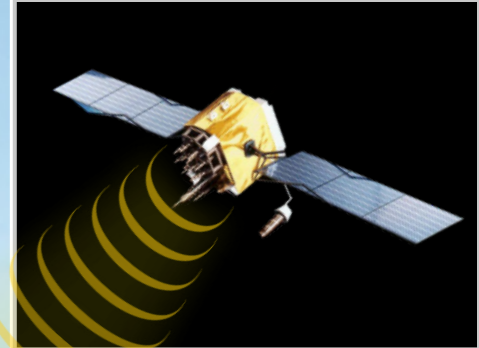
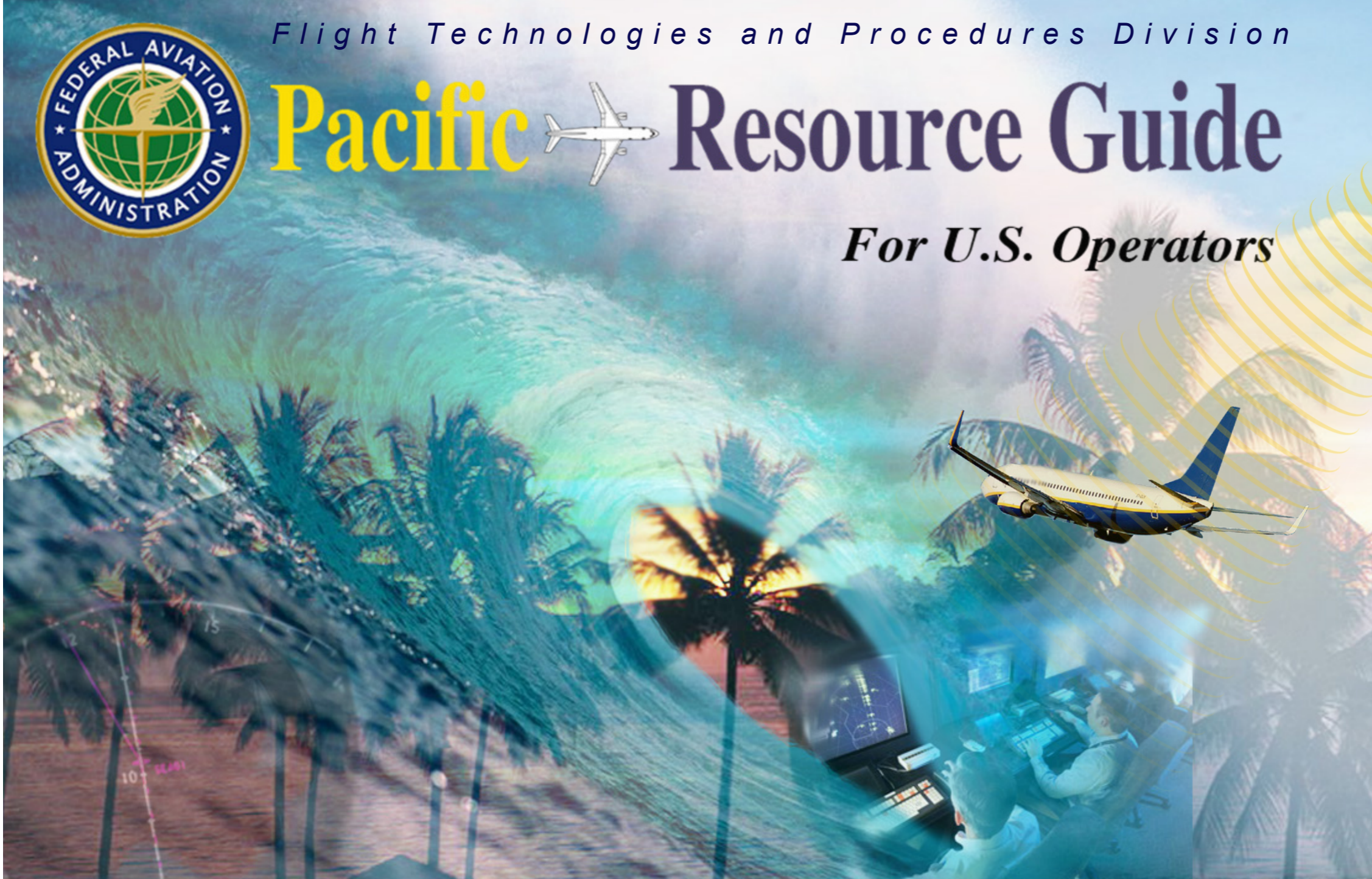




Flight Technologies and Procedures Division

Pacific Resource Guide

For U.S. Operators



The links within this resource guide are provided as a service to help you easily find pertinent information. The validity of the links is re-checked quarterly. Documents and other information may change between updates. Information provided by non-FAA sites should be considered strictly "for information only." You should confirm the accuracy of all such non-FAA information against official FAA documentation.

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3rd Quarter 2021
Updated Quarterly,

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or if you have Adobe Acrobat, click
the Advance Search button



CLICK TO VIEW ITEMS

- [Emphasis Items, Page 1](#)
- [Emphasis Items, Page 2](#)
- [Oceanic Errors](#)
- [Pacific Sites and Documents](#)
- [SLOP](#)
- [Contingency References](#)
- [Volcanic Ash and Solar Storms](#)
- [Weather Deviation](#)
- [Flight Planning](#)
- [ARINC 424 Coordinate Convention](#)

Emphasis Items



**Federal Aviation
Administration**

Emphasis Items

- **COVID-19 (FAA Website Updates)**
- FAA Site to lookup Prohibitions, Restrictions and Notice
- FAA Order 7110.65, Chapter 8
- [AIP: ENR 7.3 Special Procedures for In-Flight Contingencies in Oceanic Airspace](#)
- [International Aviation](#)
- [Track User Guide for Dispatchers](#)
- [Australian Organized Track System \(AUSOTS\) - Operational Concept](#)

Fuel Planning:

- [ICAO Fuel Requirements, Annex 6, Part 1 and Part 2 \(link to purchase\)](#)
- [SKYbrary: Fuel-In-Flight Management \(Normal Operations\)](#)
- [Skybrary: Fuel - Regulations](#)
- [14 CFR Part 91, §91.167](#)
- [14 CFR Part 121, §§ 121.639, 121.641, 121.643, 121.645](#)
- [14 CFR Part 135, §135.209, §135.223](#)
- AC 91-70B, Oceanic and Remote Continental Airspace Operations

Cold Weather Operations:

- [Cold Temperature Restricted Airports, InFO 15002](#)
- [Cold Temperature Operation, AIM Altimeter Setting Procedures](#)



Sample Oceanic Checklist

PBCS Operations

(RNP 4, RCP 240, RSP 180, Latency Monitoring)

Performance-Based Communication and Surveillance (PBCS) began on March 29, 2018. See the following documents:

- AC 90-117
- ICAO Doc 4444
- Data Link Compliance Guide
- B036/B054 Compliance Guide



**Federal Aviation
Administration**

Emphasis Items

Page 2

NEW

- **Coming Soon!** Streamlined Part 91 Operational Approval The Streamlined Part 91 Operational Approval is an innovative process for obtaining or amending up to ten commonly requested Part 91 Letters of Authorization (LOAs) when purchasing a new aircraft directly from the aircraft manufacturer. Aircraft manufacturers, training providers, manual vendors, and FAA policy experts collaborate to streamline the operational approval process for the operator and inspector.



Federal Aviation
Administration

OCEANIC ERRORS



Gross Navigation Errors (GNE)
Large Height Deviations (LHD)
Erosion of Longitudinal Spacing

- [FAA Order 7110.82, Reporting Oceanic Errors](#)
- [SAFO 13004](#)
- [PARMO Documentation](#)
- [En Route Monitoring Agency \(EMA\) Handbook](#)
- [FAA Order 8900.1, Volume 7 Investigation Chapter 3 Investigating Oceanic Errors](#)
- [Incidents, FAA Order 8020.11 and FAA Order 2150.3](#)
- [InFO 21001, New Oceanic Contingency Procedures, Effective November 5, 2020.](#)



Federal Aviation
Administration

Pacific Flight

[IPACG](#)

[ISPACG](#)

[Asia and Pacific \(APAC\) Office](#)

[Oakland Center](#)

[ICAO Doc 9750, Global Air Navigation Plan](#)

[SKYbrary](#)

[SKYbrary Reduced Vertical Separation Minima \(RVSM\)](#)

[Cross Polar Working Group \(CPWG\) \(See Polar Navigation\)](#)

[Honolulu Control Facility](#)

[FAA: Western-Pacific Region](#)

[Overview of Oceanic and Continental Remote Navigation](#)

[Asia/Pacific Regional Air Traffic Flow Management \(ICAO\)](#)

[Asia/Pacific Region ATM Contingency Plan](#)



Federal Aviation
Administration

Strategic Lateral Offset Procedures (SLOP)

- [United States Aeronautical Information Publication \(AIP\)](#),
See ENR 7.1, Section 8
- [ICAO Doc 4444, Air Traffic Management](#) (*Link to Purchase*) See chapter 16.
- [Advisory Circular \(AC\) 91-70](#)

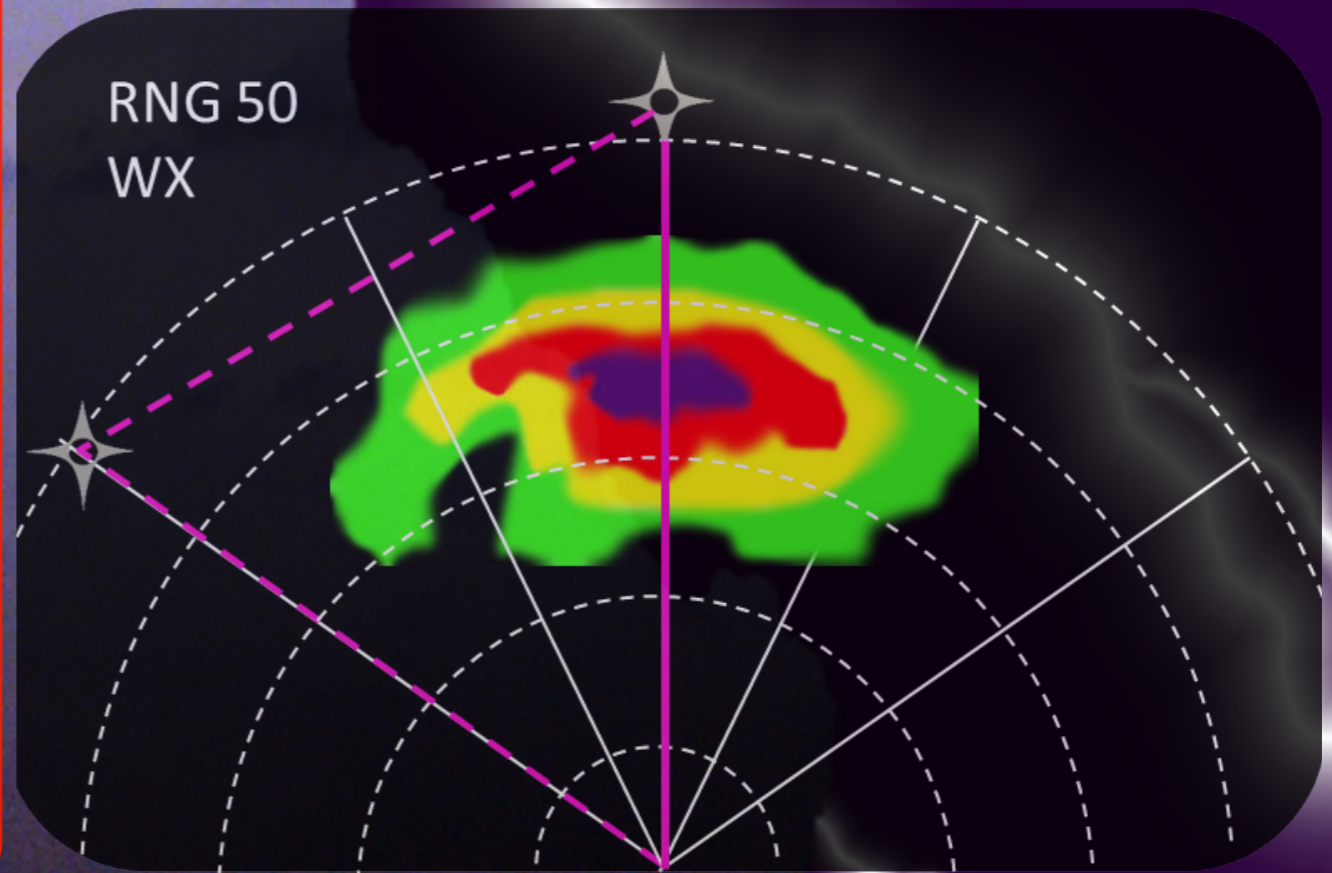


Federal Aviation
Administration



Contingency References

- [AIP: ENR 7.3 Special Procedures for In-Flight Contingencies in Oceanic Airspace](#)
- [ICAO DOC 4444 PANS-ATM \(Link to Purchase\)](#)
Chapter 15: Procedures Related To Emergencies, Communication Failure And Contingencies
- [ICAO Annex 2 \(Link to Purchase\)](#)
Chapter 3: General Rules
- [SKYbrary: Emergency Decent: Guidance for Flight Crews](#)
- [Airborne Weather Radar Limitations](#)
- [InFO 21001, New Oceanic Contingency Procedures, Effective November 5, 2020](#)
- [Emergency Assistance Guidance from Air Traffic Control Order JO 7110.65](#)



