Website Migration

The FAA adopted a new content management system (CMS) to add and update content on FAA.gov.
This may cause temporary broken links for the next 6 months.

Flight Technologies and Procedures Division

Pacific Resource Guide

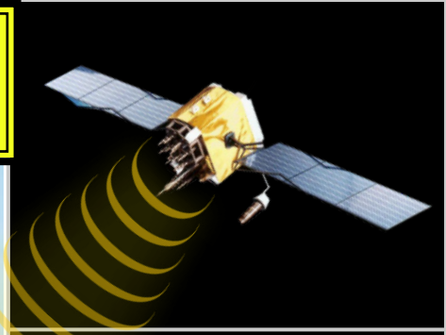
For U.S. Operators

- EMPHASIS
- AIRSPACE
- REFERENCES
- CNS
- ACRONYMS
- CONTACT US

Search

NOPAC Route Change
See Emphasis Items, p.5

NEW
Streamlined Part 91 Approval Process
Coming Soon







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.

Email Comments to: 9-AWA-AVS-AFS-400-Flight-Technologies-Procedures@faa.gov

Contacts
Acronyms

2nd Quarter 2022
Updated Quarterly,

FUTURE
OCEANIC OPERATIONS
Click to See Video
Provided By 30 West IP

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- Oceanic Errors
- Pacific Sites and Documents
- SLOP
- Contingency References
- Volcanic Ash and Solar Storms
- Weather Deviation
- Flight Planning
- ARINC 424 Coordinate Convention

Emphasis Items

Emphasis Items

- 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

NOPAC Route Structure Changes
See Memorandum



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 Communication Application Guide
- B036/B054 Application Guide

Emphasis Items

Page 2

New Emphasis Item



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.

Remote Island Information

- FAA Chart Supplement Pacific
- FAA Western-Pacific Region Airports Division
- FAA Western-Pacific Region
- NOAA Coral Reef Information System
- Abandoned & Little-Known Airfield
- Pacific Islands Benthic Habitat Mapping Center

Important Links

- FAA International NOTAM Website
- FAA Oceanic Planning/Plotting Charts
- FAA Prohibited/Restricted Airspace

Oceanic Errors

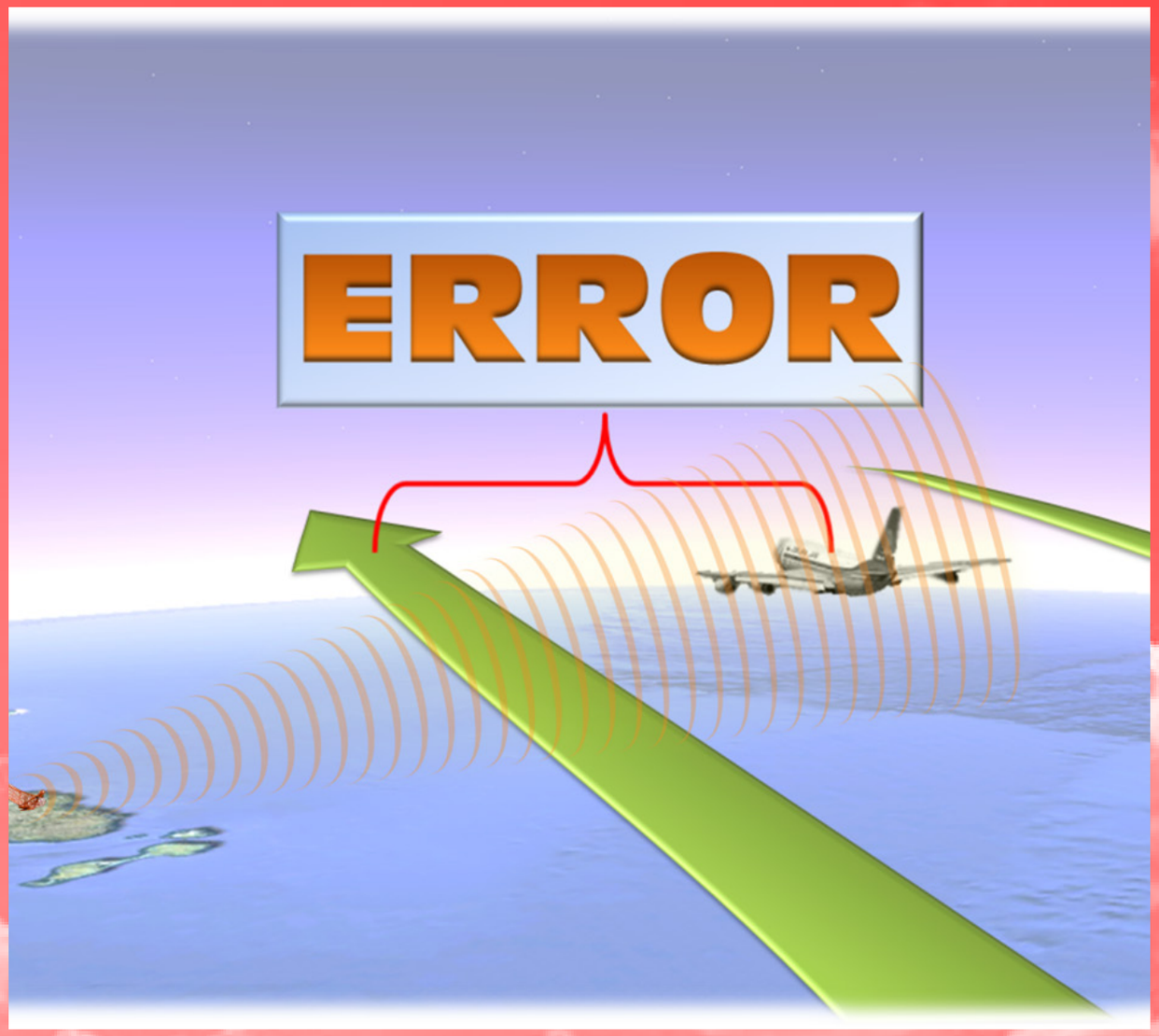
Gross Navigation Errors (GNE)

Large Height Deviations (LHD)

Erosion of Longitudinal Spacing

Oceanic Errors

- FAA Order (JO) 7210.632, Air Traffic Organization Occurrence Reporting
- 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 Proce dures, Effective November 5, 2020.



