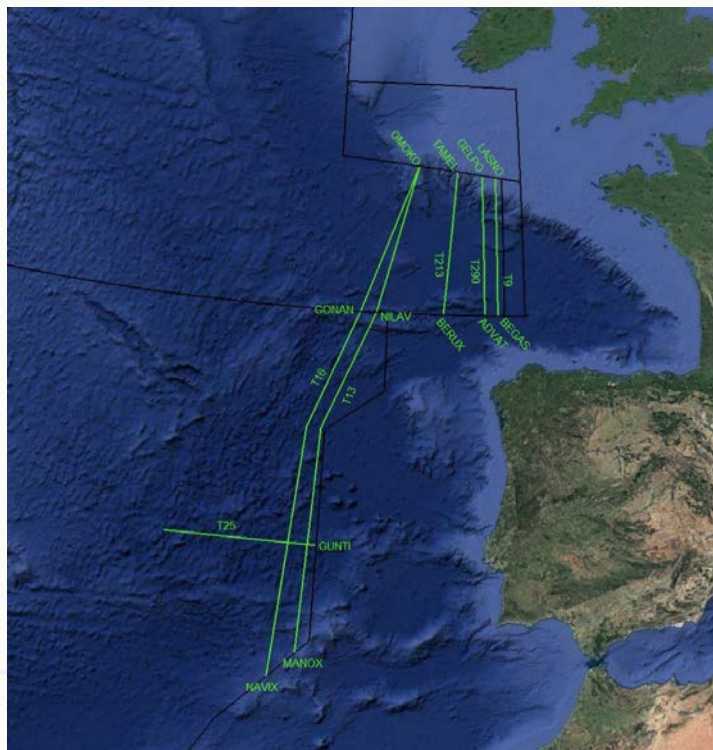


Source: ICAO NAT Doc #007

The airspace indicated on this graphic is defined by the following boundaries:

6645N 00000E - 7110N 01140E - 7500N 00430E - 8100N 00130E - 8100N
03000E - 7100N 03000E - 7120N 02800E - 7120N 02500E - 7000N 01500E -
6545N 00700E - 6303N 00403E - 6315N 00000E - (6645N 00000E)

G. Shanwick T Routes:



Source: ICAO NAT Doc #007

- Routes T9 and T290 are available for S-LRNS operations. However, aircraft operating on these routes must be equipped for ADS-B Out (1090ES), VHF, and continental RNP-2, as well as normal short-range navigation equipment (VOR/DME/ADF).
- **Exception:** Routes T13, T16, T25, and T213 **are not available** for S-LRNS operations. These routes require two or more functioning LRNSs and HF equipage. In addition, at some altitudes, CPDLC and ADS-C are required.

2.2.2.1 Required Equipment

- A. The following equipment is required and must be operational in order to conduct the operations specified:
- NAT HLA
 - Two (2) fully serviceable, independent LRNSs capable of navigating to the published RNP, including two (2) Flight Management Systems (FMSs); and
 - Two (2) long range communication systems (LRCs), at least one of which (the primary unit) must be HF.

Note 1: Aircraft that do not have two appropriate LRCSSs, and which have a VHF radio, may still fly in the NAT HLA, but will be restricted to routes within designated special use corridors (Section 2.2.1.2).

2.2.2.4 Single LRNS Operations in Oceanic and Remote Airspace

- A. If a crew intends to conduct operations with only a single LRNS, they must ensure all appropriate authorizations have been issued and that the planned flight route permits S-LRNS operations.
- B. Areas of Operation: Authorized operators may conduct S-LRNS operations in the NAT corridors identified in Section 2.2.1.2, the Gulf of Mexico, the Caribbean Sea, and the Atlantic Ocean west of a line which extends from 44°47'00" N / 67°00'00" W to 39°00'00" N / 67°00'00" W to 38°30'00" N / 60°00'00" W south along the 60°00'00" W longitude line to the point where the line intersects with the northern coast of South America.

