



Australian Government

Civil Aviation Safety Authority

NOTICE OF FINAL RULE MAKING

Carriage of ADS-B avionics in foreign registered aircraft operating in Australian territory

Amendments to CAO 82.1, CAO 82.3, CAO 82.5 -
Repeal of CASA Instrument of Direction 521/09 (as
amended) by CASA Instrument of Direction 61/14

Readers should note that this Notice of Final Rule Making (NFRM) contains the Summary of Responses and CASA's disposition in response to the Notice of Proposed Rule Making (NPRM) 1305AS. This NFRM also includes the amended legislation for CAO 82.1, CAO 82.3 and CAO 82.5 (Annexes A - C, respectively) and CASA Instrument 61/14, which repeals CASA Instrument 521/09 as amended.

This NFRM finalises the public consultation process in respect of the Notice of Proposed Rule Making (NPRM).

Audience

This NFRM will be of interest to:

- aircraft owners, operators and pilots of foreign registered aircraft operating in Australia territory after 2 February 2017.
- Airservices Australia, as the provider of air traffic services.

Foreword

On 5 November 2013, the Civil Aviation Safety Authority (CASA) published NPRM 1305AS—Carriage of ADS-B avionics in foreign registered aircraft operating in Australian territory. The purpose of this NFRM is to set out CASA's disposition of comments received to the NPRM, which proposed the mandatory carriage of serviceable ADS-B avionics equipment by foreign registered aircraft operating under IFR, in any classification and at any altitude, in Australian territorial airspace on or after 2 February 2017.

This NFRM:

- provides a background of the regulatory policy proposed and consultation undertaken
- discusses the submissions made in response to NPRM 1305AS
- provides an analysis of the responses and gives a CASA response and disposition
- discusses the impact and gives an explanation of the changes
- provides the final legislative changes and associated advisory materials.

CASA received two responses to the NPRM. Analysis indicates that the proposal is acceptable without change. The details of the responses received, together with CASA's disposition, can be found in section 3 of this NFRM.

CASA would like to thank those who participated in the consultations on the issues addressed in the NPRM. The input of stakeholders who are directly or indirectly affected by change proposals is appreciated and valued in our regulatory development process.

John Grima
Acting Executive Manager
Standards Division

July 2014

Contents

1	Reference material	4
1.1	Acronyms and abbreviations	4
1.2	Definitions	4
1.3	References	5
2	Overview of the amendments	5
3	Summary of responses	7
3.1	Respondents	7
3.2	Analysis of responses	7
3.3	CASA's disposition	7
4	Implementation and review	8
4.1	Implementation timeframes	8
4.2	Transition and post-implementation reviews	8
Annex A	Civil Aviation Order 82.1 Amendment Instrument	A1
Annex B	Civil Aviation Order 82.3 Amendment Instrument	B1
Annex C	Civil Aviation Order 82.5 Amendment Instrument	C1
Annex D	CASA Instrument 61/14: Direction - use of ADS-B in foreign aircraft engaged in private operations (Repeals CASA Instrument 521/09 as amended)	D1

1 Reference material

1.1 Acronyms and abbreviations

The acronyms and abbreviations used in this NFRM are listed in the table below.

Acronym / abbreviation	Description
ADS-B	Automatic Dependent Surveillance - Broadcast
ASTRA	Australian Strategic Air Traffic Management Group
ATM	Air Traffic Management
ATC	Air Traffic Control
CAO	Civil Aviation Order
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CNS	Communication, Navigation and Surveillance (ICAO term)
FAA	Federal Aviation Administration (of the USA)
FL	Flight Level
ICAO	International Civil Aviation Organization
NFRM	Notice of Final Rule Making
NPRM	Notice of Proposed Rule Making
SCC	Standards Consultation Committee
SOR	Summary of Responses
SSR	Secondary Surveillance Radar

1.2 Definitions

Terms that have specific meaning within this NFRM are defined in the table below.

Term	Definition
ADS-B IN	Aircraft reception of ADS-B OUT messages
ADS-B OUT	Aircraft transmission of ADS-B messages

1.3 References

Regulations

Part 11 of the *Civil Aviation Safety Regulations 1998 (CASR)*—Regulatory administrative procedures.

Available online <http://www.comlaw.gov.au/Series/F1998B00220>

CAO 20.18 Amendment Order (No 3) 2009. Aircraft Equipment - basic operational requirements. Section 9B and Appendix XI.

Available online <http://www.comlaw.gov.au/Series/F2005B00800>

CAO 82.1 Amendment Order (No 2) 2009. Conditions on Air Operator's Certificates authorising charter operations and aerial work operations. Paragraph 5.8 and Appendices 3 and 4.

Available online <http://www.comlaw.gov.au/Series/F2005B00881/Compilations>

CAO 82.3 Amendment Order (No 3) 2009. Conditions on Air Operator's Certificates authorising regular public transport operations in other than high capacity aircraft. Paragraph 10.8 and Appendices 6 and 7.

Available online <http://www.comlaw.gov.au/Series/F2005B00882/Compilations>

CAO 82.5 Amendment Order (No 3) 2009. Conditions on air operator's certificates authorising regular public transport operations in high capacity aircraft. Paragraph 10.8 and Appendices 4 and 5.

