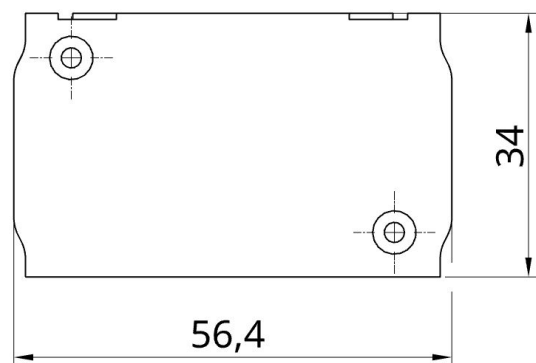# TRIG TY96/TY97 Adapter BLE Bluetooth

SkyDemon (SD) EXPERIMENTAL

Bluetooth Low Energy Adapter (BLE) for a TRIG TY96/97 VHF transceiver (aviation radio). The adapter was developed as an interface between a TRIG TY96/97 and the navigation software SkyDemon (SD). It implements the data transfer between the navigation software (SD) and the radio hardware (BLE $\leftrightarrow$ RS-232). The adapter is simply screwed between the radio's mounting rack and the existing connector.

No additional power supply is necessary. The adapter can be operated with 12 V and 24 V onboard voltage. A self-resetting fuse is integrated in the housing. The power supply is protected against reverse polarity and short circuits.

A control unit already connected to the radio (EFIS, Garmin G3X, etc.) remains functional.

No further electrical work required!

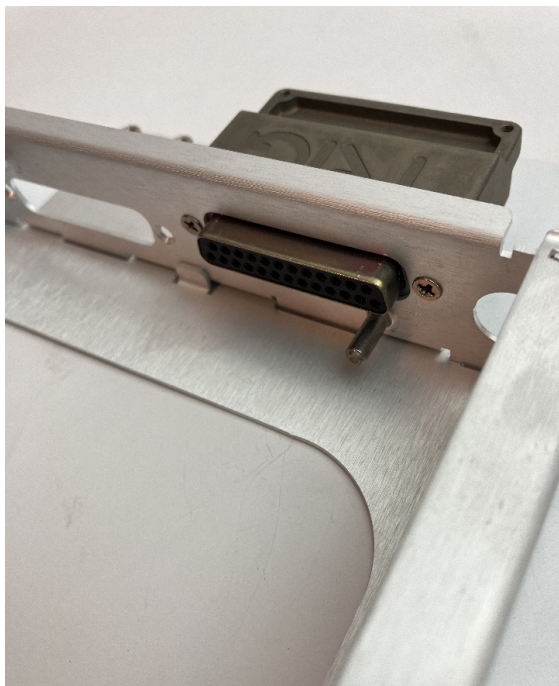> **Important:** This is a prototype for experimental use only!

1   Adapter Installation

The adapter is delivered with the following accessories:

- 2 × Countersunk screw 3 × 8 mm (for thermoplastics), Phillips head
- 2 × Retaining clip
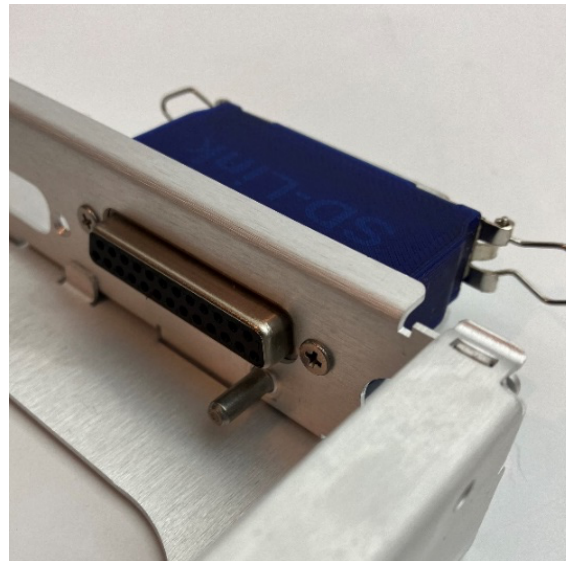- 2 × Screw UNC 4-40

## 1.1   Removing the TRIG Connector from the Tray

1. Remove the two Phillips head screws to detach the TRIG connector from the radio's tray.
2. Remove any dirt that has accumulated between the connector and tray.