Federal Aviation
Administration

Volcanic Links

- [World VAAC Map](#)
- [SKYbrary](#)
- [ATM Volcanic Ash Contingency Plan Template](#)
- [Washington DC Volcanic Ash Advisory Center](#)
 1. [Current Volcanic Ash Advisories](#)
 2. [Volcanic Ash Advisory Archive](#)
 3. [Volcanic Ash Forecast Transport and Dispersion](#)
- [Wellington Ash Advisories](#)
- [VAAC Buenos Aires](#)
- [Tokyo VAAC](#)
- [Anchorage Volcanic Ash Advisory Center](#)
- [ICAO: Doc 9974 ANB/487](#)
- [Volcanic Ash Reporting Form in the AIM](#)

Current Volcanic Eruptions

- [USGS Volcano Hazards](#)

Solar and Space Weather

- [Current Space Weather Conditions, Alerts, Watches, and Warnings](#)
- [Space Weather](#)
- [Solar Wind Prediction](#)

Volcanic Ash and Solar Storms



Federal Aviation
Administration

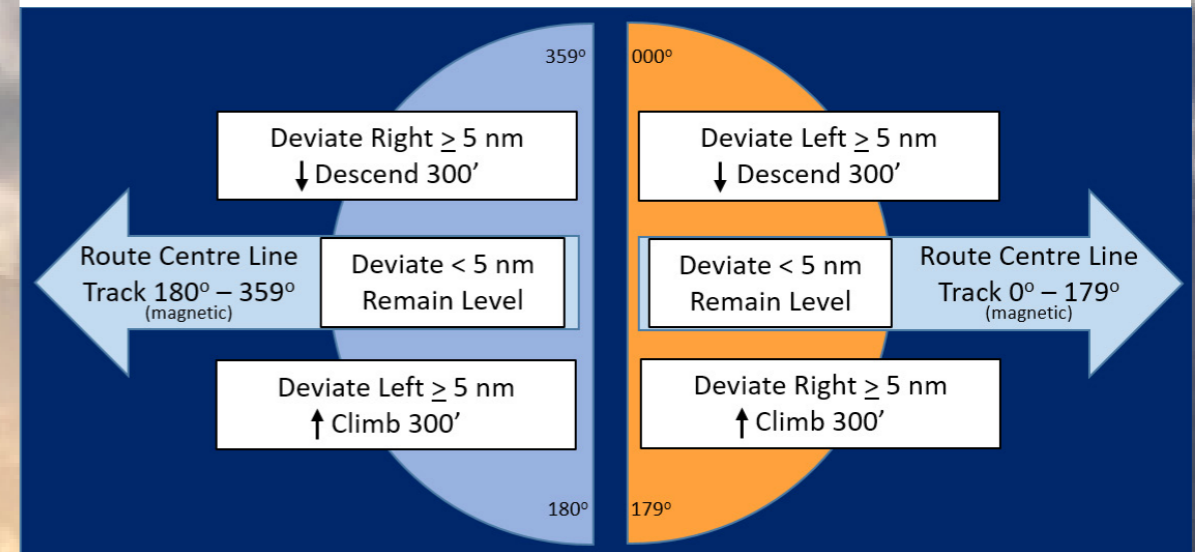


Aviation Weather

[Weather Abbreviations \(FltPlan.com\)](#)

- [Asia/Pacific Regional Sigmet Guide](#)
- [Surface Weather Observation Stations ASOS/AWOS](#)
- [Aviation Weather Center \(NOAA\)](#)
- [Aviation Weather Center International Flight Folder Program](#)
- [Alaska Aviation Weather Unit \(AAWU\)](#)
- [AIM: Thunderstorm Flying \(See 7-1-29\)](#)
- [AC 00-6, Aviation Weather](#)
- [AC 00-24, Thunderstorms](#)
- [AC 00-30, Clear Air Turbulence Avoidance.](#)
- [AC 00-45, Aviation Weather Services.](#)
- [AC 00-54, Pilot Windshear Guide.](#)
- [AC 00-57, Hazardous Mountain Winds.](#)
- [RVR Status Monitor](#)
- [FAA Weather Cameras](#)
- **FAA WeatherCams (Google Chrome)**
- [NAV Canada Weather Cameras](#)
- [NAV Canada Aviation Weather](#)

For weather deviation procedures, see [ICAO Doc 4444 \(Link to Purchase\)](#)



Federal Aviation
Administration

AIRMETS AND SIGMETS

Flight Planning Information

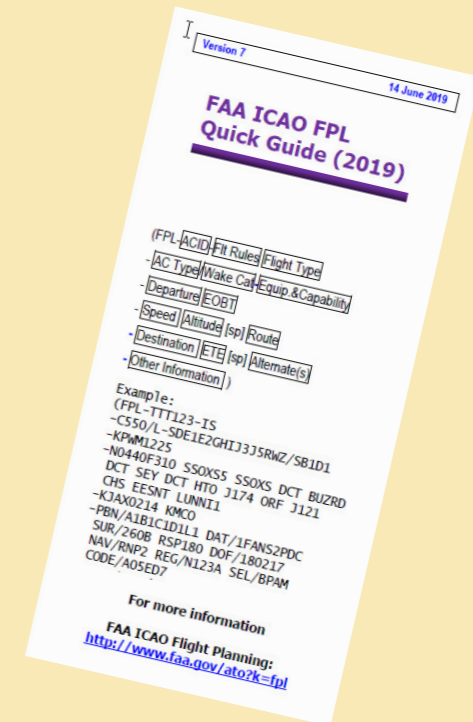
[FAA Website](#)

[FAA Form 7233-4](#)

[ICAO Doc 7030 \(Link to Purchase\)](#)

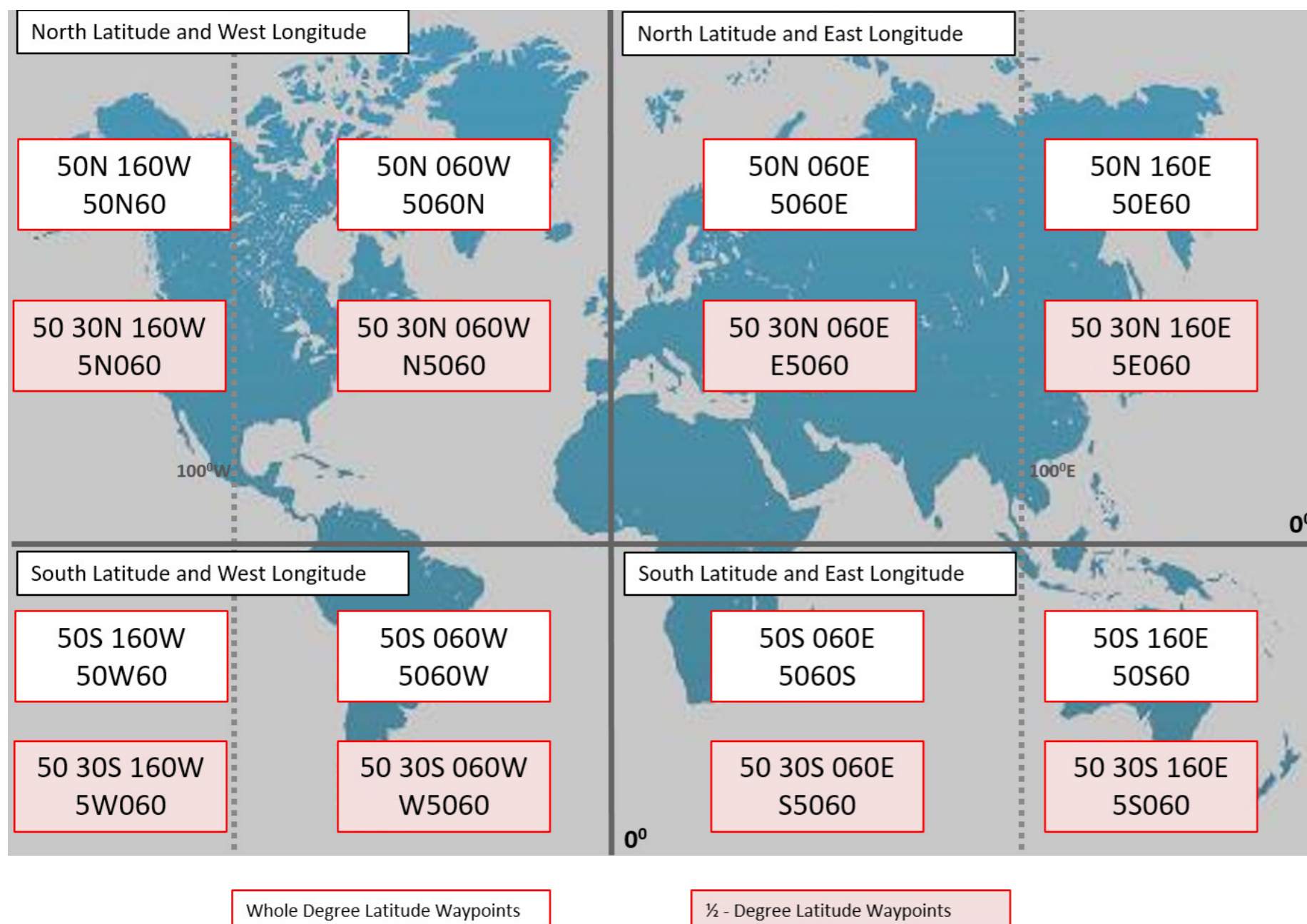
Useful Links

- [ICAO Flight Planning Reference Guide](#)
- [Aeronautical Information Manual \(AIM\) Section 1, Paragraph 5-1-9](#)
- [Flight Plan Filing \(SKYbrary\)](#)
- [Filing for data link operations \(See AC 90-117\)](#)
- [Flight Planning for Oceanic and Remote Continental Airspace \(See AC 91-70\)](#)
- [Distance From To \(use Google Chrome\)](#)
- [Sunrise, Sunset, Solar Noon, and Solar Position](#)
- [SkyVector Aeronautical Charts](#)
- [Great Circle Mapper](#)



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Oceanic Waypoints ARINC 424 Shorthand System



- NAT doc 007, (North Atlantic Operations and Airspace Manual), chapter 15 "Prevention of Deviations from Track as a result of Waypoint Insertion Errors" to "...review the 15.2, "The Solution"
- Half Degree Discussion IATA Informational Paper - ICAO
- ARINC 424 Shorthand System - Code7700
- NAT OPS Bulletin 2018_003, Waypoint Insertion/Verification Special Emphasis Items



Airspace

d ***CLICK TO VIEW ITEMS***

- [Polar Navigation](#)
- [Route Guidance](#)
- [Pacific Routes](#)
- [RVSM](#)
- [Pacific FIRS](#)
- [Oakland](#)
- [Anchorage](#)
- [Fukuoka](#)
- [Nadi](#)
- [Tahiti](#)
- [Brisbane and Melbourne](#)
- [Auckland Oceanic](#)

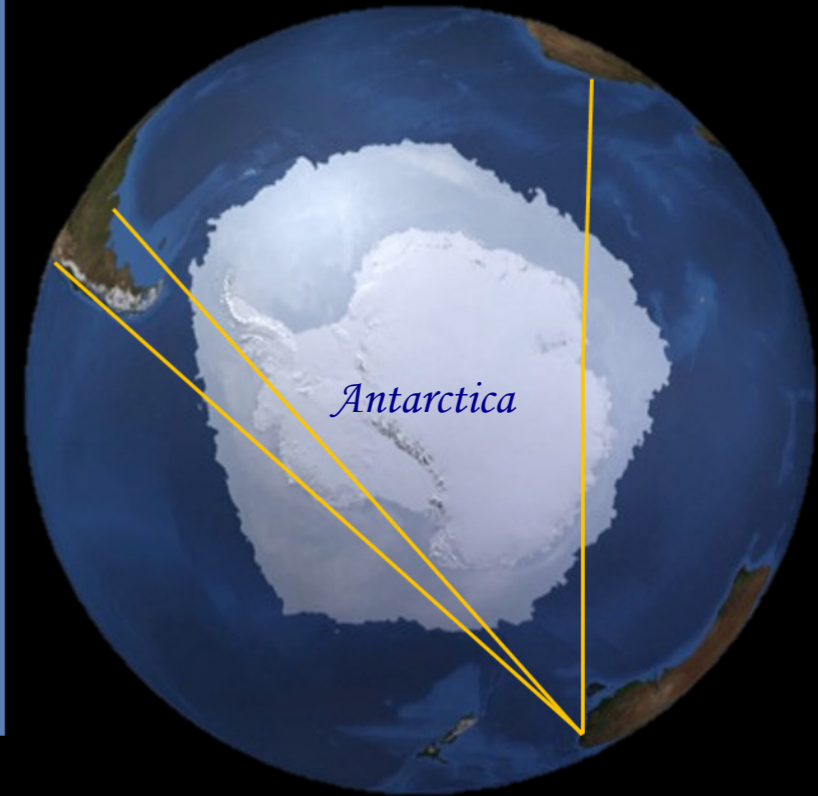


**Federal Aviation
Administration**

Polar Navigation



- [AC 120-42B: Extended Operations \(ETOPS\) and Polar Operations](#)
- [AC 135-42: Extended Operations \(ETOPS\) and Operations in the North Polar Area](#)
- [AC 91-70B: Oceanic and Remote Continental Air-space Operations](#)
- [B036/B054 Compliance Guide](#)
- [14 CFR Part 121, Appendix P, Requirements for ETOPS and Polar Operations](#)
- [Cross Polar Work Group \(CPWG\)](#)
- [AERO 16, Boeing: Polar Route Operations](#)
- [SKYbrary: Grid Navigation](#)
- [Polar Route Asia Pacific Turbulence Maps](#)
- [NOAH: Aurora-30 Minute Forecast](#)