Pacific Flight

Pacific Flight Links

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

Asia/Pacific Regional Air Traffic Flow Management (ICAO)

Asia/Pacific Region ATM Contingency Plan

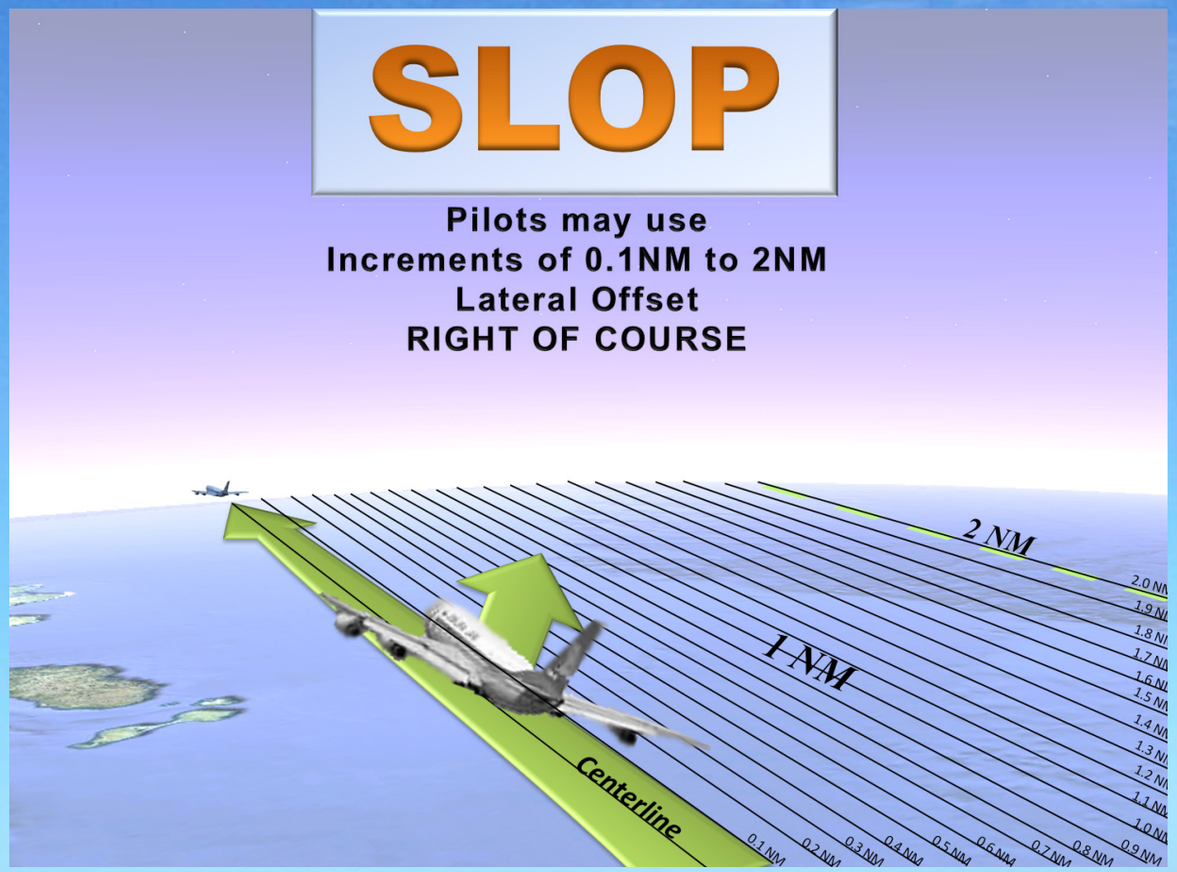




Strategic Lateral Offset Procedures (SLOP)

SLOP Links

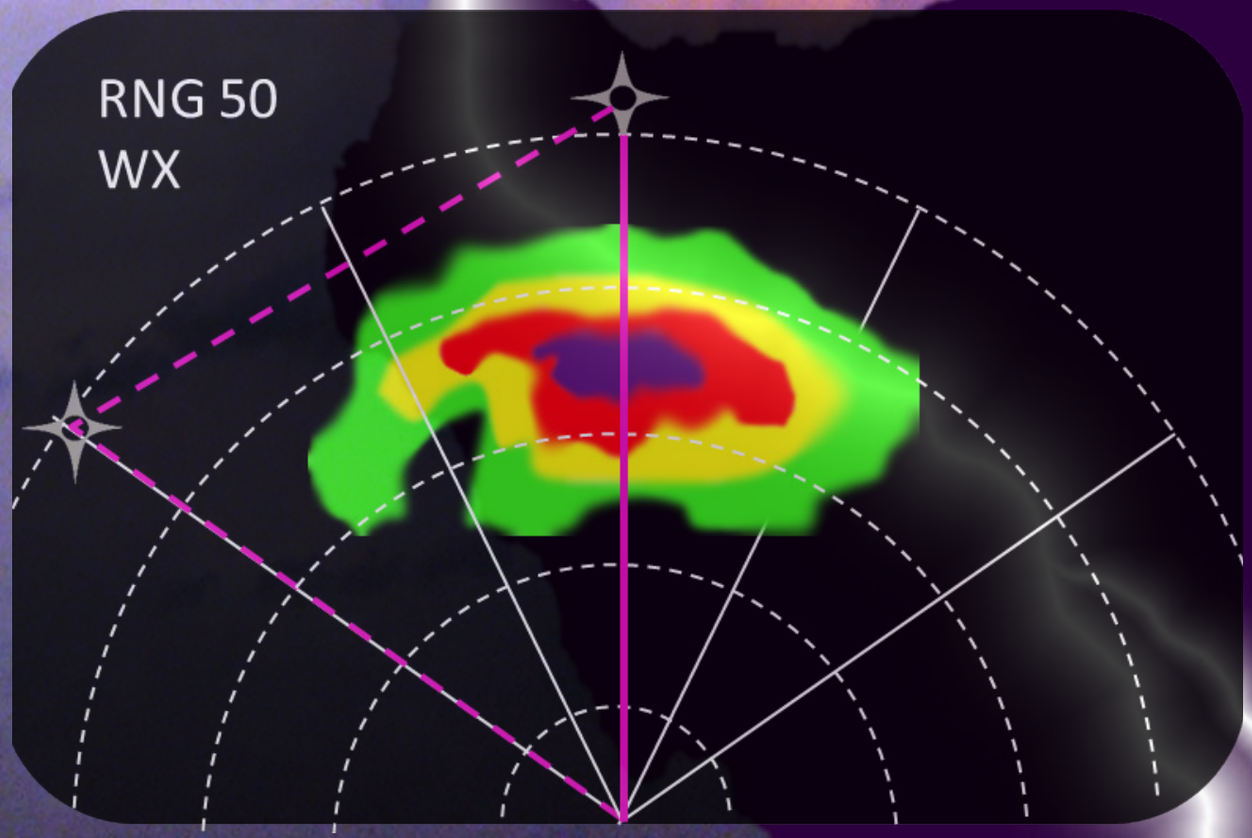
- United States Aeronautical Information Publication (AIP), See ENR 7.1, Section 8
- ICAO Doc 4444, Air Traffic Management *(Link to Purchase) See chapter 16.*
- Advisory Circular (AC) 91-70