1.2 Installing the SD-TY96-DS Adapter into the Tray

3. Install the SD-TY96-DS adapter into the tray using the included countersunk Phillips head screws (3×8 mm, for thermoplastics). Tighten the screws hand-tight and be careful not to overtighten the threads!
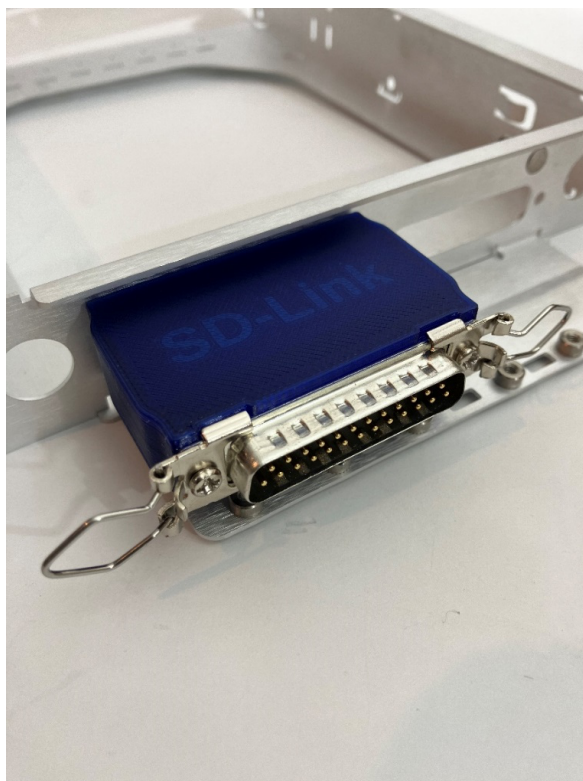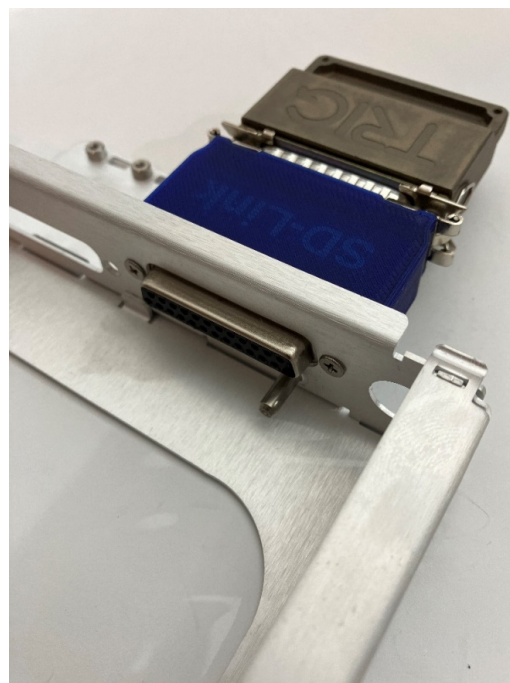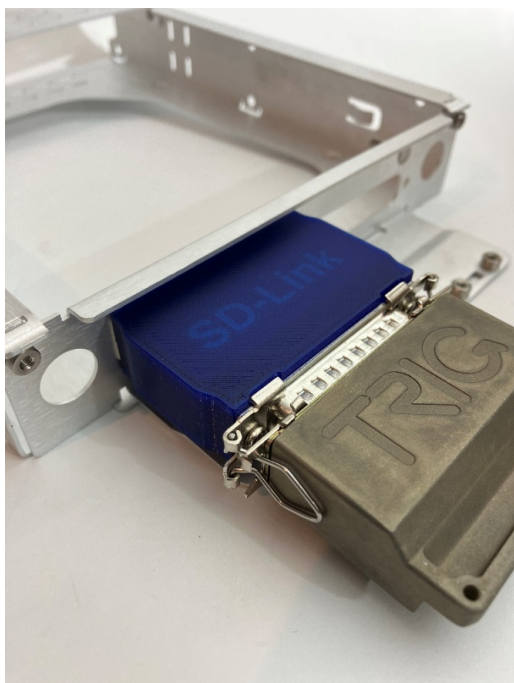
1.3   Mounting the Retaining Clips to the Original TRIG Connector
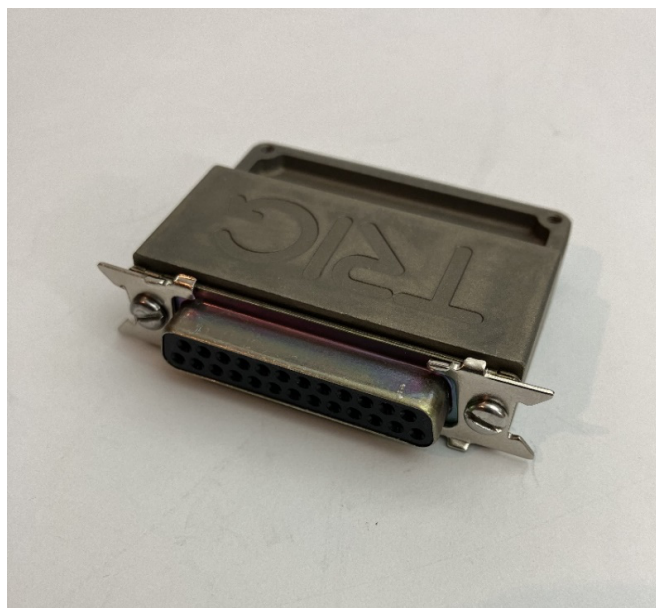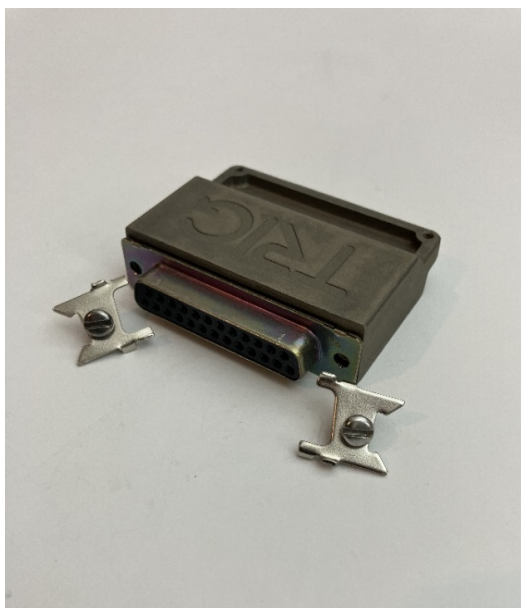