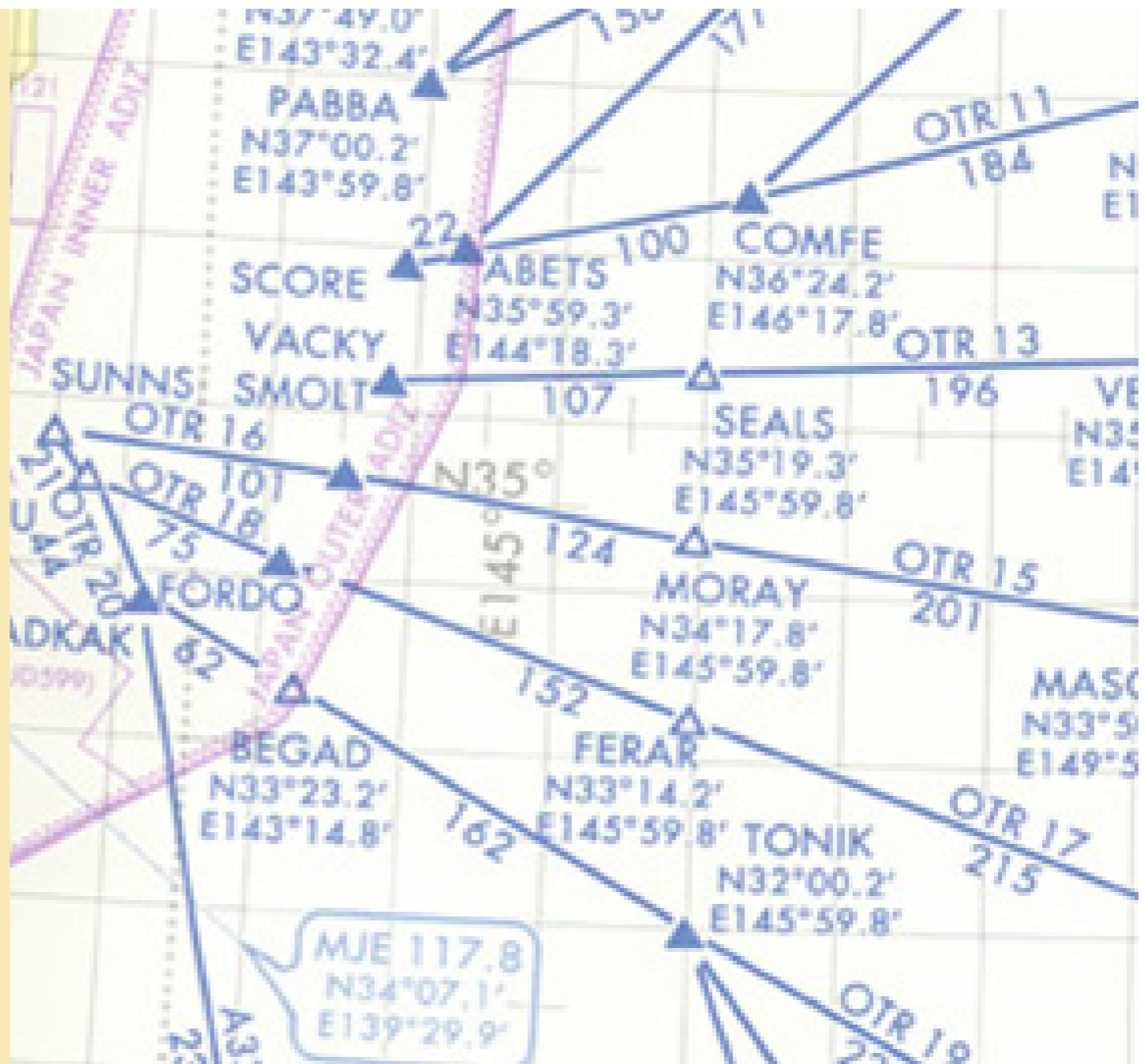
Federal Aviation
Administration

Route Guidance

- [CEP Flight Planning Guidance \(Route system from Hawaii to California\)](#)
- Order JO 7110.65, Air Traffic Control
- [Order JO 7350.9, Location Identifiers](#)
- [PACOTS NOTAM Retrieval](#)

Note: Select ARTCC Notices, TFRs and Special Notice Page tab, select ZAK (KZAK) Oakland OCA/FIR, then select View Notices (includes TFRs) tab. PACOTS are found in this NOTAM section.

- [Anchorage ARTCC - Resources for Pilots & Dispatchers](#)
- [Track Advisory User's Guide for Dispatchers](#)
- [AUSOTS - Australian Organized Track Structure](#)
- [AC 20-150, Airworthiness Approval of Satellite Voice \(SATVOICE\) Equipment Supporting Air Traffic Service \(ATS\) Communication](#)



Federal Aviation
Administration

Pacific Tracks



Links:

- [Pacific Organized Track System](#)
- [PACOTS Flight Planning Guidance](#)
- [AUSOTS - Australian Organized Track Structure](#)



**Federal Aviation
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Reduced Vertical Separation Minimum

- [FAA RVSM Page](#)
- [AGHME Locations and Operating Status](#)
- [Monitoring](#)
- [AC 91-85](#)
- [14 CFR Part 91, Appendix G](#)
- [RVSM Approvals and AGHME Monitoring Status Results](#)
- [SKYbrary](#)
- [RVSM Documents](#)
- [NAARMO FAQ](#)
- [RVSM Documentation \(ADS-B\)](#)

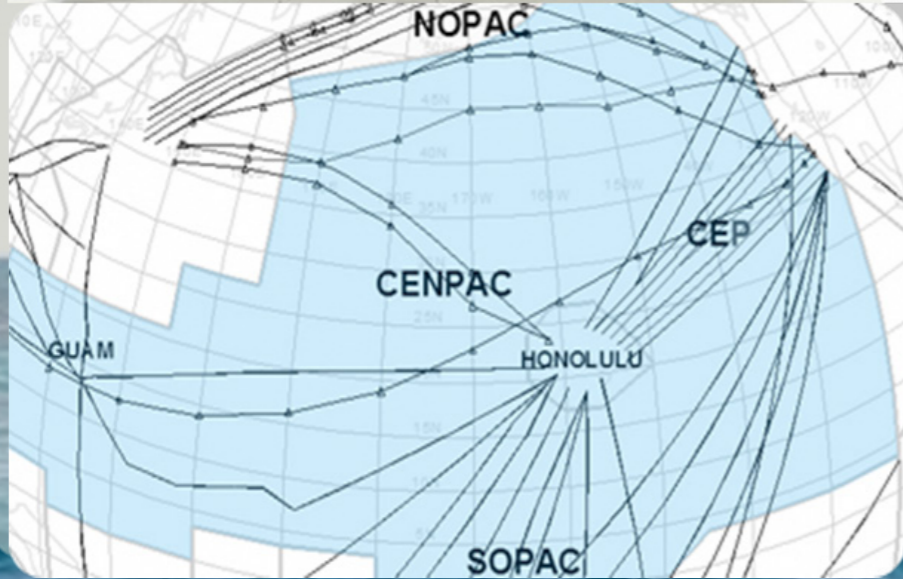


AGHME SITE



Federal Aviation
Administration

Oakland FIR



- [Oakland Oceanic](#)
- [Pacific Organized Track System](#)
- [KZAK Oceanic ATC Operations](#)
- [Central East Pacific \(CEP\) Routes Guidelines \(PDF\)](#)
- [Guam Area Preferential Routings \(PDF\)](#)
- [High Altitude User Preferred Routes \(PDF\)](#)
- [Oakland ARTCC Oceanic Points of Contact \(PDF\)](#)
- [Oakland Oceanic Control Area/Flight Information Region \(OCA/FIR\) \(PDF\)](#)
- [Oakland Oceanic CPDLC \(PDF\)](#)
- [Pacific Organized Track System \(PACOTS\) Guidelines \(PDF\)](#)
- [User Preferred Route \(UPR\) Flight Planning Guidelines \(PDF\)](#)
- [Informal Pacific Coordinating Group \(IPACG\)](#)
- [Informal South Pacific Coordinating Group \(ISPACG\)](#)
- [Oceanic Workgroup Meeting \(OWG\)](#)



Federal Aviation
Administration



Anchorage FIR

- [Anchorage Weather](#)
- [Alaskan Region Airports Division](#)
- [Anchorage ARTCC - Resources for Pilots & Dispatchers](#)
- [Anchorage Air Route Traffic Control Center Fact Sheet](#)
- [FAA Regional Offices and Aeronautical Center](#)
- [Anchorage ARTCC - Resources for Pilots and Dispatcher](#)
- [Alaskan Flight Service Stations](#)
- [Anchorage Air Route Traffic Control Center \(ZAN\)](#)
- [ZAN User Preferred Routings \(UPR\) Guide](#)
- [FAA, Flying Alaska Safely](#)



Federal Aviation
Administration

Fukuoka FIR



- [Japan Airspace Safety Monitoring Agency](#)
- [Civil Aviation Bureau \(MLIT\)](#)
- [Japan Meteorological Agency](#)
- [Aviation Weather Center, SIGMET Pacific](#)
- [Flight Information Region \(FIR\) and Control Area](#)
- [Data Link Operation and PBCS Implementation in Japan](#)



Federal Aviation Administration

Nadi FIR

- [Aviation Digital Data Service \(ADDS\) Conditions at NFFN \(Nandi, Fiji\)](#)
- [High Frequency Management Guidance Material for the South Pacific Region](#)
- [Civil Aviation Authority of Fiji](#)
- [ICAO Current FIR Status](#)
- [Fiji Airports](#)
- [PBN Implementation Barriers and Solutions for Small States - Fiji](#)



Federal Aviation
Administration

- French Polynesia AIP
- Mandatory French Polynesia Entry Requirements and Sanitary Measures on Board and at Airports
- Conditions of Entry in French Polynesia
- Business Aircraft Ops to French Polynesia – Part 1: Airports & Ground Handling
- Landing in French Polynesia
- Arriving in French Polynesia
- Aviation Digital Data Service (ADDS)
- International Civil Aviation Organization Working Paper: Experience of Tahiti ACC in the Provision of Oceanic Air Traffic Services

Tahiti FIR



Federal Aviation
Administration

Brisbane and Melbourne FIRs

- [Australia AIP](#)
- [airservices: NOTAM MAPS](#)
- [airservices: Air Traffic Management Services](#)
- [Australian Government Civil Aviation Safety Authority: General](#)
- [Australian Government Civil Aviation Safety Authority: Pre-Flight Briefing and Notification](#)
- [Australian Government Civil Aviation Safety Authority: Operations](#)
- [Australian Government Civil Aviation Safety Authority: Emergency Procedures](#)
- [Australian Government Bureau of Meteorology](#)
- [Australian Government Bureau of Meteorology Darwin Volcanic Ash Advisory Centre](#)



Federal Aviation
Administration

Auckland Oceanic FIR

- [Auckland Oceanic FIR](#)
- [New Zealand AIP](#)
- [CAA, New Zealand](#)
- [CAA, New Zealand: Aviation Weather Products](#)
- [New Zealand airspace – CAA \(pdf\)](#)
- [U.S. AIP, ENR 7.1 General Procedures](#)
- [AIRMETs/SIGMETs - forecasts - AWC - AIRMETs/SIGMETs](#)





CLICK TO VIEW ITEMS

United States

Flight Standards

- [OpSpec Cross Reference \(1\)](#)
- [OpSpec Cross Reference \(2\)](#)
- [OpSpec Cross Reference \(3\)](#)
- [OpSpec Cross Reference \(4\)](#)
- [OPSPEC Guidance](#)
- [14 CFR Part 91](#)
- [14 CFR Part 121](#)
- [14 CFR Part 135](#)
- [Advisory Circulars](#)
- [TSO](#)
- [FAA Orders](#)

ICAO

- [International Civil Aviation Organization](#)
- [International Web Sources](#)

Pilot Resources

- [Pilot Resources](#)

References



**Federal Aviation
Administration**

FLIGHT STANDARDS

Certification and Application

- The Generic Process for Certifying Organizations
- Airworthiness Certification Process
- Application for U.S. Airworthiness Certificate
- Flight Standards Information Management System (FSIMS)
- Examiner and Inspector Handbooks and Manuals
- Online Resources: Resources for Mechanics
- Oceanic and Remote Continental Compliance Guide (B036 and B054)
- Data Link Communication (A056) Compliance Guide
- WebOPSS, DCS, eAIM, OAPS Overview
- WebOPSS Training

Satellite and Performance Based Navigation

- Satellite Navigation - GPS/WAAS Approaches
- Performance Based Navigation (PBN) Implementation and Usage
- Flight Technologies and Procedures Division: Flight Operations Group
 1. Performance Based Navigation (PBN) Guidance & Approval
 2. Satellite Based Navigation (SatNav)
 3. Data Communications (DataComm)
 4. Oceanic and Remote Airspace (Special Areas of Operation)



FAA Inspector Guidance:

FAA Order 8900.1

8900.1 Contents

General Handbook Information

General Information and the Certification Process

Preparation of FAA Operating Certificates

Certification, Air Carrier and 91K: Gen. Information

Air Operator and Air Agency Certification and Application Process for 14 CFR 91K, 121, and 135

| Phase | 91 K | 121 | 135 |
|-------|------|------|------|
| 1 | Link | Link | Link |
| 2 | Link | Link | Link |
| 3 | Link | Link | Link |
| 4 | Link | Link | Link |
| 5 | Link | Link | Link |