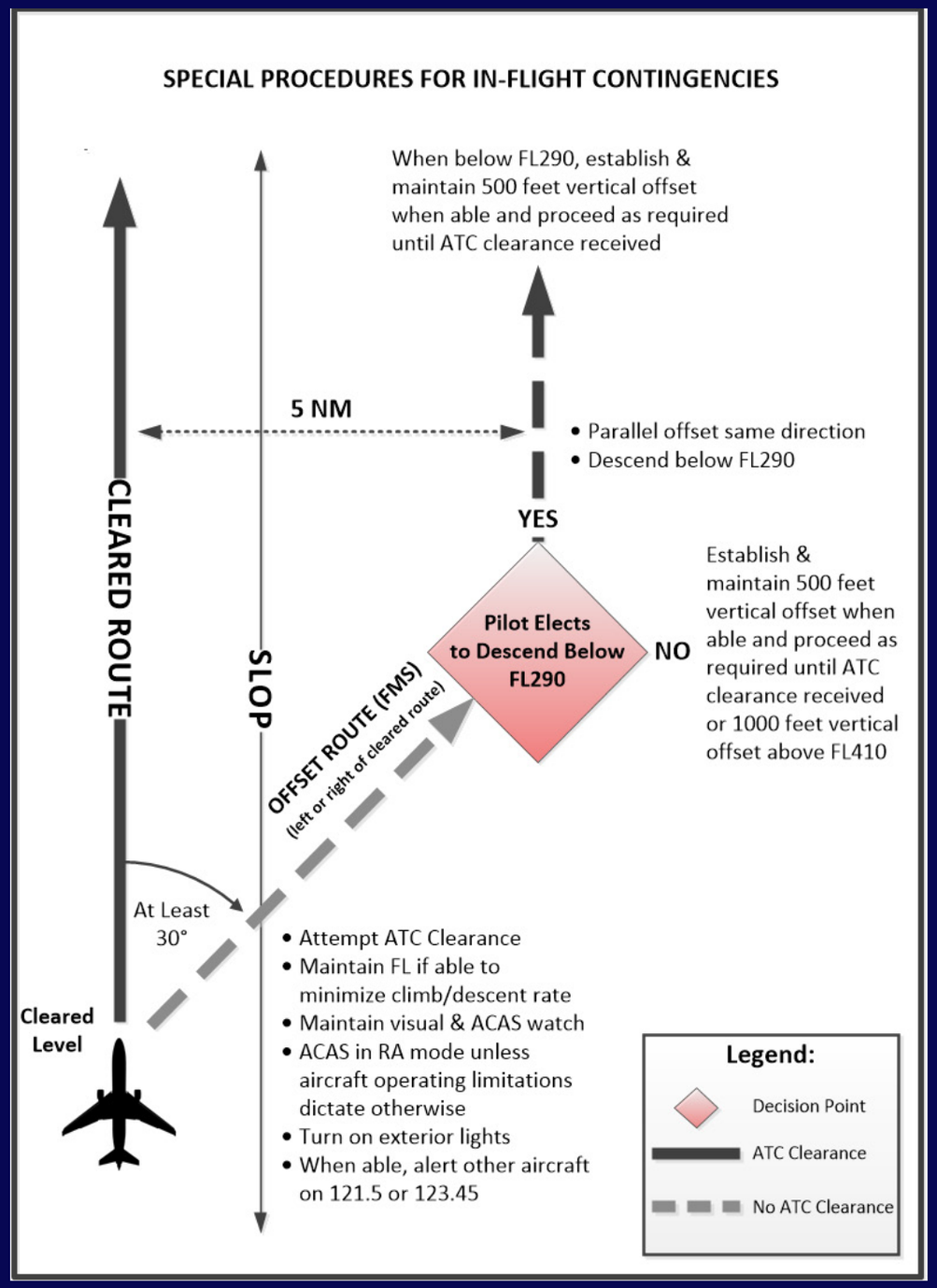
Contingency References

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
- 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



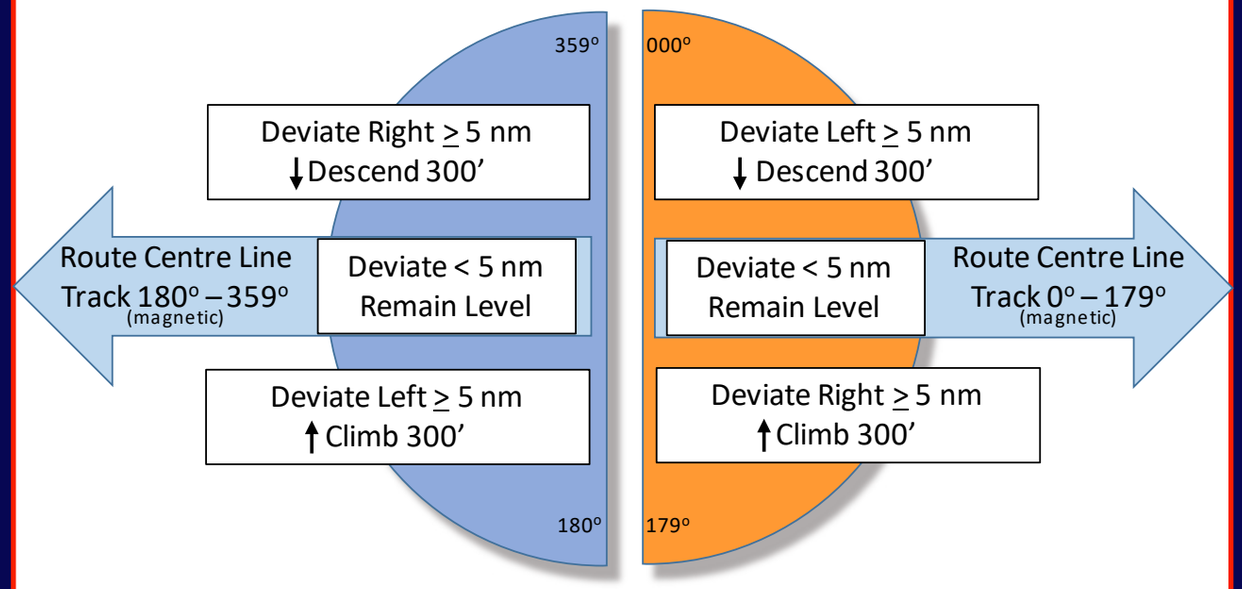
Contingency References



For details, see:

ENR 7.3 Special Procedures For In-Flight Contingencies in Oceanic Airspace

Weather Deviation Procedures



Note: These weather deviation procedures apply to all oceanic areas

Volcanic Ash and Solar Storms

Volcanic Links

- World VAAC Map
- SKYbrary
- 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









Aviation Weather

Weather Abbreviations (FltPlan.com)

Aviation Weather Links

- 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 WeatherCams (Google Chrome)
- NAV Canada Weather Cameras
- NAV Canada Aviation Weather

