

# Advisory Circular

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## AUTOMATIC DEPENDENT SURVEILLANCE–BROADCAST (ADS-B)

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### GENERAL

Advisory Circulars (ACs) are issued by the Director-General of Civil Aviation (DGCA) from time to time to provide practical guidance or certainty in respect of the statutory requirements for aviation safety. ACs contain information about standards, practices and procedures acceptable to CAAS. An AC may be used, in accordance with section 3C of the Air Navigation Act (Cap. 6) (ANA), to demonstrate compliance with a statutory requirement. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.

### PURPOSE

This AC provides guidance to demonstrate compliance with the requirements regarding, and information related to an application for, an approval for the use of data link systems in accordance with ANR-98.

### APPLICABILITY

This AC is applicable to the operator seeking an approval for operations with ADS-B.

### RELATED REGULATIONS

This AC relates specifically to Division 6 in Part 2 of ANR-98.

### RELATED ADVISORY CIRCULARS

- AC 98-1-1 Application for an Approval to Conduct a Special Operation

### CANCELLATION

This AC supersedes AC AOC-21.

### EFFECTIVE DATE

This AC is effective from 1 October 2018.

**OTHER REFERENCES**

- EASA AMC 20-24 Certification considerations for the enhanced ATS in non-radar areas using ADS-B surveillance (ADS-B-NRA) application via 1090 MHz extended squitter
- CASA AC 21-45 Airworthiness approval of airborne automatic dependent surveillance broadcast equipment

## 1 INTRODUCTION

- 1.1 **ADS-B or Automatic Dependent Surveillance – Broadcast** is a surveillance application that periodically transmits aircraft parameters, such as identification, pressure altitude and position integrity, via a broadcast data link protocol to any airborne or ground-based receivers within its range.
- 1.2 The operation of ADS-B is automatic requiring no flight crew or controller action. This surveillance-type information broadcast is dependent on the aircraft's navigation system and the broadcast capability of the source transmitter.
- 1.3 While **ADS-B-RAD (radar)** is for use with integrated radar data in high traffic density airspace, **ADS-B-NRA (non-radar airspace)**, is currently being, or already has been, implemented in North America, Europe and other areas worldwide including the Asia/Pacific region.
- 1.4 The development of ADS-B technology is still ongoing and specification of standards is still being harmonised. Taking cognisance of great benefits of ADS-B, ICAO has recommended that Contracting States grant interim approval to their operators who are suitably equipped or have already been granted approval by Airservices Australia to operate in Australian airspace. This interim authorisation is expected to be valid up to 2020 or at such time the requirements for ADS-B are harmonised globally.

## 2 OPERATIONAL APPROVAL

- 2.1 As part of his application for the operational approval, the operator should include information of the various equipment on each aircraft type, as illustrated in the example below.

No	Aircraft Type	ADS-B Transmitter	GPS	S A aware / FDE functionality
1	B744	Honeywell TRA-67A	Honeywell GLU-920	S A aware / GPS (FDE)
2	B777			
3	A320			

- 2.2 Additionally, the operator should submit to CAAS the following:
- (a) Evidence of approval by CASA or Air services Australia; or
  - (b) Statement of Compliance in accordance with:
    - (i) EASA AMC 20-24; or
    - (ii) CASA AC 21-45
- 2.3 Generally, the ADS-B operational approval granted under this manner is expected to remain valid until 31 December 2020.