

Introduction

Automatic Dependent Surveillance-Broadcast or ADS-B as it is known, is a new Air Traffic Control technique for aircraft in both Non-Radar and Radar Airspace. Guiding aircraft to their destination in a safer more efficient way.

ADS-B is a means by which aircraft, aerodrome vehicles and other objects can automatically transmit and receive data. Identifying themselves and their position via a data-link. This user friendly broadcast mode keeps communication lines open, informing people on the ground and in the air of real time developments. ADS-B out is the first step and will only send data from the aircraft.

Non-reliant on external stimuli the ADS-B is automatic, depending solely on existing on-board transmission services to provide surveillance information to other users.



Your needs

ADS-B will gradually be mandated globally; Australia in 2013, followed by Europe in 2015 and then North America by 2020. It is already mandatory in airspace above the Hudson Bay area with very positive results.

All dates are applicable to retrofits, mandates for new aircraft may be more stringent.

Your benefits

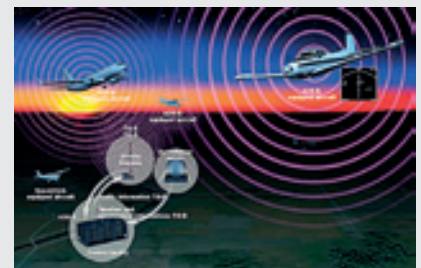
Our aim is to offer improved safety and efficiency to airlines. The ADS-B offers accuracy, and goes a long way to maximizing efficiency and minimizing worry in an industry predominantly running on radar based surveillance.

Radar measures the range and bearing of an aircraft from an antenna on the ground. The further the aircraft is from

the antenna the wider the antenna beam becomes, leaving an increasing scope for error. Additionally, detecting changes in velocity requires several radar sweeps that are spaced several seconds apart. This inevitably means that control rooms are receiving old data.

At present aircraft positioning is reported via the pilots themselves; people can make mistakes! In contrast, a system using ADS-B creates and demands periodic position updates whilst regularly monitoring the flight path. These reports are then generated by the aircrafts own navigational system and distributed via one or more ADS-B data links. The integrity of the data is now reliable.

Before installation becomes mandatory, ADS-B can already be providing more friendly and efficient flight paths, and free weather information and other useful data (US only), to its users.



ADS-B is intended to increase safety and efficiency. The safety benefits include:

- Improved visual acquisition for general aviation under the visual flight rules (VFR).
- Reduced number of runway incursions on the ground.

ADS-B enables increased capacity and efficiency by offering:

- Enhanced visual approaches.
- Closely spaced parallel approaches.
- Reduced spacing on final approach.
- Reduced aircraft separations.
- Enhanced operations in high altitude airspace for the incremental evolution of the „free flight“ concept.
- Surface operations in low visibility conditions.
- Near visual meteorological conditions (VMC) capacities throughout the airspace in most/all weather conditions.
- Improved ATC services in non-radar airspace.



Product description

Technical concept

This Fokker ADS-B-solution adds a GNSS receiver, which makes it a very efficient Modification for aircraft without a suitable GNSS receiver. The ADS-B capability is achieved by adding one or two GNSS receivers to the aircraft and connecting them to the installed ATC transponders. The ADS-B data set is completed within GNSS parameters, which are:

- Position (latitude/longitude)
- Position integrity value information
- Ground speed (GNSS velocity)
- GNSS altitude

Required Modification

The following equipment will be added to the aircraft to enable the ADS-B out functionality:

- One GNSS receiver, a dual installation is optional
- The necessary wiring to connect the sensor with the ATC transponder
- Installation materials like brackets.

Aircraft applicability

The ADS-B out modification is available for a wide range of aircraft:

- F70/F100
- Airbus A300 and A310 series
- Boeing 737 series
- Boeing 757 and 767 series
- Boeing MD80/90 series

Fokker Services B.V.

P.O. Box 1357
2130 EL Hoofddorp
The Netherlands
Tel. +31 (0)88 628 00 00

Fokker Services Inc.

5169 Southridge Parkway
Suite 100
Atlanta, GA 30349
U.S.A.
Tel. +1 770 991 43 73
Fax +1 770 991 43 60

Fokker Services Asia Pte. Ltd

1800 West Camp Rd.
Seletar AeroSpace Park
Singapore 797521

Contact

For more information contact Fokker Services or visit www.fokkerservices.com

E-Mail abacus@fokker.com

Websites

www.fokkerservices.com
www.flyfokker.com
www.myfokkerfleet.com