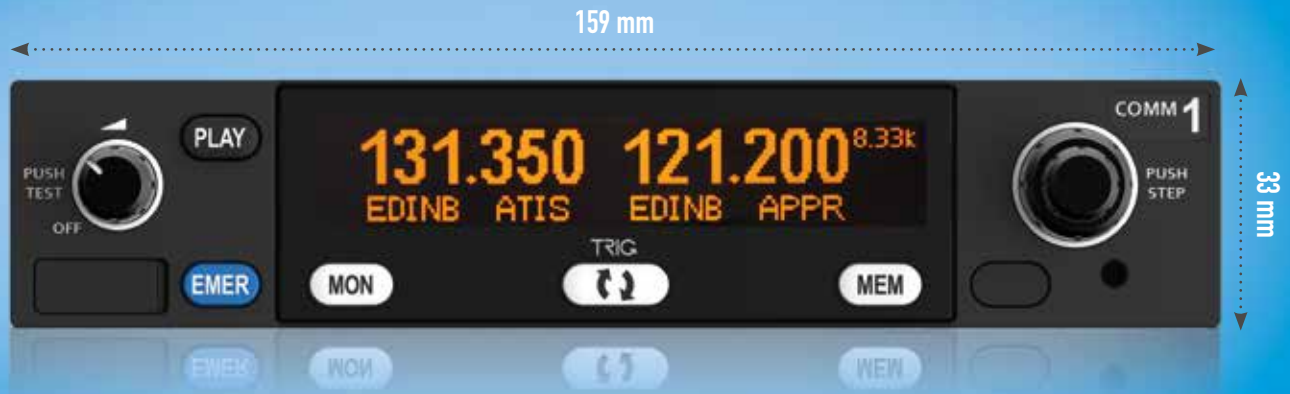


# THE TY96 AND TY97 AVIATION RADIOS



## 5 reasons to buy

- Slimline - only 33mm high
- 8.33 and 25 kHz - ETSO and TSO approved
- Stereo music / two place intercom
- Configurable airfield database
- 'Say Again' and Emergency button

Both the TY96 and TY97 aviation radios define a new standard in dual 25 kHz and 8.33 kHz radio design. Combining great quality and performance each radio is housed within a superbly engineered unit, slimline and light. At only 33 mm high the radio saves valuable stack space, but retains innovative and practical features. These radios are perfectly suited to the needs of experienced and novice pilots alike.

### Features that matter

The TY96 is a 10 Watt model, suited for most general aviation use. The TY97 is a more powerful 16 Watt model, where a higher transmission output is required.

The display is clear and bright, showing both primary and secondary frequencies along with ICAO or custom set airfield identifiers. A 'Push Step' knob allows the fastest change from 8.33 kHz to 25 kHz - so you can tune the radio quickly without compromising your look-out. The Dual Watch feature allows two frequencies to be monitored at the same time - it's like having two radios in one.

# TRIG

Both radios have a 'Say Again' feature. A single button press replays the last radio transmission. It's ideal for student pilots, but every pilot can get distracted, so it avoids the embarrassment of asking air traffic to repeat a message. A one touch Emergency button automatically sets 121.5 MHz, along with mic and volume levels. This ensures a successful transmission in what can be a stressful situation.

### Integration benefits

Each radio has a built in two place intercom with auxiliary inputs for stereo music and audio warnings. Each radio can also integrate with a GPS (SL40 protocol) to automatically display frequencies as they are required along the flight route. Finally, an airfield database can be loaded via the handy USB port. This database can contain over 200 of your preferred frequencies and identifiers.

#### Support

We provide a two year worldwide warranty through our Approved Trig Dealer network.

#### How to buy

We always recommend that you buy your Trig products through an Approved Trig Dealer, further information can be found at [www.trig-avionics.com](http://www.trig-avionics.com)

### Ease of installation

The radio's low profile design requires no external cooling fans. The radio's compact size and features make it a great choice for both forward and retro-fit installations. Each radio is designed to easily replace legacy radios, these include popular KY 196A, KY 197A and SL 40 models.

### The TY96 and TY97 – slimline aviation radios

- 8.33 kHz / 25 kHz certified stack radio – only 33mm high.
- Features that matter – Push Step, Dual Watch, 'Say Again' and Emergency button.
- Free EASA minor change template available - saving you time and money.