2.2.3.1 Terminal PBN (RNP-1 / RNAV-1 / P-RNAV / SIDs / STARs / RNP APCH)

[Paragraphs A-E omitted from Sky Brief Summary; we recommend adding a new paragraph as shown below.]

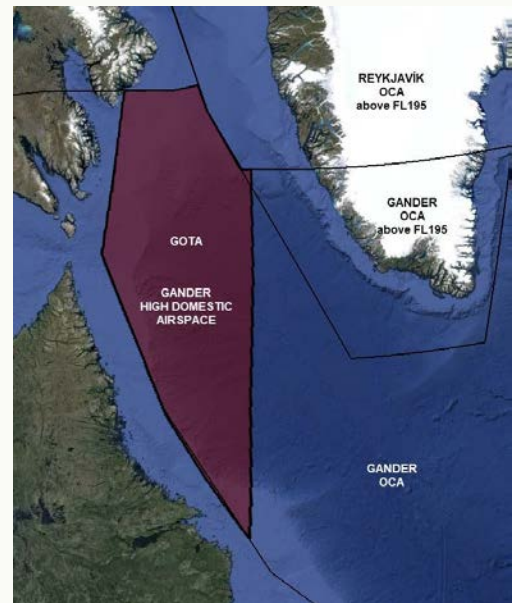
- F. Additional considerations for approach procedures described as "RNP APCH" or "RNAV (GPS)" can be found in Appendix Q.

2.3.4.4 Gander Oceanic Transition Area (GOTA)

- A. The GOTA consists of airspace depicted in the graphic to the right from FL290 to FL600 inclusive. This airspace is defined by the boundaries below:

6523N 06238W - 6530N 06000W - 654236N
0582356W - 6500N 05745W - 6330N
05540W - 6330N 05500W - 5352N 05458W
- 5700N 05900W - 582816N 0602104W -
6100N 06300W - 6519N 06300W - 6523N
06238W

- B. In conjunction with formation of GOTA, additional fixes will be incrementally added along the Gander FIR domestic/oceanic boundary. These fixes will be aligned to accommodate half-degree track spacing associated with reduced lateral separation in the NAT.
- C. The GOTA will allow for availability of more efficient flight profiles and will facilitate further service improvement initiatives such as reduced lateral separation.
- D. ADS-B and DLC services are provided and may be required on certain tracks.



Source: ICAO NAT Doc #007

2.3.6.1 Transponder Operations in the North Atlantic

- A. The last assigned code will be retained for no more than 10 minutes after entering NAT airspace (regardless of the direction of flight), and by then transponders must be set to Mode A, Code 2000.

Exception 1: All eastbound flights routing Reykjavik – Shanwick – Scottish (BIRD-EGGX-EGPX) should set transponders to Mode A, Code 2000 upon transferring from Reykjavik (BIRD) and no more than 10 minutes after entering EGGX airspace.

Exception 2: Reykjavik provides a radar control service in the southeastern part of its control area; transponder codes issued by Reykjavik ACC must be retained throughout the Reykjavik OCA until advised by ATC.

- B. Pilots operating in the WAT should leave their transponders on the code last assigned by ATC. They should not change to a non-discrete code 30 minutes after radar service is terminated.
- C. New York West OCA provides radar control within a 180-mile radius of Bermuda. Accordingly, transponder codes previously issued must be retained throughout Bermuda radar airspace until advised by ATC.
- D. Aircraft operating within the NOTA/SOTA have to select Mode A/C. Codes will be allocated by Shannon Air Traffic Control Center (ATCC).
- E. All aircraft transitioning from Miami Center and San Juan CERAP into the WAT area via fixed ATS routes shall remain on their last assigned beacon code.

