

What is ADS-B Out, and Why Should I Care?

By Dan O'Donnell

What is ADS-B? Why do I need it? What will it do for me? And what kind of pilot training will be required? These are the top questions I hear when this four-letter acronym comes up in conversation. Automatic Dependent Surveillance Broadcast (or ADS-B Out) is an Air Traffic Management surveillance technology that is replacing radar as the primary surveillance method for controlling aircraft worldwide.

The FAA initially announced the ADS-B Out mandate in 2010, and while some minor regulatory changes have occurred, the implementation date of January 1, 2020 has not been adjusted. In short, this technology will be required for all aircraft whether flying under VFR or IFR in airspace that requires a transponder.

In basic terms, if your aircraft is properly equipped it is “squittering,” or sending pertinent data to Air Traffic Control (ATC) with separate integrity and accuracy parameters, further enhancing air traffic management and ground safety. When all aircraft have a common level of equipment, it will allow ATC to implement operational efficiencies, such as reduced separation standards.

Think about the benefits of how Reduced Vertical Separation Minimum (RVSM) has allowed more efficient usage of airspace that we fly in today. Similarly, ADS-B Out has the potential to enable more aircraft to safely fly closer together laterally. Increased throughput in all phases of flight can reduce fuel burn, engine run-time, distances flown, as well as the time to reach your destination.

Many people are surprised by the aircraft out-of-service time needed to be rule compliant, so it is advised to accomplish this retrofit with another scheduled maintenance visit. Some of the modifications that might need to be accomplished on your aircraft include a position source (e.g., GPS), a rule-compliant transponder and in many cases two transponders, plus

extensive wiring that typically runs from the front to the back of the airplane. Some aircraft will also require a new antenna(s).

On a positive note, ADS-B Out is automatic, meaning the system is constantly sending information and does not require pilot action, other than ensuring any fail indicator lights are not illuminated. If, for some reason, ATC cannot “see you” they may request that you switch to your other transponder (assuming you have one).

The FAA has completed the ground-based infrastructure and has publically stated the 2020 mandate will not slip. To ensure your aircraft is not grounded, it is important to establish a plan to meet the mandate. While deviations to operate can be made on a case-by-case basis, you will certainly be impacted if you are not equipped.

To put things in perspective, if everyone attempted to schedule an ADS-B Out modification tomorrow, there would not be enough hardware, MRO capacity, or mechanics to implement these Service Bulletins or Supplemental Type Certificates. Stated another way, as of May 22, 2017 we have just 954 days until the deadline!

As a final note, ADS-B In has NOT yet been mandated by the FAA or any other Air Navigation Service Provider. I will review ADS-B In in another blog, but here’s a very brief explanation: ADS-B In will allow pilots/ATC to see the aircraft “around them” on a display and then request more operationally efficient navigation.

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