	TY96	TY97
Type	Certified – 8.33 kHz and 25 kHz	
Certification	ETSO 2C128, 2C169a, TSO-C128a, TSO-C169a	
Compliance	ED-23C, ED-67, DO-186B, DO-207, DO-178B Level B, DO-254 Level C, DO-160G	
Supply Voltage (DC)	11 – 33 V	22 – 33 V
Typical Current Consumption in receive mode	at 14V – 265 mA	at 28V – 140 mA
Nominal Transmitter Power	10 Watt	16 Watt
Operating Temperature	-20°C to +55°C	
Cooling Requirement	No fan required	
Weight	0.95 kg	
Front Panel Dimensions	H 33 x W 159 mm	
Installed depth in tray	230 mm	

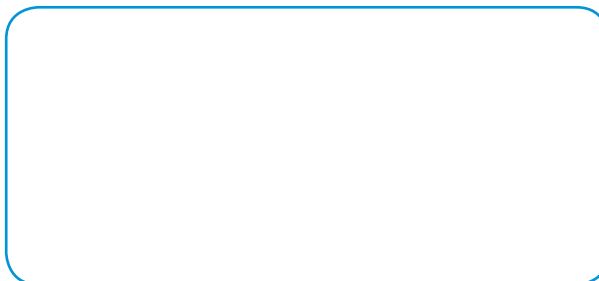


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# INTRODUCING THE TRIG TY91 AND TY92 – VHF RADIOS



## 5 reasons to buy

- › Compact and light weight
- › Fits in the tightest panel space
- › Dual watch and two place intercom
- › Nine programmable memories
- › Can be battery operated

The TY91 and TY92 radios provide light sport and general aviation pilots with a compact, fully certified 25kHz / 8.33 kHz VHF radio.

Both radios perfectly compliment our TT21 and TT22 transponders, the world's smallest and lightest Mode S general aviation transponders.

### Small and Flexible

The Trig TY91 and TY92 take up minimal space and weight. The use of a control head and separate radio hardware unit provides more installation options, especially when space is at a premium.

The control head can be conveniently mounted in a standard 57mm round hole or even smaller compact mount. Fitting is straightforward, and once installed the depth of the radio control head is only 74mm. In practice this means that the Trig TY91 and TY92 control head can be located in an aircraft instrument panel where a 'single box' radio will simply not fit.

# TRIG

## 8.33 kHz & 25 kHz Compatible

Future changes in European airspace will require all aircraft to be fitted with a certified 8.33 kHz radio. The Trig TY91 and TY92 both use 8.33 kHz and 25 kHz steps. Operation of the radio is simple and frequency selection rapid. A single convenient function button allows rapid channel spacing preferences to be selected when required.

The Trig TY91 and TY92 are fully compliant with the 8.33 kHz mandate, so you can be reassured that Trig radios are ready for the future.

### Which model is right for me?

Light sport, ultra light, glider and balloon pilots will fit the Trig TY91 radio, this lower powered 6 watt model is ideal for the majority of GA users.

The Trig TY92 has a higher nominal power output of 16 watts, suitable for longer range transmission and for aircraft that have a 28 volt power supply. Easily installed outwith the main avionics stack the TY92 makes a perfect back up radio in larger GA aircraft.

## Features

The Trig TY91 and TY92 offer pilots the following features:

- Low size and weight, with flexibility of installation options.
- Simple operation via positive controls, can be easily operated whilst wearing gloves.
- Dual watch function, allowing the monitoring of the standby frequency.
- Includes a two place intercom.
- Includes a built in speaker amplifier, allowing the option of headset free operation.
- 9 programmable memories.
- Crisp display, visible in all lighting conditions.
- Fully certified.

### Support

We provide a two year worldwide warranty through our Approved Trig Dealer network.