2.3.10.5 Operations Without an Assigned Fixed Speed

[Paragraphs A-B omitted from Sky Brief]

- C. The following procedures will generally apply for OWAFS:

[Bullets omitted from Sky Brief]

- If the aircraft then receives “RESUME NORMAL SPEED” (via CPDLC or Voice), the flight crew no longer needs to comply with a previously issued Mach. However, the flight crew shall advise ATC if, as the result of the RESUME NORMAL SPEED message, they intend to adjust their speed by plus or minus Mach 0.02 or more from their last assigned speed or the Mach entered in the RCL message (Appendix D), as appropriate.

3.4.1 GNSSU Failures

A. Any failure of or malfunction of GNSS (which will likely correspond with loss of RNP-4/10, CPDLC, ADS-C, and/or ADS-B capability) should be reported to ATC as soon as possible to aid not only in resolution for the flight crew but also identification of potential GNSS jamming (Section 2.1.5.5). A late notification by flight crews can lead to ATC's corrective actions creating a disruption not only to the affected aircraft but also other nearby air traffic.

Note: If the flight will enter the NAT and crews detect or suspect GNSS degradation / interference prior to their OEP, they should include a report of the GNSS interference as part of their RCL message (Appendix D).

[Paragraphs B through D omitted from Sky Brief]

E. GNSS Degradation in the NAT: Crews who experience GNSS degradation should expect to be rerouted as described below.

- Flights that cannot maintain at least RNP-10 will be cleared below FL290 or above FL410. This does not apply within parts of Reykjavik or Santa Maria where surveillance is provided by means of radar and/or Wide Area Multilateration (WAM) coupled with VHF, provided the aircraft's SSR transponder is operational.
- Flights that cannot maintain RNP-4 but can maintain RNP-10 will be cleared on the most suitable profile within the NAT HLA, but outside of PBCS tracks, subject to impact on other traffic.
- Aircraft experiencing a CPDLC and/or ADS-C failure enroute will be cleared on the most suitable profile within NAT DLC airspace (FL290 – FL410), traffic permitting.
- Aircraft experiencing an ADS-B failure enroute will be cleared on the most suitable profile within the NAT HLA subject to impact on other traffic.

Appendix D: North Atlantic RCL Procedures

Introduction

- A. The abbreviation RCL was formerly used as shorthand for a "Request for Clearance," i.e., a request for an Oceanic Clearance prior to entering the North Atlantic.
- B. Although an Oceanic Clearance is no longer required to enter the North Atlantic (except for Shanwick), crews must still provide their ETA, intended Flight Level, and speed to ATC prior to oceanic entry.
- C. This transmission, whether by voice or ACARS, will continue to be known as an "RCL."

Prior to Oceanic Entry

- A. Send the RCL message prior to the OEP as follows:

OCA	Prior to OEP
Gander	90-60 minutes
Shanwick	90-30 minutes
Santa Maria	At least 40 minutes
Bodo	At least 20 minutes
Reykjavik	No earlier than 15 minutes
New York	N/A – RCL Not Required (Except for GNSS Interference – See Paragraph C below)

Note 1: (Gander) Flights departing from airports less than 45 minutes flying time from the OEP should send the RCL 10 minutes prior to start-up.

Note 2: (Reykjavik) Due to coverage limitations, aircraft equipped with Inmarsat data link won't be able to send an RCL message via ACARS data link when north of 82 N. Aircraft equipped with Iridium and/or HF ACARS should be able to send the RCL via ACARS regardless of location.

- B. The ACARS or voice RCL must contain all of the following information:
 - OEP;
 - ETA for the OEP;
 - Mach number (based on FMS cost index (ECON));
 - Requested Flight Level;
 - The highest acceptable Flight Level which can be attained at the OEP (via free text);
 - Provide the highest acceptable Flight Level as *MAX FL*
Example: Requesting FL360 – enter free text *MAX F380*
 - If the requested Flight Level is the highest acceptable, provide the requested Flight Level as MAX FL
Example: Requesting FL360 – enter free text *MAX F360*
 - If applicable, any observed GNSS interference (see paragraph C below).

