

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

N JO 7110.563

Effective Date:
August 15, 2011

Cancellation Date:
August 15, 2012

SUBJ: Automatic Dependent Surveillance – Broadcast (ADS-B) In-Trail Procedure (ITP)

- 1. Purpose of This Notice.** This notice transmits air traffic procedural guidance and requirements applicable to apply reduced longitudinal separation aircraft-to-aircraft during altitude change maneuvers between appropriately authorized and equipped aircraft during operational trials for ADS-B ITP in designated portions of the Oakland ARTCC Oceanic Control Area (CTA). The operational trials will be conducted for a period of one (1) calendar year from the start of the trial.
- 2. Audience.** This notice applies to the Air Traffic Organization (ATO) En Route and Oceanic Service Unit.
- 3. Where Can I Find This Notice?** This notice is available on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/ and on the air traffic publications Web site at http://www.faa.gov/air_traffic/publications/.
- 4. Explanation of Policy Change.** The procedures in this notice establish the requirements for the use of ADS-B ITP during operational trials.
- 5. Procedures.** Standard air traffic control procedures contained in FAA Order JO 7110.65 and facility orders must be applied in support of the ADS-B ITP operational trials. Oakland ARTCC will apply ADS-B ITP separation to proximate eligible pairs of aircraft in areas of the Oakland Oceanic CTA designated by facility directive. To allow qualified aircraft to climb or descend through the altitude of a blocking aircraft when less than standard separation exists, ADS-B ITP requirements are as follows:
 1. Communications between ITP aircraft and ATC shall be via CPDLC.
 2. Reference aircraft are identified to ATC by the ITP aircraft as part of the ITP clearance request.
 3. ITP Distance sent in the ITP request is equal to or greater than 15 NM.
 4. Closing Mach Differential is equal to or less than 0.06 Mach.
 5. Maximum vertical distance between the ITP and Reference aircraft is/are 2000 ft.
 6. ITP and Reference aircraft are same direction traffic.
 7. All aircraft are at a single assigned altitude.
 8. Aircraft are not cleared for a route deviation.
 9. ITP aircraft and Reference are not part of another ITP operation at the same time.

10. ADS-B ITP CONTROLLER PROCEDURE

This procedure must be initiated by an ITP request

If any of the FOLLOWING STEPS ARE NOT TRUE, ADVISE the aircraft UNABLE

Validate ITP Request

The PILOT-REPORTED DISTANCE between the ITP aircraft and any referenced aircraft IS AT LEAST 15NM

Initiate probe on ITP aircraft

- a) NO MORE THAN 2 CONFLICTS EXIST
- b) ALL CALL SIGNS IN CONFLICT REPORT(S) are included in the ITP request
- c) All conflict aircraft are SAME DIRECTION TRAFFIC as ITP aircraft until vertical separation is reestablished
- d) CLOSING MACH DIFFERENCE of ITP aircraft and any referenced aircraft is $\leq .06$
- e) All conflict aircraft are WITHIN 2000' of the ITP aircraft
- f) All conflict aircraft are AT A SINGLE-ASSIGNED ALTITUDE
- g) NO CONFLICTS exist AT THE REQUESTED ALTITUDE
- h) No aircraft involved are cleared for a ROUTE DEVIATION

Issue ITP Altitude Change Clearance

Send an uplink message containing the proper **UM169** message

ITP procedure type (number and relative position of reference aircraft)	UM169 Message Element content for ITP
ITP aircraft is behind 1 aircraft	"ITP BEHIND [Aircraft ID]"
ITP aircraft is ahead of 1 aircraft	"ITP AHEAD OF [Aircraft ID]"
ITP aircraft is behind 2 aircraft	"ITP BEHIND [Aircraft ID] AND BEHIND [Aircraft ID]"
ITP aircraft is ahead of 2 aircraft	"ITP AHEAD OF [Aircraft ID] AND AHEAD OF [Aircraft ID]"
ITP aircraft is between 2 aircraft	"ITP BEHIND [Aircraft ID] AND AHEAD OF [Aircraft ID]"

...concatenated with one of the following message elements:

- UM20: CLIMB TO AND MAINTAIN [altitude]
- UM26: CLIMB TO REACH [altitude] BY [time]
- UM27: CLIMB TO REACH [altitude] BY [position]

- UM23: DESCEND TO AND MAINTAIN [altitude]
- UM28: DESCEND TO REACH [ALTITUDE] by [time]
- UM29: DESCEND TO REACH [altitude] BY [position]

6. Distribution. This notice is distributed to the following ATO service units: En Route and Oceanic, and System Operations Services; the ATO Office of Safety; service center offices; the Air Traffic Safety Oversight Service; the William J. Hughes Technical Center; and the Mike Monroney Aeronautical Center.

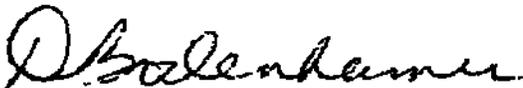
7. Background.

a. The FAA developed the ADS-B ITP oceanic ATC procedure to utilize ADS-B user equipage and ATC capabilities to allow more oceanic flights to achieve their preferred vertical profiles. Integral to ADS-B ITP is the use of advanced CNS capabilities; e.g., ADS-B, CPDLC, and RNP. To apply ADS-B ITP, oceanic controllers will utilize manual procedures, as well as Ocean21 automation system capabilities.

b. This procedure is based on in-trail Distance Measuring Equipment (DME) rules in ICAO Doc 4444, paragraph 5.4.2.3.1. Aircraft pair distance verification is performed by the requesting (ITP) aircraft using on-board ADS-B systems. As with the existing DME procedure, air traffic control validates that the ITP reported criteria meets the procedural standards.

c. To achieve early benefits, ADS-B ITP will be demonstrated in operational trials by manually applying ADS-B ITP requirements without changes to Ocean21 and will be limited for use between ADS-B-equipped qualified aircraft. Upon conclusion of the operational trial, ADS-B ITP may be implemented as an enhancement to Ocean21 software as an automated procedure.

8. Safety Management System. Appropriate safety management documentation, in accordance with FAA Order 1100.161, Air Traffic Safety Oversight, ATO Order JO 1000.37, Air Traffic Organization Safety Management System, and the ATO Safety Management System Manual, has been completed in support of this notice.



Diane Bodenhamer
Acting Director, En Route and Oceanic
Safety and Operations Support
Air Traffic Organization