### How to buy

We always recommend that you buy your Trig products through an Approved Trig Dealer. To find a dealer go to [www.trig-avionics.com](http://www.trig-avionics.com)



	TY91	TY92
Type	8.33 kHz/25 kHz VHF transceiver. Receiver – Class C, Class E. Transmitter – Class 4, Class 6	8.33 kHz/25 kHz VHF transceiver. Receiver – Class C, Class E. Transmitter – Class 3, Class 5
Certification	ETSO-2C169a, ETSO-2C128, TSO-C169a, TSO-C128a.	
Compliance	ED-23C, ED-67, DO-186B, DO-178B Level B, DO-160F, DO-254 Level C	
Supply Voltage (DC)	11-33 V	22-33 V
Typical Current Consumption	200 mA receive 2A transmit at 14 V	130 mA receive 2.5A transmit at 28 V
Nominal Transmitter Power	6 W	16 W
Operating Temperature	for the radio unit -40 °C to +70 °C for the controller -20 °C to +70 °C	
Cooling Requirement	No fan required	
Weight	460 grams	
Dimensions (mm)	controller: H 44 x W 63 x D 35 mm (74 mm depth in panel with D-Type connector fitted). radio unit: H 48 x W 66 x L 160 mm (inc. socket).	

# TRIG

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# THE TT21 AND TT22 MODE S TRANSPONDER



## 5 reasons to buy

- › Smallest GA Mode S transponder
- › Compact, fits in the tightest panel space
- › Can be battery operated
- › Built in altitude encoder
- › 1090ES ADS-B Out

## All good things come in small packages and this makes the TT21 and TT22 outright winners!

The TT21 and TT22 are the world's smallest general aviation Mode S transponders, ideally suited for use in light sport, gliders and GA aircraft where panel space is at a premium. The TT21 and TT22 are fully approved by EASA and the FAA, for both IFR and VFR use.

### The TT21 and TT22 - smart and small

Both the TT21 and TT22 transponders are physically identical, a two part solution, with a separate control head and transponder box. The control head fits into a 57mm round hole, with the option of using a smaller compact mount hole. When fitted the depth of the controller is only 54mm, and connected to a wiring harness the depth is still only 85mm. The separate transponder box can be mounted anywhere within the airframe.

# TRIG

The complete system weighs less than 450 grams and is easily powered by an aircraft battery. Both transponders have an in-built altitude encoder saving space and simplifying installation.

The TT21 has a nominal power output of 130 watts, whilst the TT22 has a power output of 250 watts. The TT22 is designed for high altitude and high performance aircraft operating above 15,000 feet and/or airspeed over 175 knots. The TT21 is popular amongst light sport, glider, balloon and foot launched pilots providing one of the most affordable ways to install Mode S.

In use the TT21 and TT22 are simple to operate, with a positive control knob and push buttons for Squawk code and Flight ID input. The LCD display is bright and back lit, making it easy to read in flight. The transponder controller is splash proof making it suitable for use in open cockpit flying and ultra-light aircraft. A quick release latch secures the main hardware unit to the included mounting tray, allowing easy removal if required.

## The TT21 and TT22 transponders – the light weight class leaders

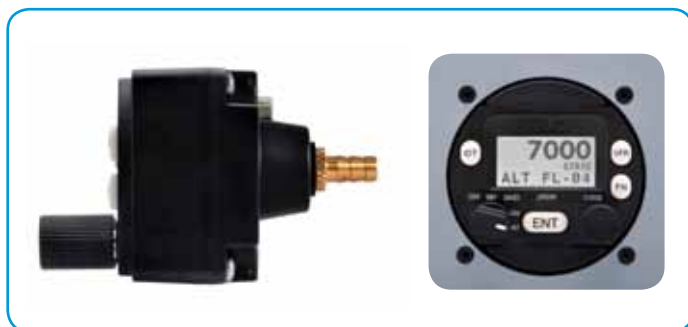
- The TT21 and TT22 give you class leading Mode S and 1090ES ADS-B Out capability; they're compact, energy efficient and high performance solutions that are fully certified.
- Trig Mode S transponders provide air traffic control with accurate aircraft position data. This makes negotiation of controlled airspace more certain, and can significantly reduce the amount of communication required with air traffic controllers.
- Fitting a TT21 or TT22 Mode S transponder increases your visibility to other airspace users, enhancing your flight safety.

### Support

We provide a two year worldwide warranty through our Approved Trig Dealer network.