C. Reporting GNSS Interference:

- GNSS interference, whether intentional or not, is a major safety concern in the NAT as GNSS systems are critical to maintaining the required standards for navigation, communication, and surveillance (i.e., RNP, RCP, and RSP).
- Accordingly, crews who are entering the NAT and who experience any GNSS disruption should report such interference to ATC as soon as possible. If such disruption is experienced before entering the NAT, a report of it should be included in the RCL message.
Note: Crews entering the NAT via New York East must still contact ATC (by voice) to report GNSS interference, even if they are not submitting an RCL message.
- Examples of such a report could include any of the following:
 - ATC REMARKS/ GNSS INTERFERENCE RNP10 ONLY
 - ATC REMARKS/ NO DATA LINK
 - ATC REMARKS/ DEGRADED NAVIGATION NO GNSS

D. Voice must be used to submit an RCL message if:

- The aircraft is not capable of ACARS data link (compliant with ARINC 623);
- ACARS is not operational;
- ETA for OEP is less than 30 minutes (other than Reykjavik);
- The aircraft receives the message *RCL REJECTED*; or
- No response to the RCL is received within 15 minutes of sending it.

Appendix G: Inflight Forms and Checklists

Oceanic Operations Checklist

[We recommend revising the "After Oceanic Entry" checklist as shown below.]

After Oceanic Entry	
<input type="checkbox"/>	Set transponder, as applicable
<input type="checkbox"/>	In NAT HLA: Squawk 2000 – 10 minutes after entry, except for Reykjavik and Bermuda
<input type="checkbox"/>	PAC (General): Upon entering Oakland OCA, and after radar service is terminated, set transponder to code 2000 and maintain until otherwise instructed by ATC

Appendix L: Low Visibility Operations

General

[Paragraphs A-C omitted from Sky Brief Summary]

- D. Unless otherwise permitted by an available LVO procedure at the airport, Operator Name will adhere to the following basic standards regarding conditions of reduced visibility:
- Crews should be aware that airports in EASA states will typically use a threshold of RVR 550 m (1800 ft) or less to determine if an LVO procedure will be provided.
 - When there is no control tower at the destination airport, an IFR approach should not be commenced unless there is a visibility of ½ NM (800 m).
 - An instrument approach will not be continued below 300 m above the airport if the reported RVR is below the minimum published for that approach.

Appendix Q: RNP Approach Considerations

Preflight Considerations

[Paragraphs A-B omitted from Sky Brief Summary]

- C. The European Single Sky initiative has set the implementation of LNAV / VNAV and LPV as one of its objectives. On any flight to Europe, flight crews of aircraft capable of RNP APCH procedures should verify whether or not RNP APCH has been implemented at the destination airport.
- D. Crews must conduct a RAIM check in accordance with the procedures in Section 2.2.3.1 of this manual.
- Note: Special emphasis must be given when crews intend to make use of an ABAS-based procedure, in that a RAIM availability check needs to be performed if the ETA is 15 minutes or more different from the flight planned ETA.
- E. The crew may not modify the final approach segment that has been loaded in the FMS.
- F. Although crews can generally expect to load their approach from the Initial Approach Fix (IAF), pilots must be aware that ATC may, on a situational basis, issue a Vector To Final (VTF) instead. Crews must respect such ATC clearances and proceed as instructed.

Conducting RNAV (GPS) Approaches

[Paragraphs A-B omitted from Sky Brief Summary]

- C. Pilots of aircraft with a recognized RNP airworthiness capability must not fly to LPV/LP lines of minima based solely upon their RNP capability. Only aircraft with an airworthiness approval for WAAS LPV/LP capability may fly RNAV (GPS) procedures using the LPV/LP line of minima. The aircraft must use WAAS to fly to the LPV/LP line of minima on an RNAV (GPS) approach.
- D. Any guidance and procedures provided by the aircraft and navigation equipment manufacturer(s) must be followed with respect to any approach procedure (e.g., AFM, FCOM, etc.).