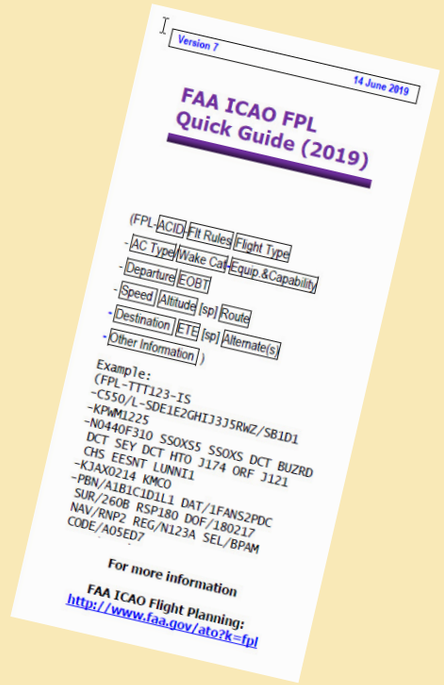
AIRMETS AND SIGMETS

Flight Planning Information

FAA Website

FAA Form 7233-4

ICAO Doc 7030 *(Link to Purchase)*


Version 7
14 June 2019

FAA ICAO FPL
Quick Guide (2019)

(FPL-ACID-Flt Rules-Flight Type
-AC Type/Wake Cat-Equip.&Capabilit
-Departure-EOBT
-Speed-Altitude-[sp]-Route
-Destination-ETE-[sp]-Alternate(s)
-Other Information)

Example:
(FPL-TTT123-IS
-C550/L-SDE1E2GHIJ3J5RWZ/SB1D1
-KPWM1225
-N0440F310 SSQXS5 SSQXS DCT BUZRD
DCT SEY DCT HTO J174 ORF J121
CHS EESNT LUNN1
-KJAX0214 KMCO
-PBN/A1B1C1D1L1 DAT/1FANS2PDC
SUR/260B RSP180 DOF/180217
NAV/RNP2 REG/N123A SEL/BPAM
CODE/A05ED7
-)

For more information

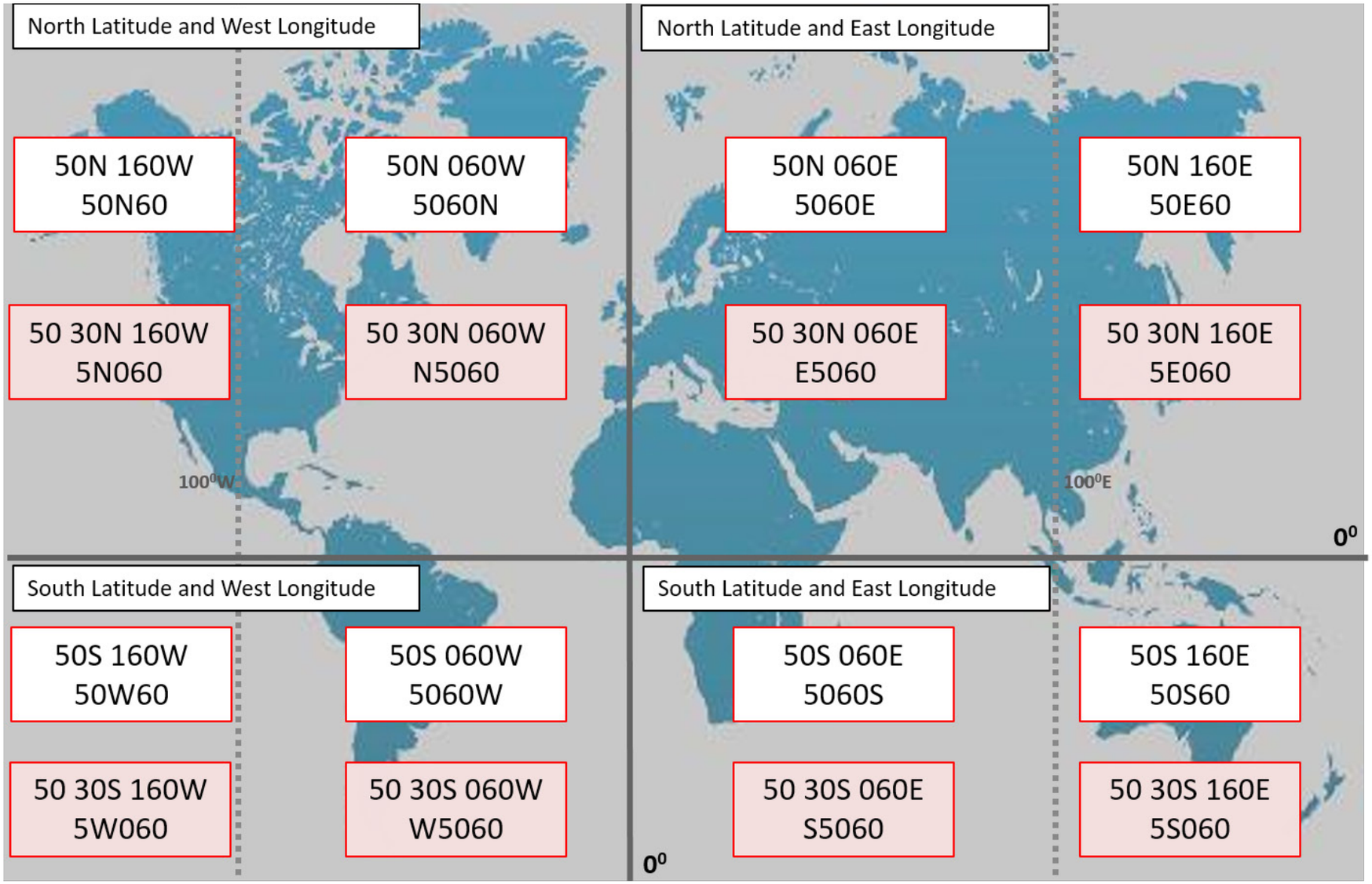
FAA ICAO Flight Planning:
http://www.faa.gov/ato?k=fpl

Flight Planning 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 *(Does not work with IE)*



Oceanic Waypoints ARINC 424 Shorthand System



ARINC 424 Shorthand System Links

- **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 Rev 01,** *Waypoint Insertion/Verification Special Emphasis Items*

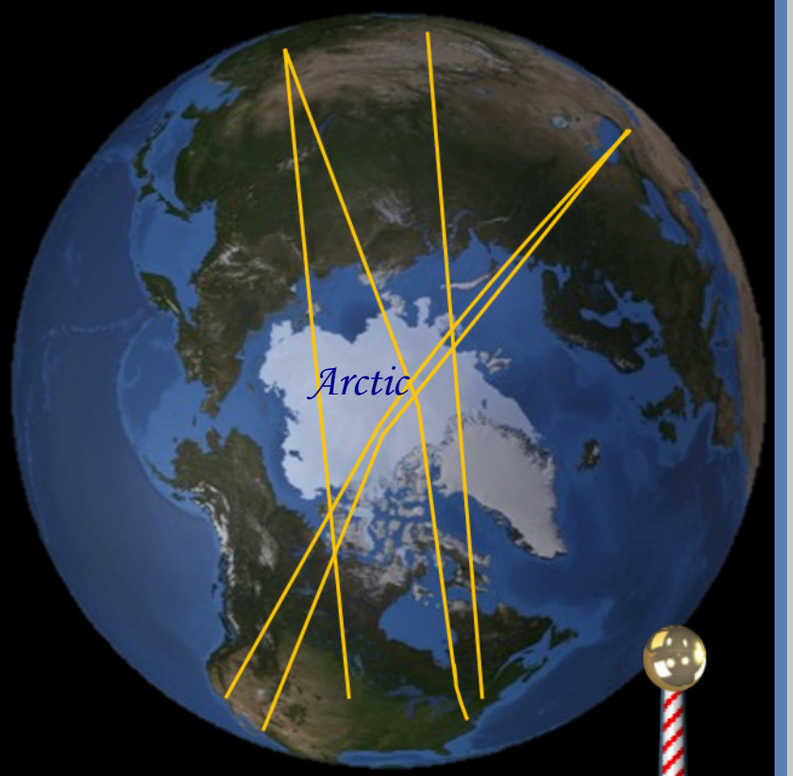


Click to View Items

- Polar Navigation
- Route Guidance
- Pacific Routes
- RVSM
- Oakland
- Anchorage
- Fukuoka
- Nadi
- Tahiti
- Brisbane and Melbourne
- Auckland Oceanic