### How to buy

We always recommend that you buy your Trig products through an Approved Trig Dealer. To find a dealer go to [www.trig-avionics.com](http://www.trig-avionics.com)



	TT21 – Mode S for light aviation	TT22 – Mode S for high performance aircraft
Type	Transponder Class 2 Mode S level 2els ADS-B Class B0	Transponder Class 1 Mode S level 2els ADS-B Class B1S
Certification	ETSO C88A, C112C, C166A and TSO C88b, C112c, C166b, approved for IFR and VFR flight	
Compliance	ED-73C, D0-160F, D0-178B Level B, D0-254 Level C, D0-260B, D0-181D	
Supply voltage (DC)	9-33 V	
Typical Consumption (at 14 V)	idle: 0.15 A active: 0.28 A	idle: 0.15A active: 0.34 A
Nominal Transmitter Power	130 W at connector	250 W at connector
Operating temperature	for the transponder -40°C to +70°C for the controller -25°C to +70°C	
Cooling Requirement	no fan required	
Weight	440g	
Dimensions	controller: H 44 x W 63 x L 54 mm transponder in tray: H 48 x W 68 x L 160 mm	

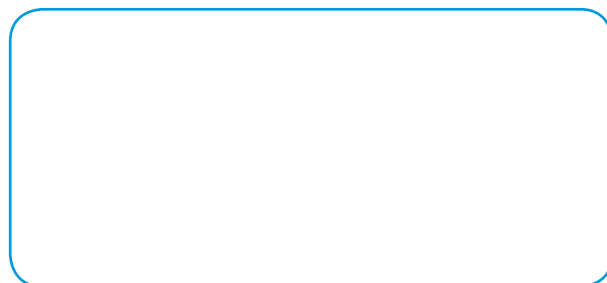
# TRIG

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# THE TT31 MODE S TRANSPONDER



## 5 reasons to buy

- Retrofit – 'plug and play' installation
- Great functionality and performance
- Low power consumption
- ETSO and TSO approved Mode S
- 1090ES ADS-B Out

Replacing your old transponder or updating your aircraft avionics? If so, the TT31 should be your panel mount transponder of choice. Fixed wing and rotary pilots around the world have selected the TT31 due to its superior features, great value and superb support.

The TT31 is the easiest upgrade to the popular KT76A and KT78A, with a plug and play capability this transponder gets to work straight out of the box. Capable of supporting 1090 MHz Extended Squitter ADS-B Out the TT31 is fully approved by EASA and the FAA, for IFR and VFR use.

### The TT31 – low power, high performance.

The transponder has a bright and easy to read backlit display, operation is simple via a conventional rotary knob enabling rapid selection of Squawk code and Flight ID. The TT31 comes with additional features that include a stop watch, flight timer and altitude alarm.

# TRIG

The TT31 has the lowest power consumption in its class (half that of most legacy transponders), it needs no warm up time and is ready to work as soon as you strap in. The reliability of an aircraft's avionics can be adversely affected by excessive heat. The TT31's low power consumption produces less heat in your avionics stack and significantly reduces loading on your aircraft's electrical system. This efficiency has no impact on performance; as a consequence fitting a TT31 actually enhances the reliability of your entire avionics system.

### Flexible Installation

The TT31 is a great new or retro-fit solution; it operates at 240 watts from a supply voltage of either 14 or 28 volts. Installation is straight forward without any special configuration or dropper resistors.

The TT31 can use either a parallel or serial altitude encoder, and can even act as a serializer for your GPS baro-aiding input.

### The TT31 conventional panel mount transponder – the class leader

- Class leading performance with the easiest transponder upgrade path for legacy units.
- Trig Mode S transponders provide air traffic control with accurate position data. This makes negotiation of controlled airspace more certain and can significantly reduce the amount of communication required with ground based controllers.
- Fitting a Trig Mode S transponder increases your visibility to other airspace users, enhancing flight safety.
- Trig offer free EASA minor changes paperwork for most popular single engine aircraft - saving you time and money.

#### Support

We provide a two year worldwide warranty through our Approved Trig Dealer network.

#### How to buy

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TT31 Mode S ADS-B Out transponder	
Type	Class 1 Mode S Level 2 els
Certification	ETSO C166A, 2C112B and TSO C112, C166b
Compliance	ED-73B, DO-160E, DO-178B Level B, DO181C, DO-260B Class B1S, DO-254 Level C
Supply Voltage (DC)	11 – 33 V
Typical Current Consumption (at 14V)	Idle: 0.22 A, Active: 0.45 A
Nominal Transmitter Power	240 W at connector
Operating Temperature	-20°C to + 70°C
Cooling Requirement	No fan required
Weight	1.35 kg
Dimensions	In tray – H 40 x W 160 x L 239 mm



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