Part 125, Introduction to Part 125 Related Tasks

Part 125, Conduct Certification of a 14 CFR Part 125 Operator



**Federal Aviation
Administration**

Operation Specification Cross Reference (Page 1 of 4)

| Special Operations | Part 121 (Ops Spec) | Part 135 (Ops Spec) | Part 125 (Ops Spec) | Part 91 (LOA) | Part 91K (MSPEC) | Other Approvals & Approval References | FPL Field 10a | FPL Field 10b | FPL Field 18 |
|---------------------------------|---------------------|---------------------|---------------------|---------------|------------------|--|--------------------|---------------|--------------|
| RVSM | B046/D092 | B046/D092 | B046/D092 | B046/D098 | B046/D092 | AC 91-85 | W | - | - |
| CPDLC | A056 | A056 | A056 | A056 | A056 | AC 90-117 | J1-7, M1-3, P1, P2 | - | - |
| GPS | N/A | N/A | N/A | N/A | N/A | Order 8900.1, Volume 4, Chapter 1 section 2, 4-31 or Aeronautical Information Manual (AIM) Chapter 1 – Air Navigation (see 1-1-18). | G | - | - |
| GPS with WAAS | N/A | N/A | N/A | N/A | N/A | Order 8900.1, Volume 4, Chapter 1 section 2, 4-32 or Aeronautical Information Manual (AIM) Chapter 1 – Air Navigation (see 1-1-19). | G, Z | - | NAV/SBAS |
| ADS-B Out (Domestic) | N/A | N/A | N/A | N/A | N/A | AC 20-165 and TSO-C166 AC 90-114 | - | B1 or B2 | SUR/260b |
| ADS-B Out UAT (Domestic) | N/A | N/A | N/A | N/A | N/A | AC 20-165 and TSO-154 AC 90-114 | - | U1 or U2 | SUR/282B |



Operation Specification Cross Reference (Page 2 of 4)

| Special Operations | Part 121 (Ops Spec) | Part 135 (Ops Spec) | Part 125 (Ops Spec) | Part 91 (LOA) | Part 91K (MSPEC) | Other Approvals & Approval References | FPL Field 10a | FPL Field 10b |
|-----------------------|---------------------|---------------------|---------------------|---------------|------------------|--|---------------|---------------|
| ADS-C | A056 | A056 | A056 | A056 | A056 | AC 90-117 | - | D1,G1 |
| NAT HLA Unrestricted | B036 + B039 | B036 + B039 | B036 + B039 | B036 + B039 | B036 + B039 | | X | - |
| RNP 10, Multiple LRNS | B036 | B036 | B036 | B036 | B036 | B036 provides the basic requirements for RNP10 and RNP4 using dual Long Range Navigation Systems installed and operational. Additional Ops Specs may be required depending on the airspace or special area of operation to be flown: Central East Pacific (CEP): B037 North Pacific (NOPAC): B038 Areas of magnetic unreliability: B040 North Polar: B055 Other Areas: Check B050 for applicability | R | - |
| RNP 10, Single LRNS | B054 | B054 | B054 | B054 | B054 | B054 provides the requirements for RNP 10 using a single Long Range Navigation System in the limited areas defined. | R | - |
| RNP 4 | B036 | B036 | B036 | B036 | B036 | B036 provides the basic requirements for RNP10 and RNP4 using dual Long Range Navigation Systems installed and operational. Additional Ops Specs or LOA may be required depending on the airspace or special area of operation to be flown: Central East Pacific (CEP): B037 North Pacific (NOPAC): B038 Areas of magnetic unreliability: B040 North Polar: B055 | R | - |
| RNP 2 | B036 | B036 | B036 | B036 | B036 | | R | NAV/RNP 2 |



Operation Specification Cross Reference (Page 3 of 4)

| Special Operations | Part 121 (Ops Spec) | Part 135 (Ops Spec) | Part 125 (Ops Spec) | Part 91 (LOA) | Part 91K (MSPEC) | Other Approvals & Approval References | FPL Field 10a | FPL Field 10b | FPL Field 18 |
|--|---------------------|---------------------|---------------------|--------------------------|------------------|---|---------------|---------------|-----------------------------|
| RNAV | B034 | B034 | B034 | Note 1 Note 2 B034 | B034 | B034 authorizes an operator to conduct instrument flight rules (IFR) Class I Navigation using an Area Navigation (RNAV) system. For operations outside the U.S. including the Gulf of Mexico Q-routes, the relevant area must be authorized in B050 in conjunction with B034. | R | - | PBN/B1-B6 |
| RNAV 5 | B034 | B034 | B034 | Note 1 Note 2 | B034 | | R | - | PBN/B1-B6 |
| RNAV 2 | B035 | B035 | B035 | Note 1 B035 | B035 | US Domestic Operations: AC 90-100 | R Note 3,4 | - | PBN/D1,D2 or D4 Note 3,4 |
| RNAV 1 | C063 | C063 | C063 | Note 1 C063 | C063 | AC 90-100 AC 90-105 | R Note 3,4 | - | PBN/D1,D2 or D4 Note 3,4 |
| RNP 1 | C063 | C063 | C063 | Note 1 C063 | C063 | AC 90-105 | G,R Note 4 | - | PBN/O1 or O2 |
| RNP AR Approach | C384 | C384 | C384 | C384 | C384 | AC 90-101 | G,R | - | PBN/T1 or T2 |
| RNAV (GPS) Approach (LNAV, LNAV/VNAV) | C052 | C052 | C052 | Note 1 | C052 | AC 90-105 | G,R | - | PBN/S1 Note 5 |



Operation Specification Cross Reference (Page 4 of 4)

| Special Operations | Part 121 (Ops Spec) | Part 135 (Ops Spec) | Part 125 (Ops Spec) | Part 91 (LOA) | Part 91K (MSPEC) | Other Approvals & Approval References | FPL Field 10a | FPL Field 10b | FPL Field 18 |
|--|------------------------------|------------------------------|---------------------|----------------|------------------|---------------------------------------|---------------|---------------|--------------------|
| RNAV (GPS) Approach (LNAV, LNAV/VNAV using Baro-VNAV) | C052 | C052 | C052 | Note 1 | C052 | AC 90-105 | G,R | - | PBN/S2 Note 6 |
| LPV approach (APV with SBAS) | C052 B030 for Alaska only | C052 B030 for Alaska only | C052 | C052 Note 1 | C052 | AC 90-107 | B,G, Z | - | Note 7 NAV/SBAS |

Notes

Note 1: Some Part 91 operations outside of the Domestic US NAS require an LOA, for others it is optional. Consult the Foreign State AIP for further information regarding operational requirements.

Note 2: Notice 8900. 539 decommissioned the template for Title 14 of the Code of Federal Regulations (14 CFR) part 91 Letter of Authorization (LOA) B034. The LOA provided U.S. part 91 operators with confirmation of Area Navigation (RNAV) system capability to fly on Precision RNAV (P-RNAV) or Basic RNAV (B-RNAV)/RNAV 5 routes and procedures, predominantly in European airspace.

Note 3: In addition to PBN/ information, NAV/ information may optionally be filed in order to indicate RNAV capability by phase of flight (departure, en route, arrival). This allows a filer to request RNAV procedures for only specific phases of flight. The AIM Section 5-1-9 contains instructions for filing RNAV capability in NAV/. Remember that when including NAV/, enter 'Z' in Field 10a.

Note 4: When filing a PBN/ code for RNAV or RNP, Field 10 must contain consistent capability information as follows:

- If PBN/ indicates GNSS (e.g. C2)... Field 10a must contain 'G'
- If PBN/ indicates DME/DME (e.g. B3)... Field 10a must contain 'D'
- If PBN/ indicates VOR/DME (e.g. B4)... Field 10a must contain 'D' and ('O' or 'S')
- If PBN/ indicates DME/DME/IRU (e.g. D4)... Field 10a must contain 'D' and 'I'

Note 5: Insert S1 in PBN/ for those aircraft that have an RNAV system approved for RNAV (GPS) or GPS approaches IAW AC 90-105, Appendix A.

Note 6: Insert S2 in PBN/ for those aircraft that have an RNAV system approved for RNAV (GPS) or GPS approaches IAW AC 90-105, Appendix A, and a barometric vertical navigation (baro-vnav) capability for vertical guidance approved in accordance with AC 90-105, Appendix B.

Note 7: Insert "B" In Item 10a for aircraft with WAAS-GPS approach RNAV systems approved IAW AC 90-107. Operators may also include PBN codes S1 or S2 (only one) based on RNAV system approval. Please consult Airplane Flight Manual (AFM) or supplement to verify capability.





United States Operation Specifications *(May be applicable in the Pacific)*

Flight Standard Information Management System (FSIMS)

| Operations Specifications | |
|----------------------------------|---|
| <u>A056</u> | Data Link Communications (CPDLC ADS-C) |
| <u>B029</u> | Drift-down or Fuel Dumping |
| <u>B030</u> | IFR Navigation Using GPS/WAAS RNAV Systems |
| <u>B034</u> | RNAV Class I |
| <u>B036</u> | Oceanic and Remote Continental Navigation Using Multiple Long-Range Navigation (M-LRNS) |
| <u>B037</u> | Operation in Central East Pacific (CEP) Airspace |
| <u>B038</u> | North Pacific (NOPAC) Operations |
| <u>B040</u> | Areas of Magnetic Unreliability |
| <u>B043</u> | Special Fuel Reserves |
| <u>B044</u> | Planned Re-dispatch/Re-release (Part 121 Only) |
| <u>B046</u> | RVSM |
| <u>B050</u> | Authorized Areas of En Route Operations, Limitations, and Provisions |
| <u>B055</u> | North Polar Operations |
| <u>B342</u> | ETOPS (Two Engines), Parts 121 and 135 |
| <u>B344</u> | ETOPS (More than Two Engines), Parts 121 and 135 |





United States

14 CFR Part 91

| 14 CFR Part 91 <i>Inclusive but not limited to:</i> | |
|--|--|
| <u>91.3</u> | Responsibility and Authority of the PIC |
| <u>91.123</u> | Compliance with ATC Clearances and Instructions |
| <u>91.181</u> | Course to be Flown |
| <u>91.213</u> | Inoperative instruments and equipment. |
| <u>91.511</u> | Communication and navigation equipment for overwater operations |
| <u>91.703</u> | Operations of civil aircraft of U.S. registry outside of the United States |
| <u>91.1019</u> | Conducting tests and inspections |
| <u>91.1041</u> | Aircraft proving and validation tests |
| <u>Appendix G</u> | Operations in Reduced Vertical Separation Minimum (RVSM) Airspace |





United States

14 CFR Parts 117 & 121

| 14 CFR Part 117 <i>Inclusive but not limited to:</i> | |
|---|----------------------------|
| <u>Tables A-C</u> | Maximum Flight Time Limits |

| 14 CFR Part 121 <i>Inclusive but not limited to:</i> | |
|---|--|
| <u>121.11</u> | Rules applicable to operations in a foreign country |
| <u>121.93</u> | Route requirements: General |
| <u>121.99</u> | Communications facilities – domestic and flag operations |
| <u>121.113</u> | Area and route requirements: General |
| <u>121.122</u> | Communications facilities-supplemental operations |
| <u>121.351</u> | Communication and navigation equipment for extended over-water operations and for certain other operations |





United States

14 CFR Part 135

| 14 CFR Part 135 <i>Inclusive but not limited to:</i> | |
|---|---|
| <u>135.3</u> | Rules applicable to operations subject to this part |
| <u>135.43</u> | Crewmember certificates: International operations |
| <u>135.73</u> | Inspections and tests |
| <u>135.98</u> | Operations in the North Polar Area |
| <u>135.145</u> | Aircraft proving and validation tests |
| <u>135.165</u> | Communication and navigation equipment: Extended over-water or IFR operations |
| <u>135.364</u> | Maximum flying time outside the United States |





United States Advisory Circulars (AC)

| Advisory Circulars (AC) <i>Inclusive but not limited to:</i> | |
|---|---|
| <u>AC 00-63</u> | Use of Cockpit Displays of Digital Weather and Aeronautical Information |
| <u>AC 20-138</u> | Airworthiness Approval of Positioning and Navigation Systems |
| <u>AC 20-140</u> | Guidelines for Design Approval of Aircraft Data Link Systems Supporting Air Traffic Services (ATS) |
| <u>AC 20-150</u> | Airworthiness Approval of Satellite Voice Equipment Supporting Air Traffic Service (ATS) Communication |
| <u>AC 20-165</u> | Airworthiness Approval of Automatic Dependent Surveillance—Broadcast (ADS -B Out System) |
| <u>AC 90-96</u> | Approval of U.S. Operators and Aircraft to Operate Under IFR in European Airspace for B-RNAV/RNAV5 and P-RNAV |
| <u>AC 90-105</u> | Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace |
| <u>AC 90-114</u> | Automatic Dependent Surveillance—Broadcast (ADS-B) Operations |
| <u>AC 91-70</u> | Oceanic and Remote Continental Airspace Operations |
| <u>AC 91-85</u> | Approval of Aircraft and Operators for flight in Reduced Vertical Separation Minimum Airspace |
| <u>AC 120-42</u> | Extended Operations (ETOPS and Polar Operations) |
| <u>AC 90-117</u> | Data Link Communications |
| <u>AC 135-42</u> | Extended Operations (ETOPS and Polar Operations) |





United States Technical Standard Orders (TSO)

| Technical Standard Orders (TSO) <i>Inclusive but not limited to:</i> | |
|---|---|
| <u>TSO-C115</u> | Flight management systems (FMS) using multi-sensor inputs |
| <u>TSO-C145</u> | Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS) |
| <u>TSO-C146</u> | Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS) |
| <u>TSO-C154</u> | Universal Access Transceiver (UAT) Automatic Dependent Surveillance-Broadcast (ADS-B) Equipment |
| <u>TSO-C157</u> | Aircraft Flight information Services-Broadcast (FIS-B) Data Link Systems and Equipment |
| <u>TSO-C159</u> | Next Generation Satellite Systems (NGSS) Equipment |
| <u>TSO-C160</u> | Very High Frequency (VHF) Data Link (VDL) Mode 2 Communication Equipment |
| <u>TSO-C166</u> | Extended Squitter Automatic Dependent Surveillance - Broadcast (ADS-B) and traffic information |
| <u>TSO-C195</u> | Avionics Supporting Automatic Dependent Surveillance - Broadcast (ADS-B) Aircraft Surveillance Applications (ASA) |
| <u>TSO-C196</u> | Airborne Supplemental Navigation Sensors for Global Positioning System Equipment Using Aircraft-Based Augmentation |





