

## TN72 GPS RECEIVER



## TN72 – AFFORDABLE ADS-B OUT

All Trig transponders are ADS-B Out capable, but they require the addition of a suitable GPS source to exploit this surveillance technology. Pilots with a Trig transponder can simply add a TN72 GPS Position Source to upgrade to ADS-B Out.

ADS-B Out enhances your aircraft's visibility to others, it has genuine safety benefits for pilot and passengers. Installing a TN72 is a small price to pay for enhanced visibility and peace of mind by reducing the risk of collision. The TN72 GPS is light weight, compact and easy to install. It is highly affordable and uses certified technology – ensuring you are visible to all ADS-B In traffic devices. Don't compromise your safety by using an uncertified GPS, this can make you invisible to traffic products designed to 'reject' uncertified positional data.

In Europe, the TN72 can be installed as a 'voluntary' ADS-B Out installation, in both EASA certified aircraft and all other uncertified types. EASA's CS-STAN provides a specific and simple installation pathway. If you don't have a Trig transponder, then the TT21/TN72 Conspicuity Bundle provides you with an ideal one box Mode S and ADS-B Out solution.

In the U.S. the TN72 can be used by experimental, light-sport and homebuilt aircraft (and gliders) to meet the FAA's 2020 ADS-B rule (FAR91.227).

## CONFIGURATION

When fitting a TN72, it uses one of two different configuration options in the transponder settings (see below). The TN72 hardware is the same in either installation, you may require a software update and you will need to install a TA50 or TA70 GPS antenna.

TN72 GPS – TABS C199 (Traffic Awareness Beacon System) this configuration uses SIL 1/ SDA 1 in the transponder settings. TABS is the FAA technical standard that enables voluntary equipage of ADS-B Out. The TN72 using TABS is ideal for 'voluntary' equipage in Europe or where ADS-B Out is not mandated.

TN72 GPS –(X) SIL 3 configuration, this uses SIL 3/ SDA 2 in the transponder settings, typically in the U.S. and fully satisfies the technical requirements of FAR 91.227 for 2020 compliance. Light-sport, experimental and homebuilt pilots who have fitted a TN72 are now flying inside ADS-B airspace and have passed FAA compliance checks with flying colours.

Glider customers in the U.S. looking to get ADS-B equipped may wish to see our ADS-B gliding guidance document this highlights equipment and regulations, for both certified and experimental gliders. In the U.S. certified gliders and Part 23 aircraft, operating outside of U.S. 2020 rule ADS-B airspace can use the TN72 to enhance visibility and trigger ADS-B In traffic.

## FEATURES

- Simple ADS-B Out upgrade for all Trig transponders
- Suitable for 'voluntary' use in both certified and uncertified aircraft (in Europe)
- Meets FAA 2020 ADS-B rule for experimental, LSA and homebuilt aircraft / gliders in the U.S.
- Safer – visible on all ADS-B In systems
- Enables live tracking of aircraft (with suitable ADS-B In equipment)
- Triggers traffic information services (TIS-B only available in U.S.)
- Low cost and light weight
- Two year world wide warranty

The TN72 supports current and future air to air collision avoidance and situational awareness applications. As it presents such good value as a certified device it is ideal for tracking flying club / fleet aircraft in real time – improving safety in the circuit and for low hours students – see our [case study](#).

## COMPATIBLE PRODUCTS

Taking minimal space in the cockpit, the [TA50](#), compact GPS antenna is the most popular antenna for the TN72. It is supplied with a simple push fit QMA connector, this plugs straight into the TN72 unit. The antenna is available with either a 1m or 3m cable. A [wiring harness](#) to connect a compact TT21 or TT22 transponder and the TN72 together is also available and simplifies installation.

The [TA70](#) certified GPS antenna can also be used with the TN72. High wing Part 23 aircraft may alternatively prefer the TA70 antenna. This is mounted on the aircraft upper surfaces and assures enhanced GPS visibility. In countries where ADS-B airspace is mandated, operation in ADS-B airspace by certified types, usually requires full compliance with TSO-C145 GPS technology, see our [TN70](#).

## ADS-B

Trig are leaders in ADS-B technology (Automatic Dependant Surveillance Broadcast) and the first company in the world to meet FAA TSO-C166b, the latest standard for ADS-B transponders. Every Trig transponder is Mode S, but also ADS-B Out capable. Once installed ADS-B equipment transmits your aircraft's precise location directly to other ADS-B equipped aircraft – improving your electronic visibility and safety. To learn more about ADS-B got to our [Knowledge Bank](#) article

## VERSIONS

| Product | Transponder Configuration | ADS-B Suitability  | Compliance              | Supply Voltage | Antenna  | Options  | Sales Part Number   |
|---------|---------------------------|--|-------------------------|----------------|--|--|---|
| TN72    | X (SIL 3)                 | U.S. – TN72 allows light-sport, home built and experimental aircraft to fly in U.S. 2020 rule ADS-B airspace.<br><br>Can also be used by experimental gliders in U.S. 2020 rule ADS-B airspace.  | FAR 91.227 (GPS source) | 11-33V         | Fit a TA70 antenna or TA 50 compact antenna  | ADS-B – Light-sport Bundle available includes TT22, TN72 and TA70 antenna that can be ordered as a single kit. | TN72<br>01685-00-01<br><br>LSA Bundle<br>02016-00         |
| TN72    | TABS (SIL 1)              | Europe – ideal for voluntary VFR use<br><br>U.S. – suitable for voluntary use (including certified gliders and Part 23 a/c) for use outside of ADS-B 2020 rule airspace.<br><br>Australia – approved for use in gliders & balloons.<br><br>New Zealand – ADS-B policy is subject to regulatory review. | TSO-C199                | 11-33V         | Fit a TA50 compact antenna<br><br>or a TA70 certified GPS antenna (may be necessary in high wing aircraft) | Conspicuity Bundle TT21/TN72 and TA50 (1m) that can be ordered as a single kit                                 | TN72<br>01685-00-01<br><br>Conspicuity Bundle<br>02375-00 |

## SPECIFICATION

| Specification                | TN72 GPS Receiver  |
|------------------------------|--|
| Type                         | TABS GNSS  |
| Certification                | TSO-C199 Class B   |
| Compliance                   | TSO-C199 Class B, DO-160G  |
| Supply voltage (DC)          | 11 – 33 V  |
| Typical consumption (at 14v) | at 14V – 0.1A  |
| Operating temperature        | -40°C to + 70°C  |
| Cooling requirement          | no fan required  |
| Weight                       | 110 grams / 3.8 ounces   |
| Connector                    | GPS (power, ground and GPS data) – 9 way D type<br>Antenna – 5V phantom power – QMA male |
| Dimensions (mm)              | H 30 x L 90 x W 63mm (W with base flange 80mm)   |
| Dimensions (inches)          | H 1.2" x L 3.6" x W 2.5" (W with base flange 3.2")                                       |

## 12. Installation Drawings

All dimensions in millimetres