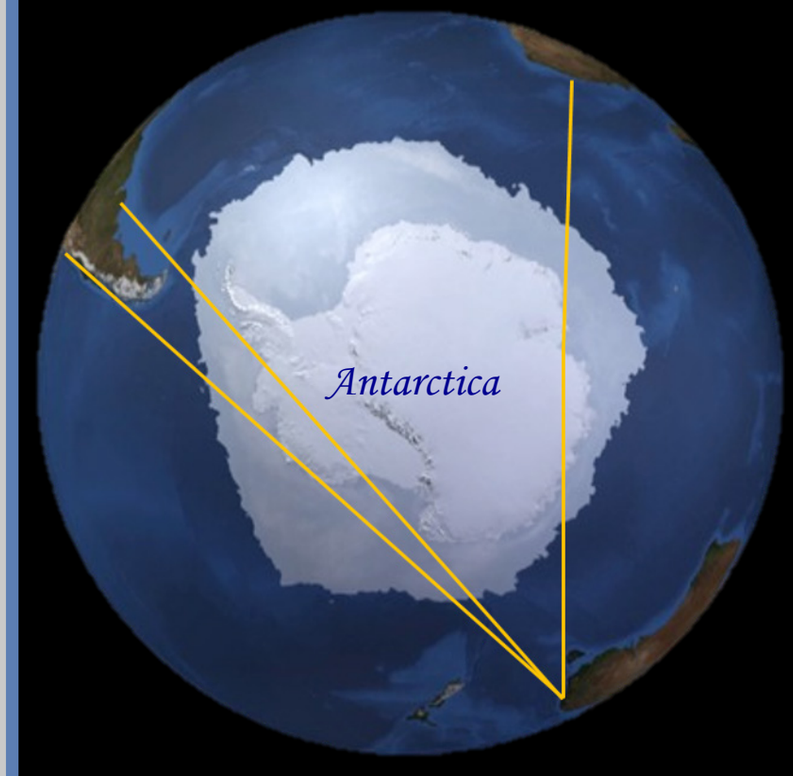
Airspace

Polar Navigation



Polar Navigation Links

- 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 Airspace Operations
- B036/B054 Application 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 Forcast



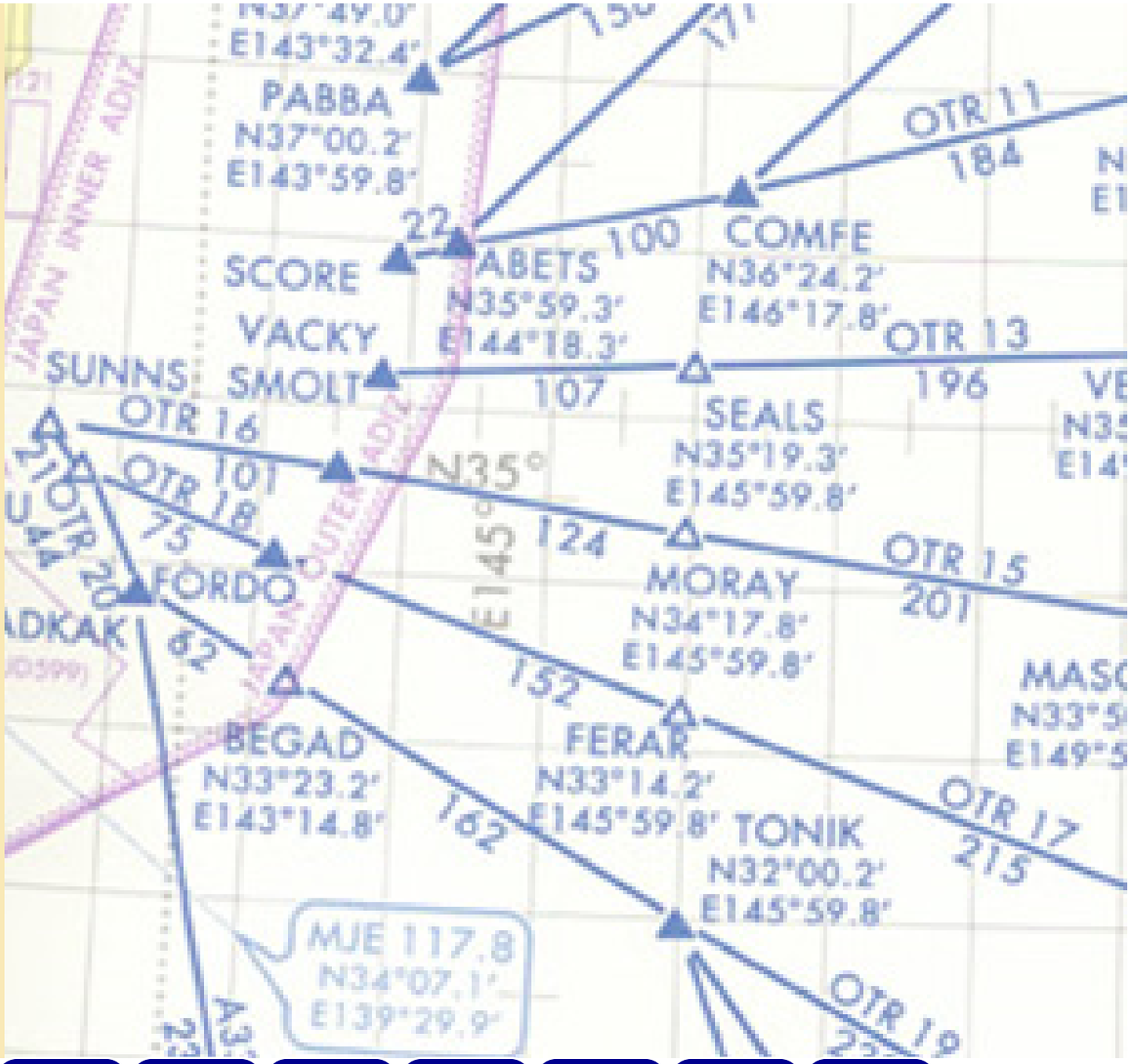
Route Guidance

Route Guidance Links

- KZAK Oceanic ATC Operations
- 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