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Sky Brief Summary

2025-02 (June 2025)

Introduction and Instructions

Thank you for your continued subscription to Nimbl's IOPM Revision Service!

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If you would like more information about your subscription or your manual, please contact us at iom@gonimbl.com.

Recommended Changes to Your IOPM

1.1.4 Purpose

- A. This manual is a combination of policy and procedures for use in planning and executing international flights. It will be used in conjunction with **any other flight department manuals, the** applicable Airplane Flight Manual (AFM), and applicable aircraft Minimum Equipment List (MEL).

2.1.1 Documents

The following documents are required, as applicable, and will be available on the aircraft in either paper or electronic format for all international operations:

[Bullets omitted from Sky Brief Summary]

- Applicable Minimum Equipment List;
- **Any other flight department manuals;**
- Current and suitable charts;

2.3.2.1b Clearances After Entering Oceanic Airspace (Long-Term)

[Paragraphs A through D omitted from Sky Brief Summary]

- E. Although an Oceanic Clearance will not be required after March 2024, crews are still required to submit an RCL message to ATC prior to the Oceanic Entry Point (OEP) to confirm their ETA and intended altitude and speed. The RCL message can be sent either by voice or ACARS in accordance with the procedures in Appendix D.

Note: To alleviate confusion associated with the RCL procedures, ATC will adopt a temporary, supplementary procedure until December 31, 2025 in the Gander OCA for eastbound aircraft. ATC will communicate any route / clearance amendments to crews solely via voice (VHF) if the amendment is made prior to the OEP. Crews must remain vigilant for voice communications for this reason. Any further amendments after the OEP will be transmitted via CPDLC when possible, or HF if CPDLC is not available.

2.7.3 Postflight Documentation

- A. To ensure that data is available for future analysis (either for troubleshooting or safety management purposes), the following information / documents should be retained, either in paper or digital format, for a minimum of six months after every international flight:
- Date;
[Bullets omitted from Sky Brief Summary]
 - Overflight and Landing Permits.
- B. Regardless of whether or not the full list of items above is retained, crews will, at a minimum, retain the information equivalent to an ICAO Journey Log Book (Appendix B) for at least 30 days after all flights.

5.3.0 European Union

- A. Implementation of Special Areas of Operation
[Paragraphs 1 through 3 omitted from Sky Brief Summary]
4. DLC: CPDLC via the ATN network is required in Europe above FL285. Refer to the additional procedures and clarification on this mandate in Appendix C.10.4.

Appendix A: Preflight Planning Resources

Preflight Planning Links

[We recommend updating / amending this list with the links below.]

AIREPs (PIREPs)

<https://aviationweather.gov/data/pirep/>

Flight Folder Briefing System
(Meteorology)

<https://www.avmet.ae/flight/fltdetails.aspx>

ADS-B Out Requirements
Brazilian Confidential Reporting
Program

https://www.faa.gov/air_traffic/technology/equipadsb
<https://www2.fab.mil.br/cenipa/>

Canadian Confidential Reporting
Program (Securitas)