United States FAA Orders

| FAA Orders <i>Inclusive but not limited to:</i> | |
|---|--|
| 7110.82 | Reporting Oceanic Errors |
| 8900.1 | Flight Standards Information Management System (FSIMS) |



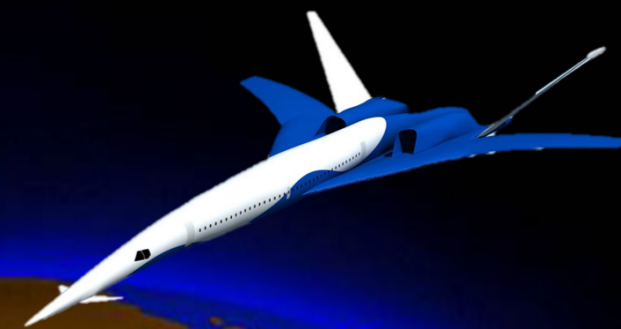


International Civil Aviation Organization (ICAO) Documents

[Online Store](#)

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International Documents *Inclusive but not limited to:*

[ICAO APAC Electronic Documents](#)

[Satellite Voice Guidance Material](#)

[Asian/Pacific Regional Performance-Based Navigation Implementation Plan](#)

[High Frequency Management Guidance Material for the South Pacific Region](#)

[Asia/Pacific Air Navigation Planning and Implementation Regional Group \(APANPIRG\) Procedural Handbook](#)

[Asia/Pacific Regional Interface Control Document \(ICD\) for ATS Interfacility Data Communications \(AIDC\)](#)

[Asia/Pacific Air Navigation Concept of Operations](#)

[GOLD, DOC 10037](#), Global Operational Data Link Document (Link to Purchase)

[ICAO DOC 9613](#) Performance-based Navigation (PBN) Manual (Link to Purchase)

[ICAO DOC 9750, Global Air Navigation Plan](#)

[ICAO DOC 9869, Performance-Based Communication and Surveillance \(PBCS\) Manual](#) (Link to Purchase)



**Federal Aviation
Administration**



INTERNATIONAL WEB SOURCES

[NACC Current FIR Status](#)

[Airfield Charts \(AIP Links\)](#)

[State AIPs](#)

[Embry-Riddle List of AIP Links](#)

- [Australia AIP](#)
- [China](#) (*Requires Registration*)
- [Japan Aeronautical Information Service Center \(AIS\)](#)
- [New Zealand AIP](#)
- [Civil Air Authority of the Philippines ATS](#)
- [Republic \(South\) of Korea](#)
- [Notice for Incheon \(RKRR\) Flight](#)
- [Russian Federation \(AIP\)](#)
- [Taiwan](#)



Federal Aviation
Administration

Pilot Resources

Charts and Guides

- digital — Terminal Procedures Publication (d-TPP)/Airport Diagrams
- [VFR Raster Charts](#)
- [IFR En Route Aeronautical Charts and Planning](#)
- [Instrument Flight Procedures Information Gateway](#)
- [Aeronautical Chart User Guide](#)
- [Airport Diagrams](#)
- [Getting Started with ADS-B SAPT](#)

Flight Planning

- [NOTAMS](#)
- [Aeronautical Information Publication \(AIP\)](#)
- [Aeronautical Information Manual \(AIM\)](#)
- [Predictive RAIM](#)
- [Temporary Flight restrictions](#)
- [Aviation Weather Center](#)
- [FAA Flight Planning Information](#)
- [Flight Service 1800wxbrief](#)
- [FAA ICAO Quick Guide](#)
- [Critical DME List](#)
- [FAA Form 7233-4](#)
- [Flight Medical Examiner](#)
- [SkyVector](#)
- [State AIPs](#)
- [AC 91-74, Pilot Guide: Flight in Icing Conditions](#)

FAA Offices

- [Flight Standards District Offices \(FSDO\)](#)
- [Certificate Management Offices \(CMO\)](#)
- [Aircraft Certification Service](#)
- [Aircraft Evaluation Division](#)
- [International Field Offices](#)
- [Office of Safety Standards](#)
- [FAA Safety Team \(FAAST Team\)](#)
- [Rotorcraft Directorate](#)
- [Flight Technologies and Procedures Division: Flight Operations Group](#)
 - [Performance Based Navigation \(PBN\)](#)
 - [Satellite Based Navigation \(SatNav\)](#)
 - [Data Communications \(DataComm\)](#)
 - [Oceanic and Remote Airspace](#)



FAA TV

Useful Links

- [Advisory Circulars](#)
- [Orders and Notices](#)
- [Technical Standard Orders](#)
- [FAA Forms](#)
- [Airmen Services](#)
- [Flight Delay Information](#)
- [Flight Tracking](#)
- [Airworthiness Directives \(ADS\)](#)
 - [Current](#)
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Manuals, Guides, and Testing

- [Handbooks and Manuals](#)
- [Aircraft](#)
- [Aviation](#)
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Federal Aviation
Administration



CLICK TO VIEW ITEMS

- Long Range Communication
- Data Link [Operations](#)
- ICAO GIS Mapping

CNS

(Communication, Navigation, Surveillance)



**Federal Aviation
Administration**



Long Range Communications

AIP



SATVOICE

CLICK HERE
SEE ENR 7.1

[GOLD \(Global Operational Data Link Document\)](#)

Doc 10037, Published by ICAO

14 CFR

[91.511](#)

Communication and Navigation Equipment for Overwater Operations
[DePasquale-Williams International Air - \(2018\) Legal Interpretation \(PDF\)](#)

[121.351](#)

Communication and Navigation Equipment for Extended Over-Water

[135.165](#)

Communication and Navigation for Overwater Operations

Advisory Circulars

[AC 20-150](#)

Airworthiness Approval of Satellite Voice Equipment Supporting Air
Traffic Services (ATS)
Communication

[AC 91-70](#)

Oceanic and Remote Continental Airspace Operations

[AC 90-117](#)

Data Link Communication Systems

FAA InFO

[InFO 15008](#)

Iridium Satellite Voice (SATVOICE) with Safety Services

[InFO 15015](#)

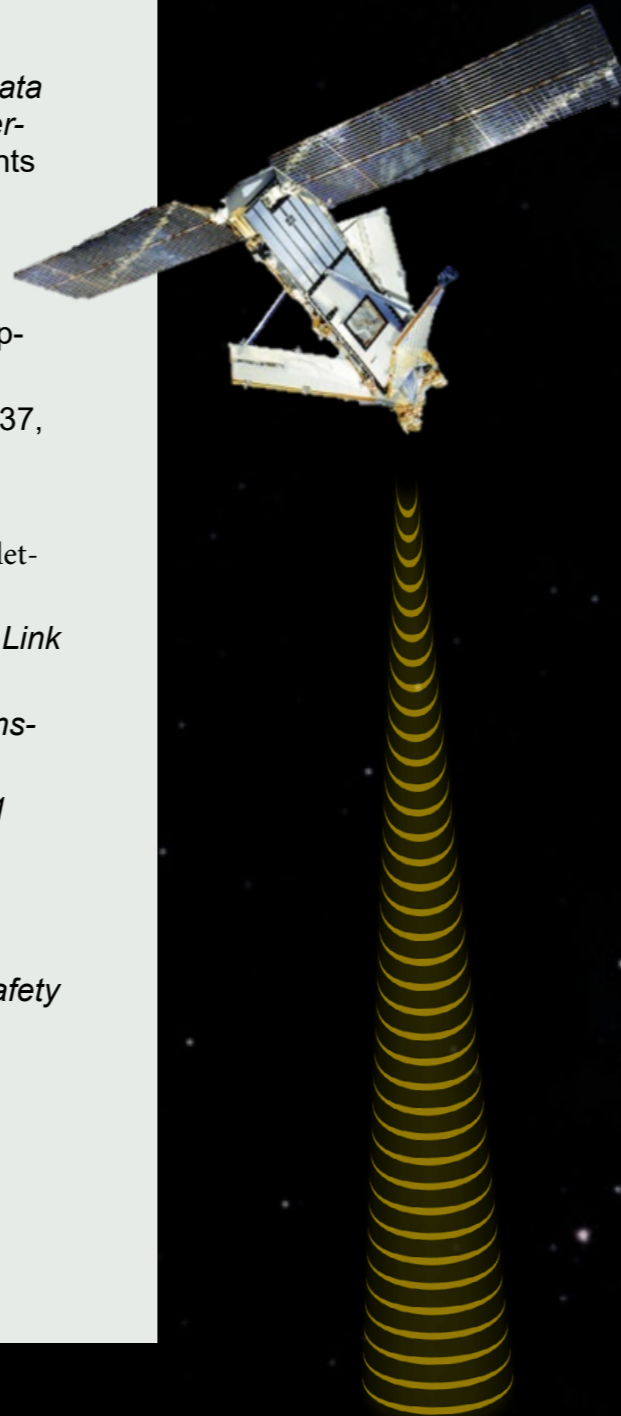
Filing REG/ and CODE/ in Item 18 of the Flight Plan



**Federal Aviation
Administration**

Data Link Operations

- AC 90-117, *Data Link Communications*
- AC 20-140, *Guidelines for Design Approval of Aircraft Data Link Communication Systems Supporting Air Traffic Services (ATS)* This AC provides airworthiness requirements for the type design approval of aircraft with a data link system installed.
- A056 Compliance Guide
- AC 91-70 Oceanic and Remote Continental Airspace Operations
- GOLD (Global Operational Data Link Document) Doc 10037, Published by ICAO (Link to Purchase)
- SITA
- Standardized Master Minimum Equipment (MMEL) Policy letter 70
- AC 20-160, *Onboard Recording of Controller Pilot Data Link Communication in Crash Survivable Memory*
- Annex 6 - *Operation Of Aircraft-Intl Commercial Air Transport 9th Edition - 6.3.3 Data Link Recorders*
- Annex 6 Part II *General Aviation 3.6.3 and Appendix 3.1 Flight Recorders*
- **14 CFR Parts** 23, 25, 27, §29.1457, §91.609
- Rule by the Federal Aviation Administration on 03/02/2015
- InFO 15008, *Iridium Satellite Voice (SATVOICE) with Safety Services*

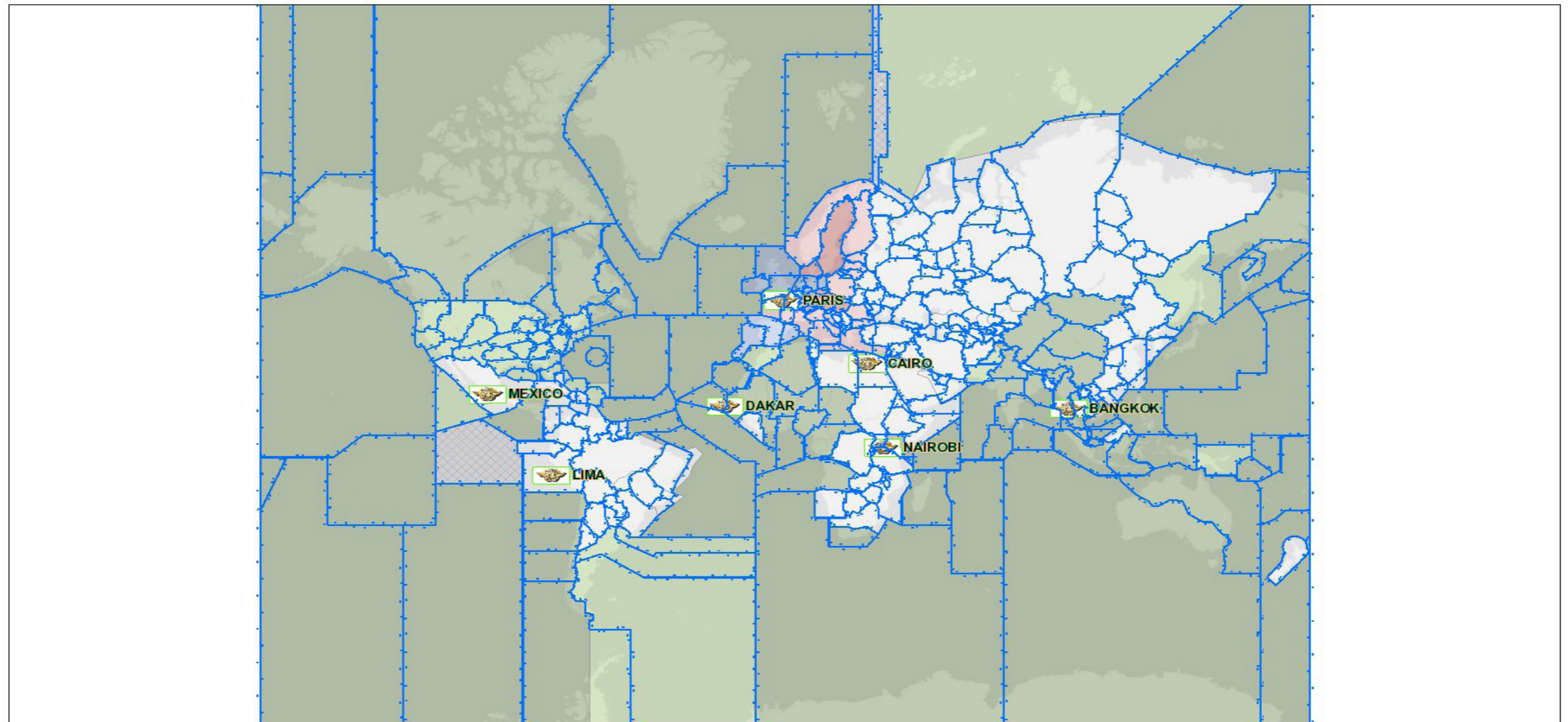


- NAS Data Communication Guide *Overview that introduces flight crews to the concept of CPDLC in the NAS and outlines the roles of the Airline Operations Center (AOC), clearance delivery and En Route controllers, and flight crews.*
- CPDLC End2End Description *Overview of FAA Segment 1 Phase 1 (S1P1) and Segment 1 Phase 2 (S1P2) Implementation of CPDLC processing from an end-to-end perspective.*
- Data Link News
- FAA Site: *Oceanic and Remote Airspace (Special Areas of Operation)*
- FAA Site: *Data Comm*
- FAA Site: *Performance-based Communication and Surveillance (PBCS) Monitoring*
- FANS 1/A Problem Reporting (Works Better on Google Chrome)
- NAS Operational Problem Reporting
- ICAO DOC 9869, *Performance-Based Communication and Surveillance (PBCS) Manual*
- MMEL Policy Letter (PL) 106, Latest Revision
- NAT OPS Bulletin 2019_003 Data Rev 2 Link Performance Improvement Options