Pacific Tracks



Pacific Track Links

- Pacific Organized Track System
- PACOTS Flight Planning Guidance
- AUSOTS - Australian Organized Track Structure

Reduced Vertical Separation Minimum

RVSM Links

- 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

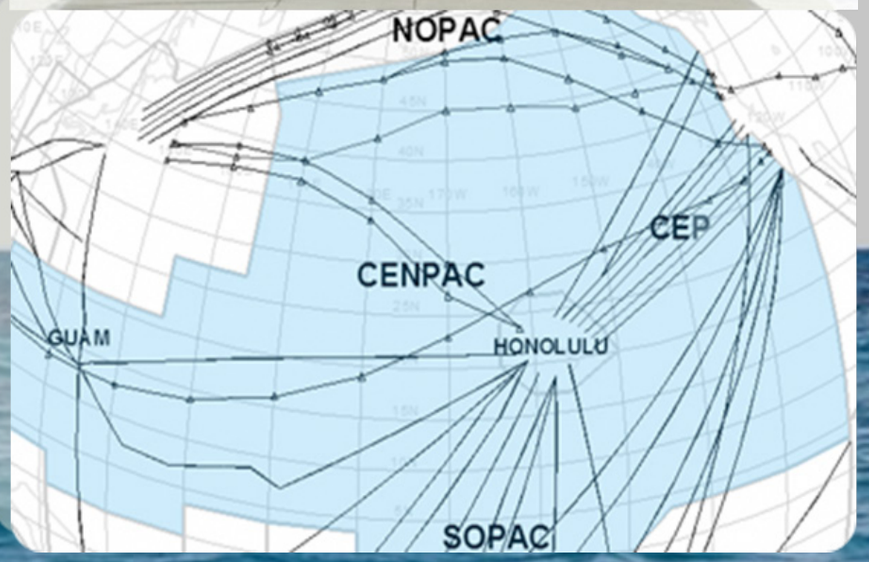
Airspace Menu | Polar Navigation | Route Guidance | Pacific Tracks | RVSM | Oakland | Anchorage | Fukuoka | Nadi | Tahiti | Brisbane Melbourne | Auckland

Contents

Federal Aviation Administration

Oakland FIR





Oakland FIR Links

- Oakland Oceanic
- Pacific Organized Track System
- KZAK Oceanic ATC Operations
- Guam Area Preferential Routings (PDF)
- Pacific Organized Track System (PACOTS) Guidelines (PDF)
- Oakland Oceanic Controlled Airspace/Flight Information Region (OCA/FIR) (PDF)
- Oakland Oceanic CPDLC (PDF)
- User Preferred Route (UPR) Flight Planning Guidelines (PDF)
- Informal Pacific Coordinating Group (IPACG)
- Informal South Pacific Coordinating Group (ISPACG)
- Oceanic Workgroup Meeting (OWG)



Anchorage FIR

Anchorage FIR Links

- FAA Anchorage ARTCC
- Anchorage Weather
- Alaskan Region Airports Division
- Alaska Aviation Fact Sheet
- Alaskan Flight Service Stations
- Anchorage Air Route Traffic Control Center (ZAN)

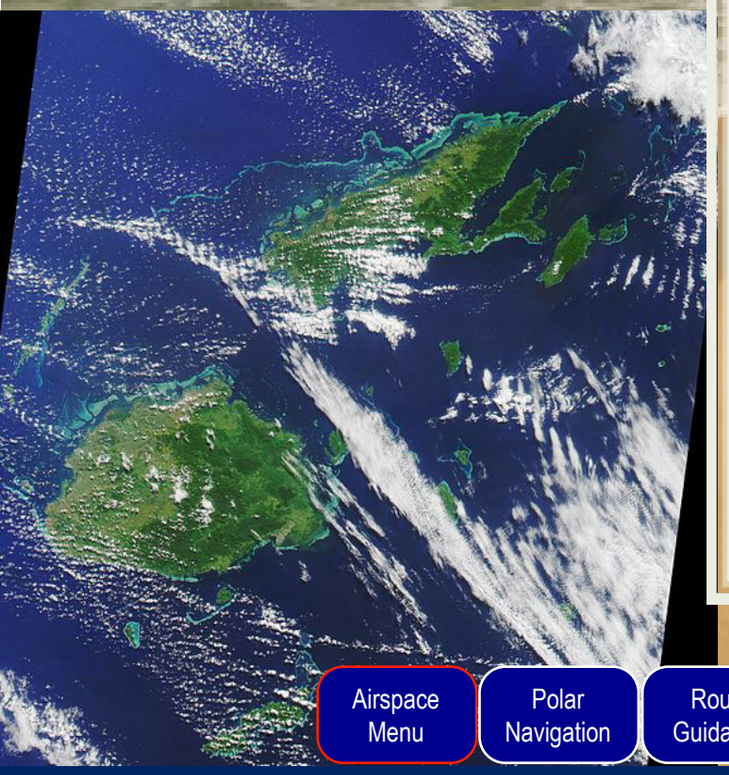
Fukuoka FIR



Fukuoka FIR Links

- Japan Airspace Safety Monitoring Agency
- Civil Aviation Bureau (MLIT) Japan Meteorological Agency
- Aviation Weather Center, SIGMET Pacific
- Civil Aviation Bureau: Air Traffic Services System
- Data Link Operation and PBCS Implementation in Japan

Nadi FIR



Nadi FIR Links

- 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

Tahiti FIR

Tahiti FIR Links

- 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
- Tahiti International Airport
- Aviation Digital Data Service (ADDS)
- International Civil Aviation Organization Working Paper: Experience of Tahiti ACC in the Provision of Oceanic Air Traffic Services

Brisbane and Melbourne FIRs



Brisbane and Melbourne FIR Links

- Australia AIP
- airservices: NOTAM MAPS
- airservices: Air Traffic Management Services
- Australian Government Civil Aviation Safety Authority
- Australian Government Bureau of Meteorology
- Australian Government Bureau of Meteorology Darwin Volcanic Ash Advisory Centre



Auckland Oceanic FIR

Auckland Oceanic FIR Links

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



References

Click to View Items

United States

Flight Standards

- 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

Flight Standards: Certification and Application

- Flight Standards Information Management System (FSIMS)
- Examiner and Inspector Handbooks and Manuals
- Online Resources: Resources for Mechanics
- Oceanic and Remote Continental Application Guide (B036 and B054)
- Data Link Communication (A056) Application Guide
- WebOPSS Training

FS 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)

FLIGHT STANDARDS



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

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

Flight Standard Information Management System (FSIMS)