<https://www.bst.gc.ca/eng/securitas/index.html>

EASA / European Confidential
Reporting Program

<https://www.easa.europa.eu/en/confidential-safety-reporting>

Singapore Confidential Reporting
Program

<https://www.tellsarah-vrs.com/>

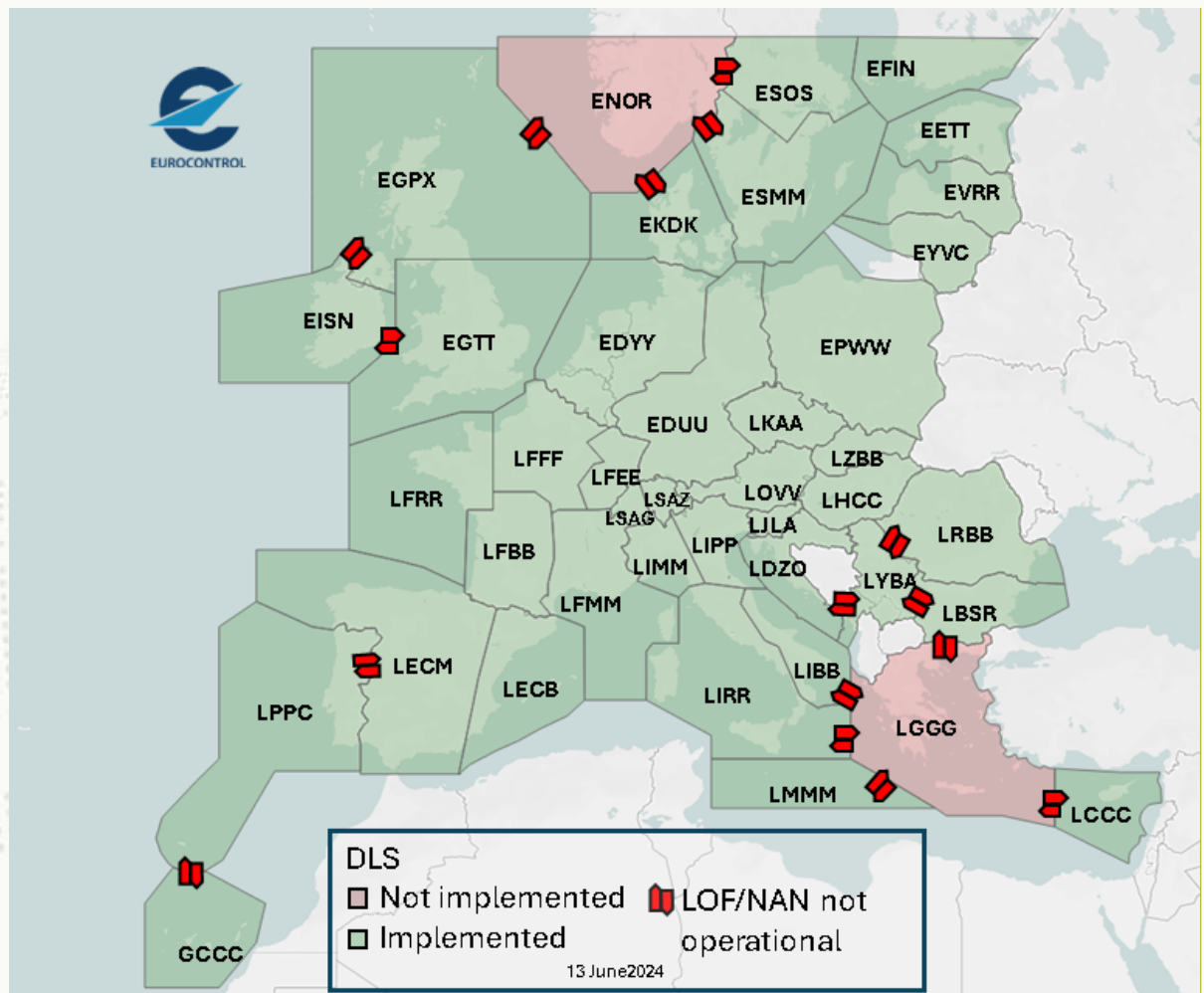
C.10.4 CPDLC in Europe

- A. Aircraft must be fitted and approved for CPDLC and capable of interoperating on the ATN network to operate above FL285 in the core European ANSPs, with the following additional considerations in mind:

[Bullets omitted from Sky Brief Summary]

Note: If the aircraft is exempt from the European DLC mandate for any of the reasons above (including those fitted with FANS), the entry “Z” must be included in Item 10a and “DAT/CPDLCX” must be included in Item 18 of the flight plan.