4. Mount the included retaining clips to the TRIG connector by tightening the UNC-4-40 screws with a slotted screwdriver.

1.4   Connecting the TRIG Connector to the Adapter

5. Connect the SD-TY96-DS adapter to the TRIG connector by joining the adapter's clips with the installed retaining clips of the TRIG connector.

6. *Optional:* Secure the connection between adapter and TRIG connector with a cable tie.
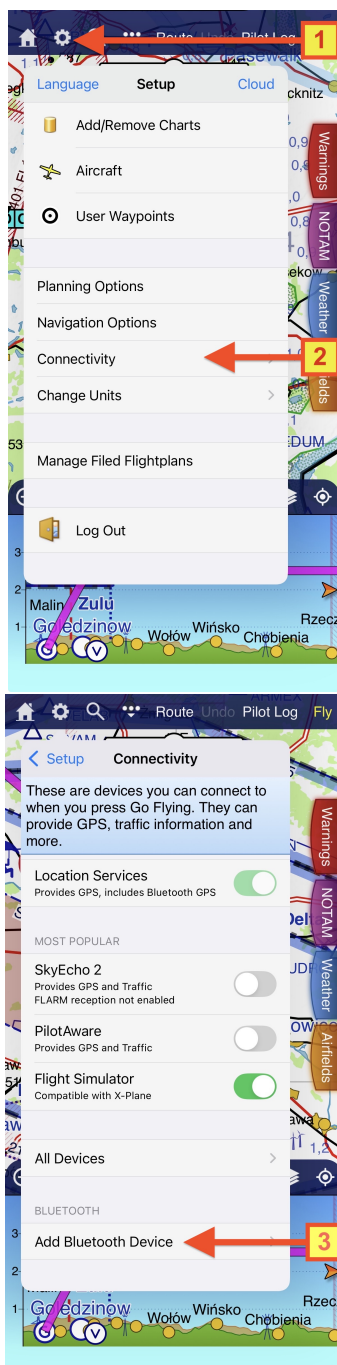
7. Verify that all connections are tight and secure.
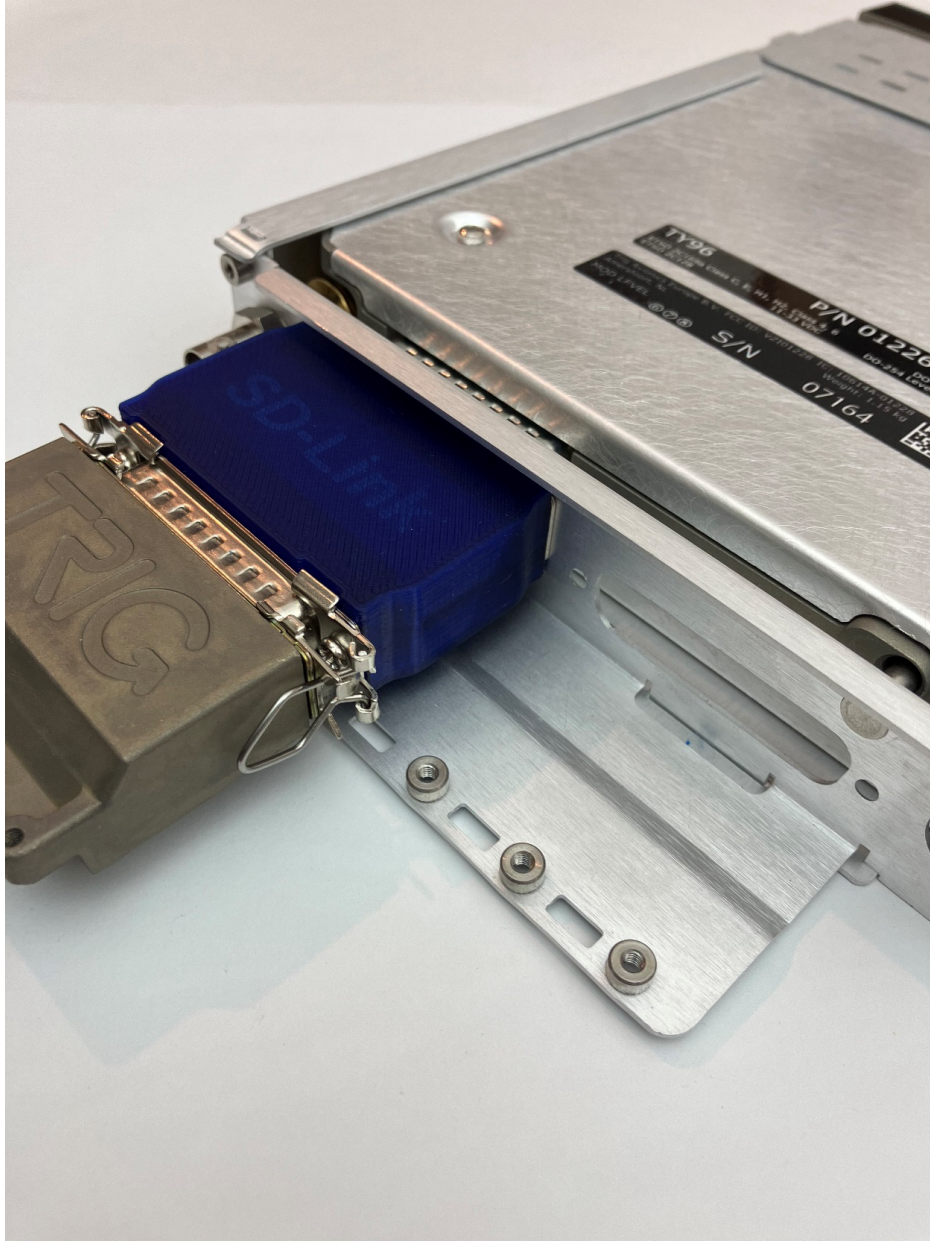
2   Radio Configuration