Operations Specifications	
A056	Data Link Communications (CPDLC ADS-C)
B029	Drift-down or Fuel Dumping
B030	IFR Navigation Using GPS/WAAS RNAV Systems
B034	RNAV Class I
B036	Oceanic and Remote Continental Navigation Using Multiple Long-Range Navigation (M-LRNS)
B037	Operation in Central East Pacific (CEP) Airspace
B038	North Pacific (NOPAC) Operations
B040	Areas of Magnetic Unreliability
B043	Special Fuel Reserves
B044	Planned Re-dispatch/Re-release (Part 121 Only)
B045	Extended Overwater Operation Using a Single Long-Range Communication System
B046	RVSM
B050	Authorized Areas of En Route Operations, Limitations, and Provisions
B055	North Polar Operations
B342	ETOPS (Two Engines), Parts 121 and 135
B344	ETOPS (More than Two Engines), Parts 121 and 135

United States
14 CFR Part 91

14 CFR Part 91	
91.3	Responsibility and Authority of the PIC
91.123	Compliance with ATC Clearances and Instructions
91.181	Course to be Flown
91.213	Inoperative instruments and equipment.
91.511	Communication and navigation equipment for overwater operations
91.703	Operations of civil aircraft of U.S. registry outside of the United States
91.1019	Conducting tests and inspections
91.1041	Aircraft proving and validation tests
Appendix G	Operations in Reduced Vertical Separation Minimum (RVSM) Airspace

United States
14 CFR Part 121

14 CFR Part 121	
121.11	Rules applicable to operations in a foreign country
121.93	Route requirements: General
121.99	Communications facilities – domestic and flag operations
121.113	Area and route requirements: General
121.122	Communications facilities-supplemental operations
121.161	Airplane limitations: Type of Route
121.351	Communication and navigation equipment for extended over-water operations and for certain other operations

United States
14 CFR Part 135

14 CFR Part 135	
135.3	Rules applicable to operations subject to this part
135.43	Crewmember certificates: International operations
135.73	Inspections and tests
135.98	Operations in the North Polar Area
135.145	Aircraft proving and validation tests
135.165	Communication and navigation equipment: Extended over-water or IFR operations
135.364	Maximum flying time outside the United States

United States
Advisory Circulars (AC)

Advisory Circulars (AC)	
AC 00-63	Use of Cockpit Displays of Digital Weather and Aeronautical Information
AC 20-138	Airworthiness Approval of Positioning and Navigation Systems
AC 20-140	Guidelines for Design Approval of Aircraft Data Link Systems Supporting Air Traffic Services (ATS)
AC 20-150	Airworthiness Approval of Satellite Voice Equipment Supporting Air Traffic Service (ATS) Communication
AC 20-165	Airworthiness Approval of Automatic Dependent Surveillance—Broadcast (ADS -B Out System)
AC 90-96	Approval of U.S. Operators and Aircraft to Operate Under IFR in European Airspace for B-RNAV/RNAV5 and P-RNAV
AC 90-105	Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace
AC 90-114	Automatic Dependent Surveillance—Broadcast (ADS-B) Operations
AC 91-70	Oceanic and Remote Continental Airspace Operations
AC 91-85	Approval of Aircraft and Operators for flight in Reduced Vertical Separation Minimum Airspace
AC 120-42	Extended Operations (ETOPS and Polar Operations)
AC 90-117	Data Link Communications
AC 135-42	Extended Operations (ETOPS and Polar Operations)

United States
Technical Standard Orders (TSO)

Technical Standard Orders (TSO)	
TSO-C115	Flight management systems (FMS) using multi-sensor inputs
TSO-C145	Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)
TSO-C146	Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)
TSO-C154	Universal Access Transceiver (UAT) Automatic Dependent Surveillance-Broadcast (ADS-B) Equipment
TSO-C157	Aircraft Flight information Services-Broadcast (FIS-B) Data Link Systems and Equipment
TSO-C159	Next Generation Satellite Systems (NGSS) Equipment
TSO-C160	Very High Frequency (VHF) Data Link (VDL) Mode 2 Communication Equipment
TSO-C166	Extended Squitter Automatic Dependent Surveillance - Broadcast (ADS-B) and traffic information
TSO-C195	Avionics Supporting Automatic Dependent Surveillance - Broadcast (ADS-B) Aircraft Surveillance Applications (ASA)
TSO-C196	Airborne Supplemental Navigation Sensors for Global Positioning System Equipment Using Aircraft-Based Augmentation

United States
FAA Orders

FAA Orders	
JO 7210.362	Air Traffic Organization Occurrence Reporting *(FSIMS as noted in other RGs)*

International Civil Aviation Organization (ICAO) Documents

Online Store

ICAO Portal Login

ICAO Automatic Updates for Paid Subscribers (Username and Password)



International Documents
ICAO APAC Electronic Documents
Satellite Voice Guidance Material, ICAO doc 10038
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)



INTERNATIONAL WEB SOURCES

International Web Links

Airfield Charts (AIP Links)

EUROCONTROL Aeronautical Information Around the World

- **Australia AIP**
- **Japan Aeronautical Information Service Center (AIS)**
- **New Zealand AIP**
- **Civil Air Authority of the Philippines ATS**
- **Republic (South) of Korea**
- **Taiwan**

FAA Pilot Links

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
- 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
- Historical

Manuals, Guides, and Testing

- Handbooks and Manuals
- Aircraft
- Aviation
- Examiner and Inspector





Click to View Items

- Long Range Communication
- Data Link Operations
- ICAO GIS Mapping

CNS

(Communication, Navigation, Surveillance)



Long Range Communications



Long Range Communications Links

GOLD (Global Operational Data Link Document),
Doc 10037, Published by ICAO

FAA InFO

InFO 15008	Iridium Satellite Voice (SATVOICE) with Safety Services
InFO 15015	Filing REG/ and CODE/ in Item 18 of the Flight Plan

14 CFR

91.511	Communication and Navigation Equipment for Overwater Operations
121.351	Communication and Navigation Equipment for Extended Over-Water
135.165	Communication and Navigation for Overwater Operations