- B. Below is a graphic depicting the European FIRs where CPDLC is supported:



Source: Eurocontrol

- C. Crews must logon to the ATN network 10 minutes prior to entering any CPDLC airspace in Europe (or during preflight, if departing from an airport within the ATN service area). In addition, if crews will transit an airspace where CPDLC is not supported, there will not be an automatic handoff from one ATSU to the next; therefore, crews must manually logon again 10 minutes prior to entering the next airspace where CPDLC will be supported.

- D. Particular attention should be paid to the areas depicted with red arrows on the graphic in Paragraph B above. In these cases, the logon from one FIR will not be automatically handed off to the next, meaning that crews who transit these FIRs will need to manually logon to the next FIR 10 minutes prior to entry.
- E. In general, the logon requirement applies at or above FL285 in the areas depicted on the map above. However, the following areas support CPDLC at lower altitudes, and so logon is required as shown below. (For example: an aircraft that intends to fly at FL200 from Spain to France would not be required to logon when operating in Spain, where the lower boundary is FL285. However, they would be required to logon 10 minutes prior to entering France via LFBB, since the lower boundary in LFBB is FL195.)
- Maastricht (EDYY) above FL245;
 - Helsinki (EFIN) above FL095;
 - Belgrade (LYBA) above FL205;
 - Prague (LKAA) above FL195;
 - France above FL195 in:
 - Paris (LFFF);
 - Reims (LFEE);
 - Marseille (LFMM);
 - Bordeaux (LFBB);
 - Brest (LFRR);
 - Switzerland above FL145 in:
 - Geneva (LSAG);
 - Zurich (LSAZ);
 - Sofia (LBSR) above FL215.
- F. Crews should ensure that any ATN-capable Operator Name aircraft are registered in Eurocontrol's "Logon List" (formerly known as the White List). This list streamlines the ability for ATC to interface with ATN-fitted aircraft and will avoid delays or complications that can arise due to interoperability issues.
- An overview of the Logon List can be found at the following link:
https://ext.eurocontrol.int/WikiLink/index.php/Logon_List
 - New users who do not yet have an account for the Logon List can request one by sending an email request to: ectl_nm_dataink_team@eurocontrol.int
 - Users who do have an account can access the Logon List portal via the following:
<https://eurocontrol.sharepoint.com/sites/comm-DPMF/>

Appendix D: North Atlantic RCL Procedures

[We recommend adding the following subsection after "Oceanic Route Change Prior to the OEP" section of Appendix D.]

Gander

- A. To alleviate confusion associated with the RCL procedures, ATC will adopt the following temporary, supplementary procedure until December 31, 2025 for eastbound aircraft only (i.e., aircraft entering oceanic airspace from North American continental airspace). This procedure does not apply to any other OCAs at this time, nor to westbound aircraft (i.e., aircraft exiting the ocean into North American continental airspace).
- B. If any route or clearance amendments associated with oceanic entry are required, ATC will communicate such amendments to crews solely via voice (VHF) if the amendment needs to be issued **prior** to the OEP. Such communications will be via VHF regardless of whether the aircraft is logged on for CPDLC. Accordingly, crews must remain vigilant for VHF voice communications for this reason.
- C. Any further amendments **after** the OEP will be transmitted via CPDLC when possible, or HF if CPDLC is not available.
- D. Gander has otherwise adopted the RCL procedures above without changes or differences.

Appendix G: Inflight Forms and Checklists

[We recommend adding the following checklists after the "Oceanic Operations Checklist."]