ICAO GIS Mapping

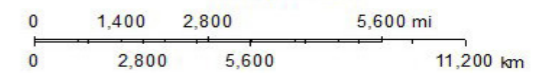
See [ICAO GIS](#)



June 22, 2017

- | | | |
|-----------------------------|---------------------------------|------|
| ICAOFIR2015 26 june | FANS and LINK 2000+ operational | none |
| RegOffice | FANS and LINK 2000+ planned | nil |
| ATS Data Link Status | | |
| FANS operational | LINK 2000+ operational | |
| FANS planned | LINK 2000+ planned | |

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Federal Aviation
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ACRONYMS ([FAA Acronym Site](#))



**Federal Aviation
Administration**

| Acronym | Definition |
|-----------|---|
| A | |
| A/FD | Airport/Facility Directory |
| AAA | Airport Airspace Analysis |
| AAD | Assigned Altitude Deviation |
| AAO | Adverse Assumption Obstacle |
| AAS | Airport Advisory Service |
| AAWU | Alaskan Aviation Weather Unit |
| ABAS | Aircraft Based Augmentation System |
| AC | Advisory Circular |
| ACA | Arctic Control Area |
| ACARS | Aircraft Communication Addressing and Reporting System |
| ACAS | Airborne Collision Avoidance System |
| ACC | Area Control Center |
| ACI | Airport Council International |
| ACL | ATC Clearance |
| ACM | ATC Communication Management |
| ACO | Aircraft Certification Office |
| ACP | Actual Communication Performance |
| ACSP | Aeronautical Communication Service Provider |
| ACTP | Actual Communication technical Performance |
| ADC | Air Data Computer |
| ADCUS | Advise Customs |
| ADDS | Aviation Digital Data Service |
| ADF | Automatic Direction Finder |
| ADIRU | Air Data Inertial Reference Unit |
| ADIZ | Air Defense Identification Zone |
| ADMS | Atmospheric Dispersion Modelling System |
| ADS | Automatic Dependent Surveillance |
| ADS-ADD | ADS Aircraft Derived Data |
| ADS-B | Automatic Dependent Surveillance-Broadcast |
| ADS-B In | ADS-B signal received onboard from another aircraft or ground station |
| ADS-B Out | ADS-B signal sent from aircraft to ground station or other aircraft |
| ADS-C | Automatic Dependent Surveillance-Contract |
| ADS-NRA | ADS in Non-Radar Airspace |



| Acronym | Definition |
|---------|---|
| ADS-RAD | ADS in Radar Airspace Blending of ADS & SSR |
| AEDT | Aviation Emissions Design Tool |
| AEEC | Airlines Electronic Engineering Committee |
| AEM III | Advanced Emission Model |
| AERO2K | Model Name |
| AeroNav | Aeronautical Navigation Products |
| AFB | Air Force Base |
| AFCS | Automatic Flight Control System |
| AFIS | Automatic Flight Information Service |
| AFM | Airplane Flight Manual |
| AFN ATS | Facilities Notification (FANS logon) |
| AFS | Flight Standards Services |
| AFSS | Automated Flight Service Station |
| AFTN | Aeronautical Fixed Telecommunication Network |
| AGHME | Aircraft Geometric Height Measurement Element |
| AGL | Above Ground Level |
| AHRS | Attitude Heading Reference System |
| AIC | Aeronautical Information Circular |
| AIFSS | Aviation International Flight Service Station |
| AIM | Aeronautical Information Manual |
| AIP | Aeronautical Information Publication |
| AIR | Aircraft Certification Services |
| AIRE | Atlantic Interoperability Initiative to Reduce Emissions |
| AIREP | Aircraft Reports |
| AIRMET | Airman's Meteorological Information |
| AIS | Aeronautical Information Service |
| AISR | All centers, some military facilities, some international ATC units |
| AKD | Altitude Keeping Device |
| ALAQS | Airport Local Air Quality Studies |
| ALD | Available Landing Distance |
| ALS | Approach Light Systems |
| ALTRV | Altitude Reservation |
| AMOC | Alternative Means of Compliance |
| AMSL | Above Mean Sea Level |



| Acronym | Definition |
|---------|--|
| AMSS | Aeronautical Mobile Satellite Service |
| AMU | Area of Magnetic Unreliability |
| AMVER | Automated Merchant Vessel Report |
| ANC | Air Navigation Commission |
| ANCON | Aircraft Noise Control Model |
| ANOTEC | Spanish Company |
| ANP | Actual Navigation Performance |
| ANP | Air Navigation Plan |
| ANP | Aircraft Noise and Performance |
| ANSP | Air Navigation Service Provider |
| AOC | Aeronautical Operational Control |
| AOCC | Airline Operation Control Center |
| AOV | Air Traffic Safety Oversight Service |
| AP | Autopilot System |
| APM | Aircraft Performance Model |
| APMT | Aviation Environmental Portfolio Management Tool |
| APNT | Alternate Position Navigation and Time |
| APP | Airport Planning and Programming |
| APQI | Aircraft Position Quality Indicator |
| APU | Auxiliary Power Unit |
| APV | Approach with Vertical Guidance |
| AQP | Advance Qualification Program |
| AR | Authorization Required |
| ARENA | Areas Noted for Attention |
| ARFF IC | Aircraft Rescue and Fire Fighting Incident Commander |
| ARINC | Aeronautical Radio Incorporated |
| ARO | Airport Reservations Office |
| ARP | Airports |
| ARSA | Airport Radar Service Area |
| ARSR | Air Route Surveillance Radar |
| ARTCC | Air Route Traffic Control Center |
| ARTS | Automated Radar Terminal System |
| ASDE-X | Airport Surface Detection Equipment - Model X |
| ASE | Altimetry System Error |



| Acronym | Definition |
|-----------|---|
| ASOS | Automated Surface Observing System |
| ASR | Aviation Safety Report |
| ASR | Airport Surveillance Radar |
| ASR | Antenna Structure Registration |
| ASRS | Aviation Safety Reporting System |
| ATA | Actual Time of Arrival |
| ATC | Air Traffic Control |
| ATCC | Air Traffic Control Center |
| ATCRBS | Air Traffic Control Radar Beacon System |
| ATCSCC | Air Traffic Control System Command Center |
| ATCT | Airport Traffic Control Tower |
| ATD | Along-Track Distance |
| ATIS | Automatic Terminal Information Service |
| ATM | Air Traffic Management |
| ATMG | Air Traffic Management Group |
| ATN | Aeronautical Telecommunication Network |
| ATO | Air Traffic Organization |
| ATOP | Oceanic centers (Advance Technologies and Oceanic Procedures) |
| ATS | Air Traffic Service |
| ATSA-AIRB | Enhanced Traffic Situational Awareness when Airborne |
| ATSA-ITP | Enhanced Traffic Situational Awareness In-Trail-Procedures |
| ATSA-S&M | Enhanced Sequencing & Merging operations |
| ATSA-SURF | Enhanced Traffic Situational Awareness on the airport Surface |
| ATSA-VSA | Enhanced Visual Separation on Approach |
| ATSP | Air Traffic Services Provider |
| ATSU | Air Traffic Service Unit |
| ATT | Attitude Retention System |
| AVS | Office of Aviation Safety |
| AWC | Aviation Weather Center |
| AWO | All Weather Operations |
| AWOS | Automated Weather Observing System |
| AWPR | Automatic Waypoint Reporting |
| AWSS | Automated Weather Sensor System |
| AWTT | Aviation Weather Technology Transfer |



| Acronym | Definition |
|-----------|--|
| AWW | Severe Weather Forecast Alert |
| B | |
| BAASS | Bigelow Aerospace Advanced Space Studies |
| BADA | Base of Aircraft Data |
| baro VNAV | Barometric Vertical Navigation |
| BBS | Bulletin Board System |
| BC | Back Course |
| BECMG | Becoming group |
| BITE | Built-In Test Equipment |
| BMVBS | German Ministry of Transport |
| BORPC | Basic Operational Requirements and Planning Criteria |
| BOTA | Brest Oceanic Transition Area |
| BRG | Bearing |
| B-RNAV | Basic Area Navigation |
| C | |
| CAA | Civil Aviation Authority |
| CAASD | Center for Advanced Aviation Systems Development |
| CAATS | Canadian Automated Air Traffic System |
| CAD | Centralized ADS-C system |
| CAEP | ICAO Committee on Aviation Environmental Protection |
| CANSO | Civil Air Navigation Services Organization |
| CAR | Caribbean Region |
| CAR-SAM | Caribbean–South America (ICAO term) |
| CARTS | Common Automated Radar Terminal System |
| CAT | Clear Air Turbulence |
| CATEX | Categorical Exclusion |
| CB | Cumulonimbus Clouds |
| CC | Connection |
| CD | Controller Display |
| CDA | Current Data Authority |
| CDI | Course Deviation Indicator |
| CDL | Configuration Deviation List |
| CDR | Coded Departure Route |
| CDTI | Cockpit Display of Traffic Information |



| Acronym | Definition |
|-----------|--|
| CDU | Control Display Unit |
| CEP | Central East Pacific |
| CFA | Controlled Firing Area |
| CFIT | Controlled Flight into Terrain |
| CFL | Cleared Flight Level |
| CFM | Company Flight Manual |
| CFP | Computer Flight Plan |
| CFR | Code of Federal Regulations |
| CFRS | Centralized FMC Waypoint System |
| CHDO | Certificate-Holding District Office |
| CIS | Commonwealth of Independent States |
| CM | Context management |
| CMA | Central Monitoring Agency |
| CMO | Certificate Management Office |
| CNS | Communications, Navigation, and Surveillance |
| CNS/ATM | Communications, Navigation and Surveillance/Air Traffic Management |
| CO | Carbon Monoxide |
| CO2 | Carbon Dioxide |
| COA | Certificate of Waiver or Authorization |
| COSPAS | Space System for the Search of Vessels in Distress |
| CPC | Connect Request (Euro Control) |
| CPDLC | Controller-Pilot Data Link Communications |
| CPDLC-DCL | Controller-Pilot Data Link Communications Departure Clearance |
| CR | Connect Request |
| CRC | Cyclic Redundancy Check |
| CRM | Collision Risk Model |
| CRM | Cockpit Resource Management |
| CSP | Communication Service Providers |
| CTA | Control Area |
| CTAF | Common Traffic Advisory Frequency |
| CTR | Control Zone |
| CU | Cumulus Clouds |
| CVFP | Chartered Visual Flight Procedure |
| CVRS | Computerized Voice Reservation System |



| Acronym | Definition |
|----------|---|
| CWA | Center Weather Advisory |
| CWSU | Center Weather Service Unit |
| D | |
| DA | Decision Altitude |
| DA | Data Authority |
| DARP | Dynamic Airborne Reroute Procedure |
| D-ATIS | Data link (or Digital) Automatic Terminal Information Service |
| DCDU | Datalink Control & Display Unit |
| DCL | Departure Clearance |
| DCNS | Data Communication Network System |
| DCP | Data Collection Package |
| DCPC | Direct Controller Pilot Communications |
| DDTC | Data link Delivery of Taxi Clearance |
| DER | Departure End of Runway |
| DEWIZ | Distant Early Warning Identification Zone |
| DF | Direction Finder |
| DfT | Department for Transport |
| DH | Decision Height |
| DL | Data Link (CPDLC, ATN, ACARS, AFIS) |
| DLIC | Data Link Initiation Capability |
| DLS | Data Link Services |
| DM | Downlink Message |
| DME | Distance Measuring Equipment |
| DME/N | Standard DME |
| DME/P | Precision DME |
| DOD | Department of Defense |
| DOF | Digital Obstacle File |
| DOI | Department of Interior |
| D-ORIS | Data link Operational "En-Route" Information Service |
| DP | Instrument Departure Procedure |
| DPU | Data Processor Unit |
| DR | Dead Reckoning |
| DRT | Diversion Recovery Tool |
| DRVSM | Domestic Reduced Vertical Separation Minimum |



| Acronym | Definition |
|-----------|--|
| DSC | Downstream Clearance |
| D-SIG | Data link Surface Information & Guidance |
| D-TAXI | Data link Taxi Instruction |
| DTC DUATS | Direct file over the internet |
| DTED | Digital Terrain Elevation Data |
| DUATS | Direct User Access Terminal System |
| DVA | Diverse Vector Area |
| DVFR | Defense Visual Flight Rules |
| DVRSN | Diversion |
| E | |
| EA | Environmental Assessment |
| EASA | European Aviation Safety Agency |
| ECAC | European Civil Aviation Conference |
| ECI | Environmental Condition Indicator |
| EDCT | Expect Departure Clearance Time |
| EDMS | Emissions and Dispersion Modelling System |
| EDR | Excessive Descent Rate |
| EDTO | Extended Diversion Time Operations |
| EFAS | En Route Flight Advisory Service |
| EFIS | Electronic Flight Instrument System |
| EFV | Enhanced Flight Visibility |
| EFVS | Enhanced Flight Vision System |
| EGPWS | Enhanced Ground Proximity Warning System |
| EICAS | Engine Indicating and Crew Alerting System |
| EIS | Environmental Impact Statement |
| ELT | Emergency Locator Transmitter |
| EMAS | Engineered Materials Arresting System |
| EPE | Estimate of Position Error |
| EPI | Environmental Key Performance Indicator |
| EPU | Estimate of Position Uncertainty |
| ERAM | Enroute Automated Modernization |
| ESV | Expanded Service Volume |
| ETA | Estimated Time of Arrival |
| ETD | Estimated Time of Departure |