No further configuration is required on the radio.
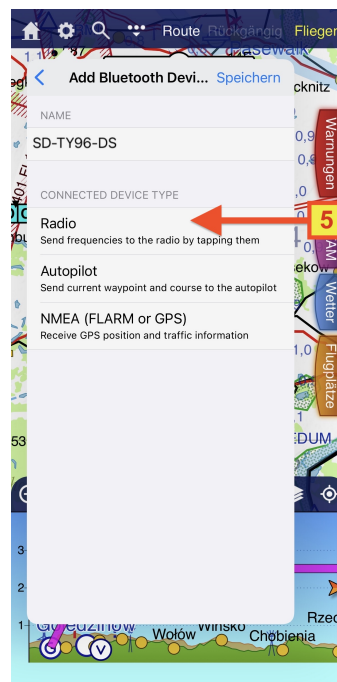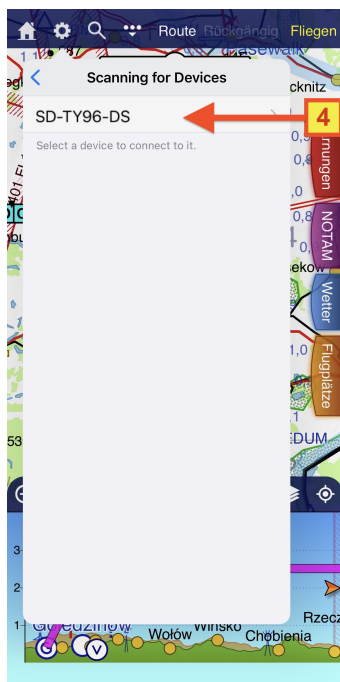
3   SkyDemon Configuration

> **Important:** The adapter is not connected via regular Bluetooth settings. BLE devices are usually not displayed there.

1. Open the configuration menu via the gear icon.

2. Select *Connectivity* in the configuration.

3. In *Connectivity -> * select *Add Bluetooth Device*.

4. Wait until the search for BLE devices is complete (this may take a moment). Then select the entry **SD-TY96-DS**

5. Select the device type **Radio**.
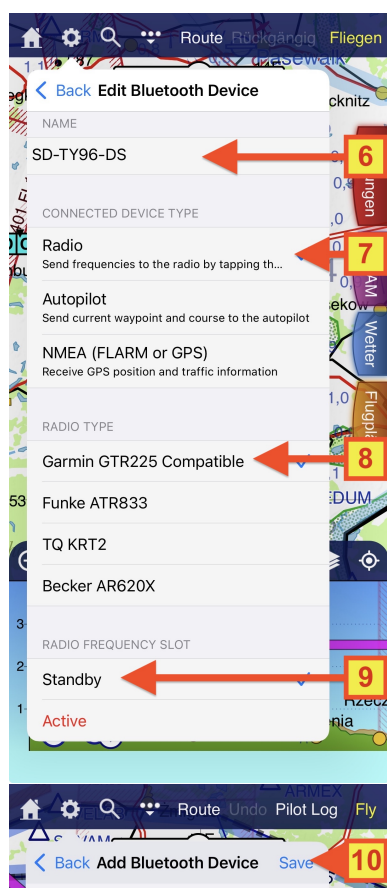
6. The adapter name can be customized as desired.

7. The device type **Radio** must be selected.

8. Select the radio type **Garmin GTR225 Compatible**.

9. Choose whether the Standby or Active frequency should be set.

10. **Save the settings by clicking Save** - the adapter is now ready to use.

4   Connector Pinout

The connector pinout is an excerpt from the TRIG installation manual.

5.4 Electrical Connections

The TY96 has single 25 way D-type connector which is used for all the data and audio signals. A single coaxial BNC is used to connect the antenna.

Pin	Signal	Direction
1	Speaker Out	Output
2	Headphone 1 Left Out	Output
3	Headphone 1 Right Out	Output
4	Ground	-
5	Headphone 2 Left Out	Output
6	Headphone 2 Right Out	Output
7	Audio Out	Output
8	Lighting Bus In	Input
9	Ground	-
10	Transmit Interlock In	Input
11	RS232 Out	Output
12	RS232 In	Input
13	Aircraft Power (DC)	-
14	Aux Audio	Input
15	Music Audio Left In	Input
16	Music Audio Right In	Input
17	Ground	-
18	Microphone 1	Input
19	Microphone 2	Input
20	Reserved	Input
21	Remote Flip-Flop	Input
22	Intercom Key	Input
23	PTT1	Input
24	PTT2	Input
25	Aircraft Power (DC)	-

Figure 1: Connector Pinout (Source: TRIG Manual)

5   Contact

For problems, questions, suggestions or positive feedback, please contact:

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