THE INS AND OUTS OF ADS-B

If you haven’t yet fitted ADS-B, then it’s time to do so and start realising the benefits!

Australia now has significant Automatic Dependent Surveillance Broadcast (ADS-B) coverage available across the continent. This additional surveillance has become necessary due to the ever-increasing volume of traffic that Australia now experiences, particularly in remote regions.

ADS-B offers a multitude of benefits for both pilots and air traffic control (ATC). The benefits vary depending on whether the flight takes place in regional Australia and at low level, or transcontinental in the upper flight levels.

BENEFITS

**Increased access to airspace**
The implementation of ADS-B has enabled a reduction in separation standards between aircraft in controlled airspace to 5 nm in areas that were previously not covered by surveillance. This has resulted in an increase to the number of aircraft that can operate safely within a volume of airspace.

**Efficiency and comfort**
A flow-on benefit of reducing the separation standard to 5 nm is the improved likelihood of getting your requested flight level or altitude making it easier to avoid weather and fly more efficiently.

**Search and Rescue**
Regardless of whether or not you have lodged a flight plan, in ADS-B surveillance coverage areas ATC are able to pinpoint your precise location in the event of an incident or emergency and therefore improve the response times for search and rescue operations, even if your ELT/PLB is damaged.

**Enhanced situational awareness**
When flying an aircraft fitted with ADS-B ‘in’ equipment, pilots can see other traffic in their vicinity on a cockpit display. Avionics is now available to seamlessly integrate ADS-B ‘in’ with many primary flight displays, it can also be displayed on a stand-alone unit or shown on a portable device.

**Track and monitor**
ADS-B allows operators, owners or flight instructors the ability to ‘track’ their aircraft by using freely available software or applications when their aircraft is flying in areas of ADS-B surveillance coverage. This is ideal for debriefing a flight with students or for when you’re waiting for an aircraft to return so you can plan the rest of your day.

**ATC assistance**
If the event ever occurs where you find yourself unsure of your location or if you’re operating under the visual flight rules (VFR) and are on top of cloud, in areas of ADS-B surveillance coverage ATC can identify you and provide navigational assistance.
Cost effective surveillance
ADS-B is internationally accepted as a safe and cost effective technology that provides radar-like surveillance. The cost savings associated with the much lower capital outlay for ADS-B ground infrastructure versus that of conventional radar is passed on through Airservices customer pricing, resulting in genuine cost savings to industry.

MANDATES
There are a number of Civil Aviation Safety Authority (CASA) mandates associated with ADS-B that all pilots and aircraft operators need to be aware of. Some mandates are already in effect, such as for those flights operating at or above 29 000 ft (FL290). The next round of mandates come into effect in February 2016 and February 2017. These mandates will require all flights operating under the instrument flight rules (IFR) to be fitted with ADS-B and Global Navigation Satellite Systems (GNSS).

VFR REQUIREMENTS
If you are flying under the VFR then you may not need to do anything at this stage. However, if you replace or upgrade your transponder and you operate in airspace that is class A, B, C or E, or above 10 000ft in Class G airspace, you must install a newer Mode S transponder that is ADS-B capable.

Additionally it would be worth considering how you can improve your situational awareness through the use of ADS-B ‘in’.

FOR MORE INFORMATION
Airservices has established an ADS-B HOTLINE to assist in answering your technical and operational questions. Please call 1800 844 487 or visit www.airservicesaustralia.com/projects/ADS-B

WHERE DO YOU FIT?

<table>
<thead>
<tr>
<th>Requirement</th>
<th>On or after</th>
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<tbody>
<tr>
<td>All flights at/above FL290</td>
<td>Implemented on 12 December 2013</td>
</tr>
<tr>
<td>Addition to the Australian register</td>
<td>Implemented on 6 February 2014</td>
</tr>
<tr>
<td>Replacement Transponder</td>
<td>Implemented on 6 February 2014</td>
</tr>
<tr>
<td>IFR operating 500 nm from Perth in airspace class A, B, C or E</td>
<td>4 February 2016</td>
</tr>
<tr>
<td>IFR aircraft (aerial work/private operations)</td>
<td>4 February 2016</td>
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<tr>
<td>Operate to BNE, SYD, PER or MEL</td>
<td>4 February 2016</td>
</tr>
<tr>
<td>All IFR aircraft</td>
<td>2 February 2017</td>
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For detailed mandate information refer CAO 20.18