



International Civil Aviation Organization

**THE TENTH MEETING OF AUTOMATIC
DEPENDENT SURVEILLANCE –
BROADCAST (ADS-B) STUDY AND
IMPLEMENTATION TASK FORCE
(ADS-B SITF/10)**



Singapore, 26 -29 April 2011

Agenda Item 5: Report and updates by the leading member of the Task Force on Tasks assigned

ADS-B AND FLIGHT PLANNING

(Presented by Australia)

SUMMARY

This paper proposes changes to ADS-B Implementation Guidance Document (AIGD) as a result of the ICAO changes to PANS ATM Doc 4444 which become effective on 15 November 2012.

1. BACKGROUND

1.1 The ADS-B Task Force Task List item 17 requires a review of the ICAO Flight Plan changes planned for 2012 and to update the AIGD accordingly. This paper undertakes the task allocated.

1.2 The text of Amendment No. 1 to the PANS-ATM (Doc 4444) was approved by the President of the Council of ICAO on behalf of the Council on 27 May 2008 for applicability on 15 November 2012.

1.3 Amongst many other changes, the ICAO flight plan will be

- modified to include designations ADS-B capability in field 10, and
- modified to provide more options for transponder capability.

1.4 The transition to the modified flight plan will commence in July 2012, and some states may accept new flight plan format data from that date.

1.5 The AIGD has a section which discusses temporary procedures to be used prior to use of the ICAO Flight plan. These procedures require use of field 18 using RMK/ADSB & CODE/. Whilst it is expected that RMK/ADSB will no longer be required post transition to the new flight plan, the use of CODE/ may continue to be used in some special circumstances.

2. RECOMMENDATION

2.1 It is recommended that the AIGD be modified as indicated at Attachment A.

ATTACHMENT A: PROPOSED AMMENDMENT TO AIGD

5.9.2 ADS-B Flight Planning Requirements (Before transition to new DOC4444 format in 2012)

Until the new ICAO flight plan, which incorporates ADSB designators, is in use in 2012, the following shall apply:

5.9.2.1 Flight Notification

A remark shall be entered in section 18 of the flight plan to indicate that the flight is capable of transmitting ADS-B messages via the Mode S Extended Squitter data link. The format of the remark should be:

RMK/ADSB

Note: Only flights with ADS-C capability should use the surveillance equipment indicator “D” and only flights with CPDLC capability should use the equipment indicator “J”.

5.9.2.2 Aircraft Address (24 Bit Code)

Where required, the aircraft address (in hexadecimal format) may be recorded in section 18 of the ICAO flight plan as per the following example:

CODE/7C432B

States should note that use of hexadecimal code may be prone to human error and is less flexible in regard to airframe changes for a notified flight.

5.9.3 ADS-B Flight Planning Requirements (After transition to new DOC4444 format in 2012)

After transition to the new flight plan format in 2012, the following shall apply:

5.9.3.1 Flight Notification

An appropriate ADS-B designator shall be entered in section 10 of the flight plan to indicate that the flight is capable of transmitting ADS-B messages.

For information, these include:

- B1 ADS-B with dedicated 1090 MHz ADS-B “out” capability
- B2 ADS-B with dedicated 1090 MHz ADS-B “out” and “in” capability
- U1 ADS-B “out” capability using UAT
- U2 ADS-B “out” and “in” capability using UAT
- V1 ADS-B “out” capability using VDL Mode 4
- V2 ADS-B “out” and “in” capability using VDL Mode 4

5.9.3.2 Aircraft Address (24 Bit Code)

Where required, the aircraft address (in hexadecimal format) may be recorded in section 18 of the ICAO flight plan as per the following example:

CODE/7C432B

States should note that use of hexadecimal code may be prone to human error and is less flexible in regard to airframe changes for a notified flight.

5.9.3.3 SSR Mode S

When an aircraft is equipped with a mode S transponder, that transmits ADS-B messages, an appropriate Mode S designator should also be entered in field 10; i.e.: either

- E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability, or
- L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability.