GPS Interference Checklists

Preflight Preparation	
<input type="checkbox"/>	Evaluate the planned route for areas of identified GPS jamming and spoofing.
<input type="checkbox"/>	Confirm if the route passes through one of the following jamming / spoofing prone areas: <ul style="list-style-type: none"> Kaliningrad region, surrounding Baltic Sea and neighboring States (e.g., Poland, Belarus, Estonia, Latvia, and Lithuania) Eastern Finland The Black Sea The Eastern Mediterranean area near Cyprus, Türkiye, Lebanon, Syria, and Israel Northern Iraq
<input type="checkbox"/>	Confirm if the route passes through an area of recently identified jamming or spoofing. The following websites may be consulted: <ul style="list-style-type: none"> SKAI Data Services GPSwise map: https://spoofing.skai-data-services.com/ FlightRadar24 GPS jamming map: https://www.flightradar24.com/data/gps-jamming Stanford University GNSS Interference Detection using ADS-B map: https://waas-nas.stanford.edu/#/heatmap/ GPSJAM map: https://gpsjam.org/
<input type="checkbox"/>	Review NOTAMs prior to flight for identified areas of jamming, spoofing, or GPS outages.
<input type="checkbox"/>	Review contingency guidance in the event GPS jamming or spoofing is encountered, particularly if operating into a region identified above (IOPM Section 3.4.1).
<input type="checkbox"/>	Review procedures for deactivating the aircraft's GPS, in case it is necessary.
<input type="checkbox"/>	Verify that non-GPS based approach options are available at the destination and filed alternate(s).

During Flight			
<input type="checkbox"/>	<p>Regularly monitor aircraft avionics for the following symptoms of jamming or spoofing:</p> <table border="0"> <tr> <td> GPS Jamming <ul style="list-style-type: none"> Sudden loss of GPS signal Disrupted navigation or positioning systems Error messages on onboard systems GPS enters "ACQUISITION" mode FMS degrades to other systems (such as VOR, IRS, or DME) </td><td> GPS Spoofing <ul style="list-style-type: none"> GPS, FMS, and/or IRS position disagree message FMS degrades to other systems (such as VOR, IRS, or DME) Sudden, unexplained location jumps ADS-B Failure message Changes in navigational performance or increasing GPS position error False TAWS / GPWS alerts UTC inaccuracies* </td></tr> </table> <p><i>*Some spoofing scenarios might include the correct UTC time. Cross-check the aircraft independent clock against avionics.</i></p>	GPS Jamming <ul style="list-style-type: none"> Sudden loss of GPS signal Disrupted navigation or positioning systems Error messages on onboard systems GPS enters "ACQUISITION" mode FMS degrades to other systems (such as VOR, IRS, or DME) 	GPS Spoofing <ul style="list-style-type: none"> GPS, FMS, and/or IRS position disagree message FMS degrades to other systems (such as VOR, IRS, or DME) Sudden, unexplained location jumps ADS-B Failure message Changes in navigational performance or increasing GPS position error False TAWS / GPWS alerts UTC inaccuracies*
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<input type="checkbox"/>	Regularly monitor avionics-indicated position uncertainty for increasing uncertainty.		
<input type="checkbox"/>	Remain alert to FMS alerts to position error.		
<input type="checkbox"/>	Display VOR/NDB indications of nearby enroute serviceable stations on avionics.		
<input type="checkbox"/>	Compare magnetic headings on the operational flight plan(s) against the FMS and Magnetic Compass.		
Suspected GPS Interference			
If GPS interference is suspected or confirmed:			
<input type="checkbox"/>	If spoofing is encountered: Disable the aircraft GPS.		
<input type="checkbox"/>	Verify aircraft position by use of conventional NAVAIDs (if available).		
<input type="checkbox"/>	Be prepared to revert to conventional instrument flight procedures (i.e., non-GNSS based).		
<input type="checkbox"/>	Report the event to Air Traffic Services responsible for the airspace.		
<input type="checkbox"/>	If experiencing interference prior to entering NAT HLA: Report the interference in the Data Link Request for Clearance (RCL) message.		

Appendix P: RNP Maintenance Policy

Introduction

[Paragraphs A through B omitted from Sky Brief Summary.]

- C. The aircraft are certified capable of RNP operations to the level specified in the AFM for all relevant phases of flight (e.g., terminal, continental, oceanic / remote, and/or approach).



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