

AIRCRAFT CONSPICUITY - INVESTING IN SAFETY



CONSPICUITY MATTERS

As a pilot, keeping a good look out every time you fly is vital. In busy skies we all fear the risk of flying too close or colliding with an unseen aircraft. Most pilots will admit to having flown too close to another aircraft, avoiding an incident with just seconds to spare.

Bright sunlight, hazy skies or poor visibility can all reduce an effective look out. A temporary distraction in the cockpit, answering the radio or a navigation task all undermine awareness of other aircraft in the vicinity.

Now surveillance technology can help. Many pilots are considering what is the best conspicuity device to make their aircraft electronically 'visible' to others?

EASA is now encouraging all pilots to get equipped with certified ADS-B Out electronic conspicuity equipment. The roll out of voluntary ADS-B Out across Europe is gaining momentum.

ADS-B MAKING ALL AVIATION SAFER

The risk of collision between aircraft is real. There have been avoidable fatal accidents where a common Electronic Conspicuity system could have prevented a collision and saved lives.

Now ADS-B Out (1090ES) provides that common standard. Used internationally by commercial aviation ADS-B is well established. This technology is now available for general aviation and more affordable.

EASA has developed CS-STAN, ADS-B approvals, so enhancing your safety by installing ADS-B is now more practical than you may have imagined.

Europe's most popular Mode S transponders are made by Trig Avionics. Flying with a Trig Mode S transponder allows access to Controlled Airspace and Transponder Mandatory Zones, this is a real benefit for pilots.

ADS-B Out uses a Trig transponder, connected to a GPS, together they provide vital positional data. Trig offers a stack transponder, the TT31 or a compact transponder called the TT21.



Both models are ADS-B Out capable. The TT21 is designed to fit in the tightest panel space. This transponder has an 130 Watt output and uses an external antenna - so your aircraft is visible at all times. Trig transponders meet the latest regulatory standard, ETSO-C166b.



By adding a TN72, GPS Position Source your ADS-B output provides 'Quality Indicators' that are greater than zero (SIL1 / SDA1). This is superior technology and makes you visible to all traffic systems. Trig satisfies EASA's drive to implement a common ADS-B standard.

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FLARM AND 1090ES ADS-B OUT

Many gliders and some aircraft are equipped with FLARM. So, what role does ADS-B have and why would this be a necessary equipment in addition to FLARM?

Whilst FLARM is accomplished at short range detection and alerting of glider-to-glider conflicts, it is not seen by ATC, commercial or most conventional ADS-B traffic systems used in GA.

As genuine conspicuity requires ADS-B Out (1090ES) glider pilots (for example) are considering Trig technology - alongside FLARM, the benefits are clear.

	Mode S ADS-B Out (1090 ES)	FLARM
Visible to commercial aircraft	✓	✗
Mode S - visible to military aircraft	✓	✗
Triggers <u>all</u> ADS-B In traffic	✓	✗
High Power	✓	✗
Long Range	✓	✗
Optimised for soaring	✗	✓
Triggers other FLARM units	✗	✓

ADS-B 1090ES - FAA ENDORSED

The use of ADS-B Out amongst aviation is based upon hard evidence from accident investigations.

A major study by the Federal Aviation Administration (FAA) followed a collision between a Hawker 800 jet and an ASG 29 glider. The FAA made the following clear recommendations.

"The FAA does not view FLARM (Including Power FLARM) as the most effective system to support collision avoidance with powered aircraft, since a FLARM system may not make the glider detectable to the aircraft that must give way. Transponders, TABS and ADS-B Out offer better protection against collisions with powered aircraft because those systems aid visual acquisition of the glider by the powered aircraft flight crew, consistent with right of way rules."

From FAA 81 FR 94277

Fitting a Trig Mode S transponder and TN72 (TABS) GPS Position Source is the single most effective way to significantly enhance both pilot and passenger safety.



YOUR TRIG DEALER - HERE TO HELP

Contact your local Approved Trig Dealer. They can provide you with a complete Trig solution or an upgrade to ADS-B with the TN72 GPS, using your existing Trig transponder. The TN72 is highly affordable at only £319 list price (excluding tax).

The TA50 Compact antenna is made for the TN72. Trig can offer a wiring harness for a TT21 transponder and TN72 GPS. If you own an LSA or uncertified aircraft this makes installation quick and simple. Finally, if you need a software upgrade this can be easily accessed from your dealer or direct from Trig.



All Trig products come with a two-year warranty. To find your local Approved Trig Dealer search. www.trig-avionics.com/how-to-buy/

Certified
Safer

TRIG