| Acronym | Definition |
|-------------|--|
| ETE | Estimated Time En Route |
| ETOPS | Extended Range Twin Engine Operational Performance Standards |
| ETP | Equal Time Point |
| EUR | Europe |
| EUR/NAT | Europe and North Atlantic |
| EUROCAE | European Organization for Civil Aviation Equipment |
| EUROCONTROL | European Organization for the Safety Air Navigation |
| EVS | Enhance Vision System |
| EWINS | Enhanced Weather Information System |
| EWR | Newark International Airport |
| F | |
| FA | Area Forecast |
| FAA | Federal Aviation Administration |
| FAB | Functional Airspace Blocks |
| FAF | Final Approach Fix |
| FANS | Future Air Navigation System |
| FAROS | Final Approach Runway Occupancy Signal |
| FAS | Final Approach Segment |
| FASID | Facilities and Services Implementation Document |
| FAST | Future Aviation Scenario Tool |
| FAWP | Final Approach Waypoint |
| FB | Fly-by |
| FBO | Fixed Base Operator |
| FCC | Federal Communications Commission |
| FD | Flight Director |
| FDC | Flight Data Center |
| FDE | Fault Detection and Exclusion |
| FDP2000 | Flight Data Processing 2000 (Anchorage Domestic Center) |
| FDPS | Flight Data Processing System |
| FESG | ICAO Forecasting and Economic Support Group |
| FIC | Flight Information Center |
| FIP | Flight Inspection and Procedures |
| FIR | Flight Information Region |
| FIS | Flight Information Service |



| Acronym | Definition |
|----------|--|
| FIS-B | Flight Information Services Broadcast |
| FISDL | Flight Information Services Data Link |
| FL | Flight Level |
| FLAS | Flight Level Allocation Scheme |
| FLIP | Flight Information Publication |
| FLIPCY | Flight Plan Consistency |
| FLIPINT | Flight Path Intent |
| FLTA | Forward Looking Terrain Avoidance |
| FMC | Flight Management Computer |
| FMC WPR | Flight Management Computer Waypoint Position Reporting |
| FMCS | Flight Management Computer System |
| FMS | Flight Management System |
| FMSP | Flight Management System Procedure |
| FN_AK | FANS 1/A (+) Logon Response |
| FN_CAD | FANS 1/A (+) Contact Request |
| FN_COMP | FANS 1/A (+) Contact Complete |
| FN_CON | FANS 1/A (+) Logon Request |
| FN_RESP | FANS 1/A (+) Contact Response |
| FO | Fly-over |
| FOCA | Federal Office of Civil Aviation |
| FOM | Figure of Merit |
| FOM | Forecasting and Operations Module |
| FOM | Flight Operations Manual |
| FOV | Field of View |
| FPA | Flight Path Angle |
| FPFO | Flight Procedures Field Office |
| FPNM | Feet Per Nautical Mile |
| FPO | Flight Procedures Office |
| FPV | Flight Path Vector |
| Frequent | Occurring more often than 1 in 1000 events or 1000 flight hours. |
| FRMS | Fatigue Risk Management System |
| FROP | Final Roll-out point |
| FRT | Fixed Radius Transition |
| FSDO | Flight Standards District Office |



| Acronym | Definition |
|-----------|---|
| FSIMS | Flight Standards Information Management System |
| FSS | Flight Service Station |
| FSTD | Flight System Training Device |
| FTE | Flight Technical Error |
| FTR | Flexible Track Route |
| FTS | Flexible Track System |
| FUA | Flexible Use of Airspace |
| G | |
| GBAS | Ground Based Augmentation System |
| GCO | Ground Communication Outlet |
| GEO | Geostationary Satellite |
| GFAAF | Global Framework for Aviation Alternative Fuels |
| GHG | Green House Gas (emissions) |
| GIS | Geographical Information System |
| GLCC | Global LORAN-C Charts |
| GLONASS | Global Orbiting Navigation Satellite System (Russian) |
| GLS | "Global Navigation Satellite System [GNSS] Landing System " |
| GMS | Global Positioning System Monitoring System |
| GMT | Greenwich Mean Time |
| GMU | GPS (Height) Monitoring Unit |
| GNE | Gross Navigation Error |
| GNSS | Global Navigation Satellite System |
| GNSSP | Global Navigation Satellite System Panel |
| Go-around | A transition from an approach to a stabilized climb. |
| GOLD | Global Operational Data Link Document |
| GP | General Purpose |
| GPS | Global Positioning System |
| GPU | Ground Power Unit |
| GPWS | Ground Proximity Warning System |
| GRAS | Ground-based regional augmentation system |
| GRECO | Graphical Trajectory Co-ordination |
| GRI | Group Repetition Interval |
| GSD | Geographical Situation Display |



| Acronym | Definition |
|----------|---|
| GSE | Ground Support Equipment |
| GUS | Ground Uplink Station |
| H | |
| HAA | Helicopter Air Ambulance |
| HAR | High Altitude Redesign |
| HAT | Height Above Touchdown |
| HDG | Heading |
| HDTA | High Density Traffic Airports |
| HEDA | Helicopter En Route Descent Area |
| HEMS | Helicopter Emergency Medical Services |
| HF | High Frequency |
| HFDL | High Frequency Data Link |
| HIL | Horizontal Integrity Limit is equal to the Horizontal Alert Limit |
| HIRL | High Intensity Runway Lights |
| HLA | High Level Airspace |
| HMI | Human Machine Interface |
| HMU | Height Monitoring Unit |
| hPa | Hectopascals |
| HR | Human Range |
| HRR | Helicopter Rapid Refueling Procedures |
| HSI | Horizontal Situation Indicator |
| HUD | Head-Up Display |
| Hz | Hertz |
| I | |
| I&I | Implementation and Impact |
| IAF | Initial Approach Fix |
| IAP | Instrument Approach Procedure |
| IAS | Indicated Air Speed |
| IATA | International Air Transport Association |
| IAWP | Initial Approach Waypoint |
| ICAO | International Civil Aviation Organization |
| ICD | Interface Control Document |
| IF | Intermediate Fix |
| IFP | Instrument Flight Procedures |



| Acronym | Definition |
|----------|---|
| IFR | Instrument Flight Rules |
| IFSET | ICAO Fuel Savings Estimation Tool |
| IGA | International General Aviation |
| ILS | Instrument Landing System |
| ILS/PRM | Instrument Landing System/Precision Runway Monitor |
| IM | Inner Marker |
| IMC | Instrument Meteorological Conditions |
| IN | International Notice to Airmen |
| INM | Integrated Noise Model |
| INS | Inertial Navigation System |
| IOC | Initial Operational Capability |
| IPDS | Instrument Procedure Design System |
| IR | IFR Military Training Route |
| IRS | Inertial Reference System |
| IRU | Inertial Reference Unit |
| ISA | International Standard Atmosphere |
| ITCZ | Intertropical Convergence Zone |
| ITP | In-Trail Procedures |
| ITWS | Integrated Terminal Weather System |
| J | |
| JAA | Joint Aviation Authority |
| JFK | John F. Kennedy International Airport |
| K | |
| KHz | Kilohertz |
| km | Kilometer |
| KPA | Key Performance Areas |
| KPI | Key Performance Indicator |
| L | |
| LAA | Local Airport Advisory (within 10 miles of an airport with FSS) |
| LAA | Lowest Authorized Altitude |
| LAAS | Local Area Augmentation System |
| LAHSO | Land and Hold Short Operations |
| LAQ | Local Air Quality |
| LAT | Latitude |



| Acronym | Definition |
|----------|--|
| LAWRS | Limited Aviation Weather Reporting Station |
| LDA | Landing Distance Available |
| LDA | Localizer Type Directional Aid |
| LDA/PRM | Localizer Type Directional Aid/Precision Runway Monitor |
| LDE | Lateral Deviation Event (LDE) |
| LDOC | Long Distance Operational Control |
| LGA | LaGuardia Airport |
| LIRL | Low Intensity Runway Lights |
| LLWAS | Low Level Wind Shear Alert System |
| LLWAS NE | Low Level Wind Shear Alert System Network Expansion |
| LLWAS-RS | Low Level Wind Shear Alert System Relocation/Sustainment |
| LNAV | Lateral Navigation |
| LOA | Letter of Authorization |
| LOC | Localizer |
| LODA | Letter of Design Approval |
| LOE | Line Oriented Evaluation |
| LOFT | Line Oriented Flight Training |
| LONG | Longitude |
| LOP | Line-of-position |
| LP | Localizer Performance |
| LPV | Localizer Performance with Vertical Guidance |
| LRCS | Long-Range Communication System |
| LRDE | Level Range Deviation Event |
| LRNP | Long-Range Navigation Program |
| LRNS | Long-Range Navigation System |
| LTP | Landing Threshold Point |
| LUAW | Line Up and Wait |
| LZ | Landing Zone |
| M | |
| MACS | Military Aviation Communication System |
| MAGENTA | Model for Assessing Global Exposure to the Noise of Transport Aircraft |
| MAHWP | Missed Approach Holding Waypoint |
| MAP | Missed Approach Point |
| MARSA | Military Assumes Responsibility for Separation of Aircraft |



| Acronym | Definition |
|---------|---|
| MAS | Message Assurance |
| MASPS | Minimum Aircraft System Performance Specification |
| MAWP | Missed Approach Waypoint |
| MBM | Market Based Measures |
| MCA | Ministry of Civil Aviation |
| MCDU | Multi-function Cockpit Display Unit |
| MDA | Minimum Descent Altitude |
| MEA | Minimum En Route Altitude |
| MEARTS | Micro En Route Automated Radar Tracking System |
| MEL | Minimum Equipment List |
| MET | Meteorology Information |
| MET | Meteorological |
| METAR | Aviation Routine Weather Report |
| MHz | Megahertz |
| MIA | Minimum IFR Altitude |
| MIRL | Medium Intensity Runway Lights |
| MLS | Microwave Landing System |
| MM | Middle Marker |
| MMEL | Master Minimum Equipment List |
| MMS | Mineral Management Service |
| MNPS | Minimum Navigation Performance Specification |
| MOA | Memorandum of Agreement |
| MOA | Military Operations Area |
| MOCA | Minimum Obstruction Clearance Altitude |
| MOPS | Minimum Operational Performance Standards |
| MORA | Minimum Off-Route Altitude |
| MPI | Management Performance Indicator |
| MRA | Minimum Reception Altitude |
| MRB | Magnetic Reference Bearing |
| MRN | Message Reference Number |
| MSA | Minimum Sector Altitude |
| MSA | Minimum Safe Altitude |
| MSAW | Minimum Safe Altitude Warning |
| MSL | Mean Sea Level |



| Acronym | Definition |
|-----------|--|
| MSpec | Management Specification |
| MTBF | Mean Time Between Failures |
| MTI | Moving Target Indicator |
| MTOS | Mountain Obscuration |
| MTR | Military Training Route |
| MTT | Minimum Time Track |
| MTTR | Mean Time To Repair |
| MVA | Minimum Vectoring Altitude |
| MWA | Mountain Wave Activity |
| MWO | Meteorological Watch Office |
| N | |
| NAA | National Airworthiness Authority |
| NAARMO | North American Approval Registry and Monitoring Organization |
| NACO | National Aeronautical Charting Office |
| NAM | North American Region |
| NAPT | National Airspace and Procedures Team |
| NAR | North American Route |
| NAS | National Airspace System |
| NASA | National Aeronautics and Space Administration |
| NASR | National Airspace System Resource |
| NAT | North Atlantic Region |
| NAT OTS | North Atlantic Organized Track System |
| NAT SPG | North Atlantic Systems Planning Group |
| NATS | National Air Traffic Services Limited |
| NAV | Navigation |
| Nav Specs | Navigation Specifications |
| NAVAID | Navigational Aid |
| NAVCEN | Coast Guard Navigation Center |
| NCA | Northern Control Area |
| NCR | Negative Climb Rate |
| NCWF | National Convective Weather Forecast |
| ND | Navigation Display |
| NDA | Next Data Authority |
| NDB | Nondirectional Radio Beacon |



| Acronym | Definition |
|---------|---|
| NDB | Navigation Data Base |
| NEPA | National Environmental Policy Act |
| NEXRAD | Next Generation Weather Radar |
| NextGen | Next Generation |
| NFDC | National Flight Data Center |
| NFPG | National Flight Procedures Group |
| NFPO | National Flight Procedures Office |
| NGA | National Geospatial-Intelligence Agency |
| NIRS | Noise Integrated Routing System |
| NM | Nautical Miles |
| NMAC | Near Midair Collision |
| NOAA | National Oceanic and Atmospheric Administration |
| NOF | NOTAM offices |
| NOPAC | North Pacific |
| NoPT | No Procedure Turn Required |
| NOTA | Northern Oceanic Transition Area |
| NOTAM | Notice to Airmen |
| NOx | Nitrogen Oxides |
| NOx-CSM | Nitrogen Oxides Cost Spreadsheet Model |
| NPA | Nonprecision Approach |
| NPOLE | North Pole |
| NRA | Non-Radar Airspace |
| NRS | Navigation Reference System |
| NRS | National Reference System |
| NSA | National Security Area |
| NSE | Navigation Sensor Error |
| NSE | Navigation System Error |
| NSW | No Significant Weather |
| NTAP | Notices to Airmen Publication |
| NTSB | National Transportation Safety Board |
| NTZ | No Transgression Zone |
| NWS | National Weather Service |
| | |
| OAC | Oceanic Area Control Center |



