

ADS-B FOR SOME SMALL AIRCRAFT – WHY?

As a review for those who don't know or aren't sure of the meaning, or for aviation newcomers, ADS-B stands for Automatic Dependent Surveillance-Broadcast.

Automatic—properly equipped aircraft automatically report their position, without need for radar to pick them up.

Dependent—ADS-B depends on aircraft having an approved WAAS GPS on board and an ADS-B Out transmitter.

GPS is familiar to most people and is used to locate your exact position on earth. Many cell and smartphones have it.

Surveillance—it is a surveillance technology that allows ATC – Air Traffic Control – to watch airplanes move around.

Broadcast—aircraft broadcast their position information to airplanes and ATC.

This system doesn't need radar to work properly, but it will depend on a network of ground stations to receive aircraft reports and send them back to ATC. These stations also transmit weather and traffic information back up to properly-equipped aircraft. This network currently consists of over 400 stations, and the complete network was supposed to be finished by early 2014. It is not finished yet.

ADS-B Out is a surveillance technology for tracking aircraft—it's what ATC needs to manage traffic. It reports your aircraft's position, velocity and altitude once per second. This transmission is received by ATC and nearby aircraft and this data makes up the equivalent of a radar display. Most aircraft will be required to have ADS-B Out by 2020.

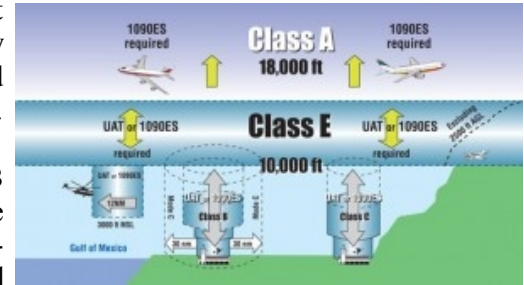
The [rules](#) say that by 2020, all aircraft will be required to have ADS-B Out equipment to fly in Class A, B and C airspace, plus Class E airspace above 10,000 feet but not below 2,500 feet. So in general you'll need ADS-B Out most of the places you need a Mode C transponder today—and you'll need to keep that Mode C transponder, because radar will be the backup for ADS-B.

But what about those who fly their aircraft just to small, untowered airports?

Many pilots do not fly their aircraft to any but small airports or, for some with light aircraft, just around the area of their home airport. Why would they want to purchase ADS-B equipment which may cost \$10,000 (plus installation)? They are exempt in the airspace they fly in. Ask pilots you know whether they fly to airports with towers and you may find that many, or even most, don't fly that much and when they do they just fly to a small airport. They can even fly great distances without any fancy avionics and just use an aviation radio. Past club member Wootten York had flown to and from Florida and Texas just by going to small airports along the way in his Quicksilver GT-400.

So there seems there will be two classes of pilots/aircraft: Those who have ADS-B because they want and possibly need it and those who don't have it, don't want it, and don't need it. Even for those who need it one pilot wrote what many are thinking “I will be happy to buy ADS-B equipment when the prices are more reasonable and the future compatibility of the equipment seem more likely.” In March of 2013 a AOPA writer claimed that 225,000 aircraft needed it. But he did not factor out all those planes in rural areas or at small airports which will never fly to places needing ADS-B. He wrote “. . . the total bill for equipping a typical certificated general aviation aircraft starting at \$10,000 (about \$7,000 if WAAS GPS is already installed), excluding installation and assuming a Mode C transponder is already installed.” This cost is pricing many with small aircraft out of ever flying to towered airports. They will just fly to small airfields or just quit flying altogether. One writer postulated that the government will charge those without ADS-B a fee for flying. He even wrote that there could be spotters writing down tail numbers of aircraft to make sure that pilots paid the bill. Or the government (FAA) will just charge each registered un-ADS-B aircraft. He closed with this:

Maybe each non-ADS-B aircraft received an “average” bill every month whether they flew or not. Or maybe every plane was forced to install ADS-B and the resulting frequency overload created the same situation we've had at Oshkosh for many years: “turn your transponder to standby when 30 miles out”. Then the planes, with their ADS-B turned off, were prohibited from flying in controlled airspace. Or maybe the aircraft owners simply gave up and sold the birds for whatever they could get and pleasure flying died, taking FBOs and manufacturers with it.



ADS-B Out will be required by 2020 for flight in most controlled airspace.

(Information adapted from [airfactsjournal.com – What is ADS-B](#), [AvWeb.com ADS-B Flawed, expensive](#) 04/28/10, [AOPA: Choices for ADS-B](#) 03/28/13, [airport-corp.com](#), [Duncan Aviation FAA ADS-B Mandate](#), [AOPA ADS-B Brief](#), [FAA ADS-B](#))



FOR SALE:
Members' Items for Sale

Club Member Aaron Ramsey still has this aircraft for sale.
He now has some health issues and has had open-heart surgery:

Quicksilver MX Sprint

Single place – high wing – Single Engine
Wing Span 18'- 1"
Empty Weight 250 lbs. (true ultralight!)
Gross Weight 525 lbs.
Useful load: 275 lbs.
Engine: Rotax 447
Fuel capacity: 5 U.S. gallons
Takeoff distance 50' obstacle: 200 feet
Rate of climb: 900 ft/min
Landing distance: 200 feet
Maximum level speed: 54 mph



Also included with sale is a Rotax 503 engine that needs servicing/rebuilding.
Located at a private airstrip near Blythe, Georgia in a covered hangar.

For the full version of this ad with much more information click on: [For Sale: Quicksilver MX Sprint](#)

ASKING: \$4,500 OBO

This ad was *NEW* 01/27/14

Contact Aaron Ramsey

e-mail: veryhappyhouse@bellsouth.net

Phone number: Cell: 803-292-2235

EAA 172 member Keith Robbins still has this engine for sale:

Continental O-300-D engine with Airflow Performance injection.

Engine log included. TT 2274. SMOH 1135. Cylinders replaced STO H 62.4

- Custom Full flow intake manifolds.
- Injectors and log manifolds installed and tested by Airflow Performance in South Carolina.
- Engine stored in shipping box, turned, and cylinders blown with oil.
- Engine attached to a custom mount.
- New plugs and wires.



Continental O-300-D lower side



Continental O-300-D bottom & frame

Contact Keith Robbins by e-mail: kcr83406@yahoo.com

For the full version of this ad, with enlargements, click on: [For Sale: Continental O-300-D engine](#)