Available online <http://www.comlaw.gov.au/Series/F2005B00883>

CASA Instrument 521/09 as amended. Direction - Use of ADS-B in foreign aircraft engaged in private operations in Australian territory.

Available online <http://www.comlaw.gov.au/Series/F2009L04118/Compilations>

Consultation documents

Notice of Proposed Rule Making (NPRM 1305AS)—Carriage of ADS-B avionics in foreign registered aircraft operating in Australian territory.

Available online http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_101758

Notice of Final Rule Making (NFRM) 1105AS—CNS/ATM Plan for this Decade-Aircraft avionics equipment mandates for satellite-based IFR navigation, Mode 2/ADS-B transponders and forward fitment of TCAS II Version 7.1.

Available online http://www.casa.gov.au/scripts/nc.dll?WCMS:PWA::pc=PC_100162

Advisory material

CASA's advisory material is available at http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_90902

AC 21–45—Airworthiness Approval of Airborne Automatic Dependent Surveillance Broadcast Equipment.

2 Overview of the amendments

The objective of the proposal is to enhance the safety and efficiency of air traffic management (ATM) provided by the national air traffic service provider by mandating the carriage of serviceable ADS-B avionics equipment as follows: in foreign registered aircraft operating, in any classification and at any altitude, under IFR, in Australian territorial airspace, commencing on 2 February 2017.

ADS-B avionics is a modern aircraft surveillance system for ATC using ground stations to receive radios signals transmitted by ADS-B equipped aircraft. Using ADS-B avionics, an aircraft is able to broadcast its identity, position, altitude, velocity and many other flight parameters with a degree of accuracy, integrity and reliability that is better than secondary surveillance radar (SSR).

The proposal is in addition to the existing mandate (refer to CASA NFRM 1105AS), in effect from 12 December 2013, for carriage of serviceable ADS-B by both Australian and foreign registered aircraft operating at or above FL290. That mandate remains unaffected by this proposal. In practice, this proposal affects turboprop and piston-engine foreign registered aircraft, which do not normally operate at or above FL290 and are hence not affected by that mandate.

Specifically, the NPRM proposed:

- amendments to CAO 82.1, 82.3 and 82.5 to mandate the carriage of serviceable ADS-B equipment on foreign registered aircraft operated under an AOC authorising regular public transport (RPT), charter or aerial work flight in Australian territorial airspace, commencing 2 February 2017, and
- making of a new Instrument of Direction to mandate the carriage of serviceable ADS-B equipment in private operations of foreign registered aircraft operating under IFR in Australian territorial airspace, commencing 2 February 2017.

3 Summary of responses

3.1 Respondents

By the closing date of 10 January 2013, CASA had received two responses to NPRM 1305AS. The following industry representatives consented to having their names published.

Industry

Representative	Organisation
Poonam Richardet	Cessna Aircraft Company

3.2 Analysis of responses

One respondent indicated full agreement with the proposal.

The other respondent indicated that the proposal would be acceptable if it included the FAA's TSO-C106 standard as acceptable for altitude source equipment.¹

3.3 CASA's disposition

CASA considers that TSO-C106 is an acceptable standard. Regulation 21.502 of CASR already provides for the automatic acceptance of equipment that meets certain pre-requisites. Any item that has, for example, FAA TSO approval is accepted in Australia and does not need any further approval. The guidance material detailed in AC 21-45 has been amended to reflect the acceptability of using air data computers.

After analysing the responses, and for the reasons explained above, no changes to the proposed amendments were deemed necessary.

¹ Refer to paragraphs 5 of: CAO 82.1 App 4; CAO 82.3 App 7, CAO 82.5 App 5; and Instrument of Direction Schedule 2.

4 Implementation and review

Attachments A, B, and C contain, respectively, the amendment instruments for CAOs 82.1, 82.3 and 82.5. Attachment D contains the new Instrument of Direction (61/14), which repeals its predecessor (521/09 as amended).

4.1 Impact of the changes

Justification for the proposal, options considered and preferred, and impact analyses remain as discussed in NPRM 1305AS.

4.2 Implementation timeframes

CASA expects that the regulatory amendments will be approved and made in time to allow operators sufficient time to be ready by the set date of effect of 2 February 2017. This is the same date by which Australian-registered aircraft, operating under IFR at any altitude, must also fit ADS-B equipment (as per CAO 20.18, NFRM 1105AS).

4.3 Transition and post-implementation reviews

CASA will monitor and review the new rules on an ongoing basis during the transition phase. Thereafter, following the commencement of the rules, CASA will conduct post-implementation monitoring and reviews as needed, or every 2-3 years as prescribed by Government guidelines.

Additional information is available from:

Jorge Woods
Project Leader

Post (no stamp required in Australia)

Reply Paid 2005

ATMS Standards Branch
Civil Aviation Safety Authority
Canberra ACT 2601, Australia

Email

jorge.woods@casa.gov.au

Telephone

Australia 02 6217 1810 or
131 757 (for the cost of a local call)
International +61 2 6217 1810