| Acronym | Definition |
|----------|--|
| OADR | Oceanic Altitude Deviation Reports |
| OASIS | Flight Services in Alaska |
| OAT | Outside Air Temperature |
| OBS | Omni-bearing Selector |
| OCA | Obstacle Clearance Altitude |
| OCA | Oceanic Control Area |
| OCD | Oceanic Clearance Delivery |
| OCEAN21 | Oceanic Flight surveillance and flight data processing |
| OCH | Obstacle Clearance Height |
| OCL | Oceanic Clearance |
| OCS | Obstacle Clearance Surface |
| ODP | Obstacle Departure Procedure |
| OE | Obstruction Evaluation |
| OEM | Original Equipment Manufacturers |
| OESB | Oceanic Errors Safety Bulletin |
| OFDPS | Offshore Flight Data Processing System |
| OIS | Operational Information System |
| OIS | Obstacle Identification Surface |
| OM | Outer Marker |
| OPI | Operational Performance Indicator |
| OPR | Office of Primary Responsibility |
| OpSpecs | Operation Specification |
| ORT | Operational Requirements Table |
| OSAP | Offshore Standard Approach Procedure |
| OTS | Organized Track System |
| P | |
| P/CG | Pilot/Controller Glossary |
| PA | Precision Approach |
| PAC | Pacific Region |
| PACOTS | Pacific Organized Track System |
| PAI | Principal Avionics Inspector |
| PAM | Path Arrival Management |
| PANS | Procedures for Air Navigation Services |
| PANS-ABC | ICAO abbreviations and codes |



| Acronym | Definition |
|----------|---|
| PANS-ATM | Procedures for Air Navigation Services-Air Traffic Management |
| PAPI | Precision Approach Path Indicator |
| PAR | Precision Approach Radar |
| PAR | Preferred Arrival Route |
| PARC | Performance-Based Operations Aviation Rulemaking Committee |
| PBN | Performance Based Navigation |
| PC | Proficiency Check |
| PDA | Premature Descent Alert |
| PDC | Pre-departure Clearance |
| PDE | Path Definition Error |
| PEC | Position Error Correction |
| PEE | Position Estimate Error |
| PEGAS | Russian Federation Air Quality Model |
| PFD | Personal Flotation Device |
| PID | Pilot Initiated Downlink |
| PinS | Point-in-Space |
| PIREP | Pilot Weather Report |
| PMI | Principal Maintenance Inspector |
| PNF | Pilot-Not-Flying |
| POB | Persons on Board |
| POC | Point of Contact |
| POFZ | Precision Obstacle Free Zone |
| POH | Pilot's Operating Handbook |
| POI | Principal Operations Inspector |
| PORT | Pilot Operational Response Time |
| POS | Position |
| PPO | Prior Permission Only |
| PPS | Precise Positioning Service |
| PQI | Position Quality Indicator |
| PRB | Procedure Review Board |
| PRM | Precision Runway Monitor |
| PRM | Preferred Route Message |
| P-RNAV | Precision RNAV |
| PSE | Path Steering Error |



| Acronym | Definition |
|----------|--|
| PSR | Primary Surveillance Radar |
| PT | Procedure Turn |
| PT | Proficiency Training |
| PTRS | Program Tracking and Reporting Subsystem |
| PVT | Position, Velocity & Time |
| Q | |
| Q Routes | High-altitude RNAV routes |
| QA | Quality Assurance |
| R | |
| R/T | Radio Telephony |
| RA | Resolution Advisory |
| RAA | Remote Advisory Airport |
| RAIM | Receiver Autonomous Integrity Monitoring |
| RAIS | Remote Airport Information Service |
| RAPT | Regional Airspace and Procedures Team |
| RBDT | Ribbon Display Terminals |
| RCAG | Remote Center Air/Ground |
| RCC | Rescue Coordination Center |
| RCLS | Runway Centerline Lighting System |
| RCO | Remote Communications Outlet |
| RCP | Required Communication Performance |
| RCP A | Required Communication Performance Availability |
| RCP C | Required Communication Performance Continuity |
| RCP ET | Required Communication Performance Expiration Time |
| RCP I | Required Communication Performance Integrity |
| RD | Rotor Diameter |
| REF | Reference |
| REIL | Runway End Identifier Lights |
| REL | Runway Entrance Lights |
| RF | Radius-to-Fix |
| RFM | Rotorcraft Flight Manual |
| RGS | Radio Ground Station |
| RIL | Runway Intersection Lights |
| RLIM | Runway Light Intensity Monitor |



| Acronym | Definition |
|--------------------------|--|
| RNAV | Area Navigation |
| RNAV RNP | RNP Authorization Required |
| RNL | Reference Noise Levels |
| RNP | Required Navigation Performance |
| ROC | Required Obstacle Clearance |
| RPAT | RNP Parallel Approach Runway Transitions |
| RSP | Required Surveillance Performance |
| RSTP | Required Surveillance Technical Performance |
| RTA | Required Time of Arrival |
| RTC | Required Terrain Clearance |
| RVFP | Area Navigation Visual Flight Procedure |
| RVR | Runway Visual Range |
| RVSM | Reduced Vertical Separation Minimum |
| RWS | Runway Segment |
| RWSL | Runway Status Light |
| RWY | Runway |
| S | |
| S&M | Sequencing and Merging |
| SAGE | System for Assessing Aviation's Global Emissions |
| SAM | System Area Monitor |
| SAM | South America Region |
| SAO | Special Areas of Operations |
| SAR | Search and Rescue |
| SARP | Standards and Recommended Practices (ICAO) |
| SARPS | Standards and Recommended Practices |
| SARSAT | Search and Rescue Satellite-Aided Tracking |
| SAS | Stability Augmentation System |
| SAT | Static Air Temperature |
| SATCOM | Satellite Communication |
| SATCOM Voice or SATVOICE | Satellite Voice Communication |
| SBAS | Satellite-based Augmentation System |
| SC | Stratocumulus Clouds |
| SCA | Southern Control Area |
| SDF | Simplified Directional Facility |



| Acronym | Definition |
|---------|---|
| SDL | Satcom Data Link |
| SELCAL | Selective Calling (<i>ICAO managed communications method used to notify aircraft that a ground radio station wishes to communicate</i>) |
| SESAR | Single European Sky ATM Research |
| SET | Select Event Training |
| SFL | Sequenced Flashing Lights |
| SFR | Special Flight Rules |
| SIA | Standard Instrument Approach |
| SIAP | Standard Instrument Approach Procedure |
| SID | Standard Instrument Departure |
| SIGMET | Significant Meteorological Information |
| SLA | Standard Landing Aid |
| SLOP | Strategic Lateral Offset Procedure |
| S-LRCS | Single Long Range Communication System |
| S-LRNS | Single Long-Range Navigation System |
| SM | Statute Mile |
| SMGCS | Surface Movement Guidance Control System |
| SMO | System Management Office |
| SMS | Safety Management System |
| SNR | Signal-to-noise Ratio |
| SOIA | Simultaneous Offset Instrument Approaches |
| SONDEO | Study on Noise Exposure Around European Airports |
| SOP | Standard Operating Procedure |
| SOTA | Shannon Oceanic Transition Area |
| SPC | Storm Prediction Center |
| SPF | Special Procedure Form |
| SPI | Special Pulse Identification |
| SPOT | Special Purpose Operational Training |
| SPS | Standard Positioning Service |
| SRM | Safety Risk Management |
| SRMD | Safety Risk Management Document |
| SRMDM | Safety Risk Management Decision Memorandum |
| SSB | Single Sideband |
| SSEC | Static Source Error Correction |
| SSR | Secondary Surveillance Radar |



| Acronym | Definition |
|----------|--|
| STAPES | System for Airport Noise Exposure Studies |
| STAR | Standard Terminal Arrival |
| STARS | Standard Terminal Automation Replacement System |
| STC | Supplemental Type Certificate |
| STMP | Special Traffic Management Program |
| SUPPS | Supplementary Procedures |
| SVA | Enhanced Successive Visual Approaches |
| SVS | Synthetic Vision System |
| SWIM | System Wide Information Management |
| SWSL | Supplemental Weather Service Locations |
| T | |
| TA | Traffic Advisory |
| TAA | Terminal Arrival Area |
| TAC | Terminal Area Chart |
| TACAN | Tactical Air Navigation |
| TAF | Terminal Area Forecast |
| TARGETS | Terminal Area Route Generation Evaluation and Traffic Simulation |
| TAS | True Airspeed |
| TAWS | Terrain Awareness Warning System |
| TC | Type Certificate |
| TCAS | Traffic Alert and Collision Avoidance System |
| TCH | Threshold Crossing Height |
| TD | Time Difference |
| TDLS | Tower Data Link System |
| TDM | Track Definition Message |
| TDWR | Terminal Doppler Weather Radar |
| TDZ | Touchdown Zone |
| TDZE | Touchdown Zone Elevation |
| TDZL | Touchdown Zone Lights |
| TEC | Tower En Route Control |
| TERPS | Terminal Instrument Procedures |
| TF-5 | Task Force-5 |
| TGL | Temporary Guidance Leaflet |
| THL | Takeoff Hold Lights |



| Acronym | Definition |
|----------|---|
| TIS | Traffic Information Service |
| TIS-B | Terminal Information Service - Broadcast |
| TKE | Track Keeping Error |
| TLS | Target Level of Safety |
| TLS | Transponder Landing System |
| TMA | Terminal Maneuvering Area |
| TMI | Track Message Identification |
| TOD | Top of Descent |
| TPP | Terminal Procedures Publications |
| TQM | Total Quality Management |
| TRACON | Terminal Radar Approach Control Facility |
| TRN | Monitored Operational Performance |
| TRSA | Terminal Radar Service Area |
| TSA | Transportation Security Administration |
| TSE | Total System Error |
| TSO | Technical Standard Order |
| TSOA | Technical Standard Order Authorization |
| TVE | Total Vertical Error |
| TWDL | Two-Way Data Link |
| TWIB | Terminal Weather Information Broadcast |
| TWIP | Terminal Weather Information for Pilots |
| U | |
| UA | Unmanned Aircraft |
| UAS | Unmanned Aircraft System |
| UAV | Unmanned Aerial Vehicle |
| UDDF | Universal Data Delivery Format |
| UFO | Unidentified Flying Object |
| UHF | Ultrahigh Frequency |
| UM | Uplink Message |
| UNEP | United Nations Environment Program |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UPR | User Preferred Route |
| USB | Upper Sideband |



| Acronym | Definition |
|----------|--|
| USIFPP | United States Instrument Flight Procedures Panel |
| USNOF | United States NOTAM Office |
| UTA | Upper Control Area |
| UTC | Universal Time Coordinated |
| UWS | Urgent Weather SIGMET |
| V | |
| VAR | Volcanic Activity Reporting |
| VASI | Visual Approach Slope Indicator |
| VCOA | Visual Climb Over the Airport |
| VDA | Vertical Descent Angle |
| VDL | VHF Data Link |
| VDP | Visual Descent Point |
| VFR | Visual Flight Rules |
| VGSI | Visual Glide Slope Indicator |
| VHF | Very High Frequency |
| VIP | Video Integrator Processor |
| VLF | Very Low Frequency |
| VMC | Visual Meteorological Conditions |
| VMINI | Instrument flight minimum speed |
| VNAV | Vertical Navigation |
| VNE | Never exceed speed |
| VNEI | Instrument flight never exceed speed |
| VOLMET | Meteorological Information For Aircraft In Flight |
| VOR | Very High Frequency Omni-directional Range |
| VOR/DME | VHF Omnidirectional Range/Distance Measuring Equipment |
| VORTAC | VHF Omni-directional Range/Tactical Air Navigation |
| VOT | VOR Test Facility |
| VR | VFR Military Training Route |
| VRE | Vertical Rate of Change Event |
| VREF | Reference landing approach speed |
| VSM | Vertical Separation Minimum |
| VSO | Stalling speed or the minimum steady flight speed in the landing configuration at maximum weight |
| VTF | Vector to Final |
| VV | Vertical Visibility |



| Acronym | Definition |
|------------------|---|
| VVI | Vertical Velocity Indicator |
| VX | Speed for best angle of climb |
| VY | Speed for best rate of climb |
| VYI | Instrument climb speed, utilized instead of VY for compliance with the climb requirements for instrument flight |
| W | |
| WA | AIRMET |
| WAAS | Wide Area Augmentation System |
| WAC | World Aeronautical Chart |
| WAH | When Able Higher |
| WATRS | West Atlantic Route System |
| WATRS Plus | West Atlantic Route System including Miami Atlantic High Offshore Airspace and San Juan Oceanic FIR |
| WCE | Waypoint Change Event |
| WFO | Weather Forecast Office |
| WG | Working Group |
| WGS-84 | World Geodetic System of 1984 |
| WGS-84 Ellipsoid | A mathematical model of the earth's shape based on WGS-84 survey information |
| WMO | World Meteorological Organization |
| WMS | Wide-Area Master Station |
| WMSC | Weather Message Switching Center |
| WMSCR | Weather Message Switching Center Replacement |
| WP | Waypoint |
| WPR | Waypoint Position Report |
| WRS | Wide-Area Ground Reference Station |
| WS | SIGMET |
| WSO | Weather Service Office |
| WSP | Weather System Processor |
| WST | Convective Significant Meteorological Information |
| WW | Severe Weather Watch Bulletin |
| X | |
| XTK | Cross-Track Error |





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- [International Contacts](#)

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