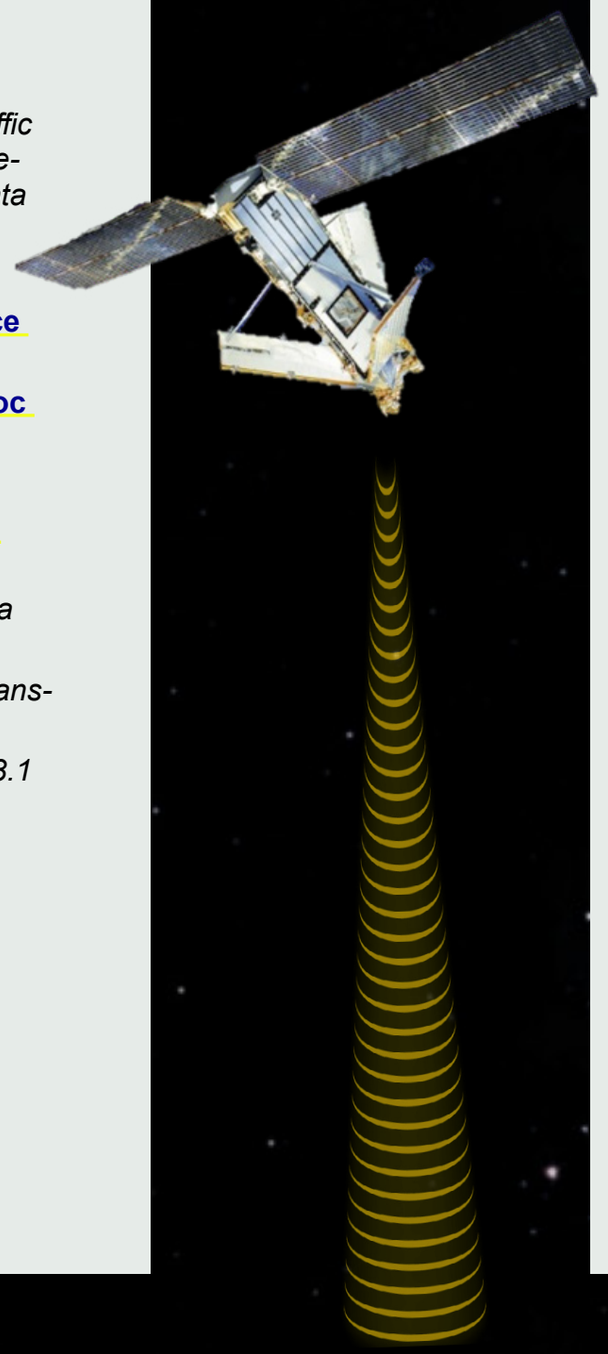
FAA Regulation Division, Legal Interpretations & Chief Councel's Opinions

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

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 Communication Application 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*



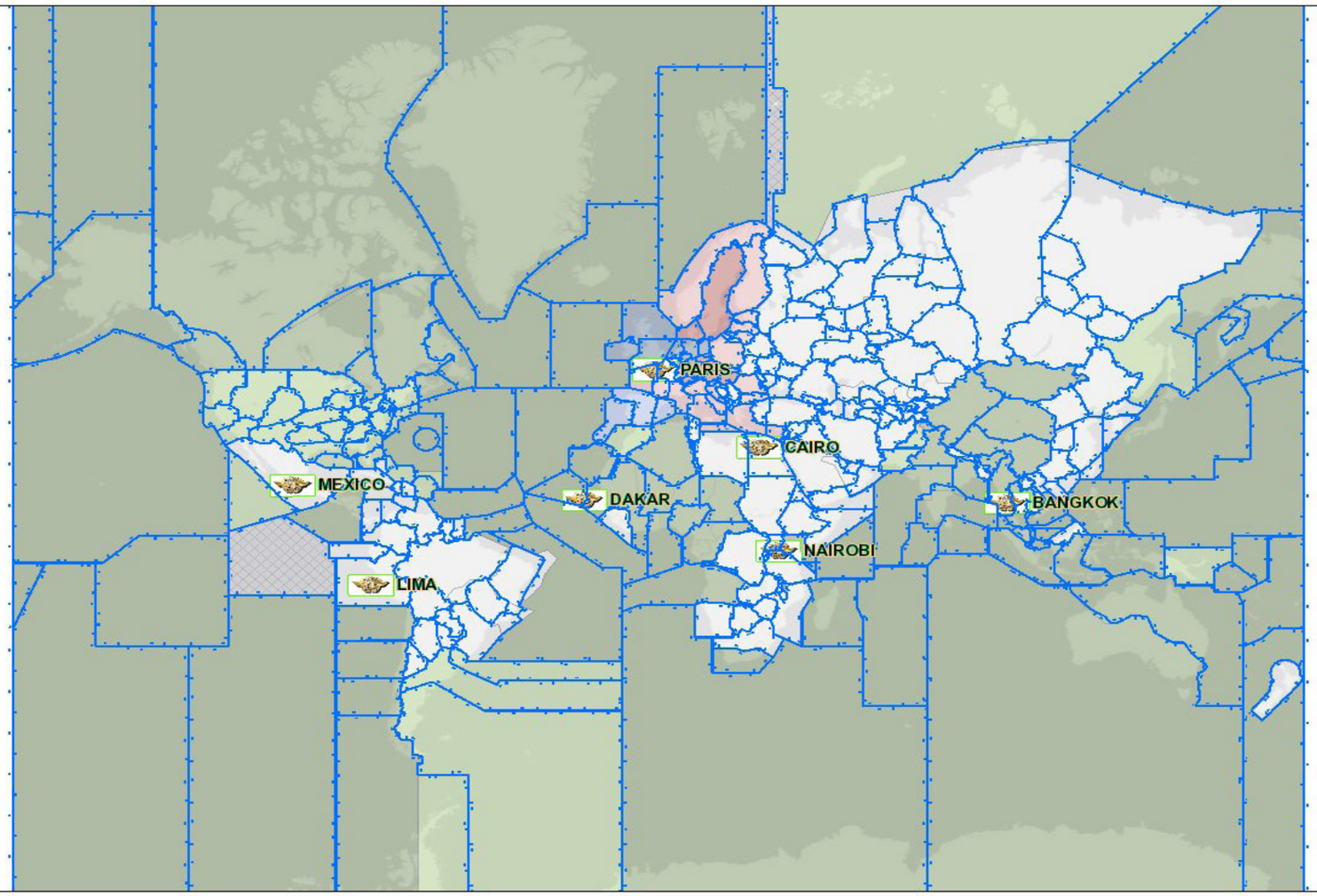
- **NAS Data Communication Guide** *Overview that introduces flight crews to the concept of CPDLC in the NAS and outlines the roles of the Airline Operations Center (AOC), clearance delivery and En Route controllers, and flight crews.*
- **CPDLC End2End Description** *Overview of FAA Segment 1 Phase 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 PDF** *(Use Google Chrome)*
- **ICAO DOC 9869,** *Performance-Based Communication and Surveillance (PBCS) Manual*
- **MMEL Policy Letter (PL) 106, HF Communications**
- **NAT OPS Bulletin 2019_003 Data Rev 03 Link Performance Improvement Options**

ICAO GIS Mapping

ICAO FlightVectorApps (Allow at least 3 minutes to load)

- ICAO Public Maps - ICAO GIS portal
- ICAO Public Maps
- Global Flight Information Region And Boundaries; GIS Database

GIS Database



June 22, 2017

ICAOFIR2015 26 june
RegOffice

ATS Data Link Status
FANS operational
FANS planned
FANS and LINK 2000+ operational
FANS and LINK 2000+ planned
LINK 2000+ operational
LINK 2000+ planned
none
nil

1:147,914,382

0 1,400 2,800 5,600 mi
0 2,800 5,600 11,200 km

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Acronyms



Click to View Items

A
B, C
D
E
F
G
H, I
J, K, L
M
N
O, P
Q, R
S
T
U, V
W
X

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

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Contents

Federal Aviation Administration

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	Charted 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

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Contents

Federal Aviation Administration

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

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Federal Aviation Administration

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
O	
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 *(ICAO managed communications method used to notify aircraft that a ground radio station wishes to communicate)*
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
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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