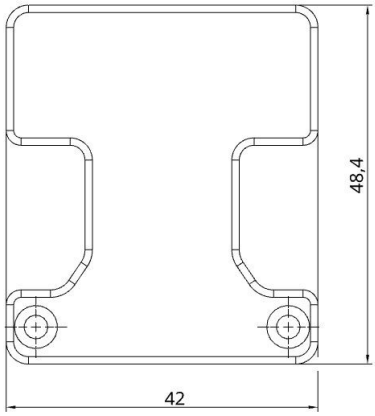
uAvionix AV-30 BLE Bluetooth Adapter

easyVFR EXPERIMENTAL



Bluetooth Low Energy (BLE) adapter for a uAvionix AV-30 Multi-Function Display (MFD). The adapter was developed as a BLE interface for an AV-30 to the navigation software easyVFR. It realizes the data transfer between the navigation software (SD) and the GPS input of the AV-30 on Port 1 (Serial 1). The adapter is simply plugged between the existing wiring and the AV-30 and is held securely to the housing thanks to two knurled screws.

No additional power supply is necessary. The adapter can be operated with 12 V and 24 V on-board voltage. An existing AV-Link module remains functional.

No further electrical or mechanical work necessary!

Important: This is a prototype for exclusively experimental use!

1 AV-30 Configuration

The following settings must be made on the AV-30 to display navigation data via the SD-AV-30-E adapter. Here is an excerpt from the uAvionix installation manual:

14 Installation Menu

The installation menu is used to configure the AV-30-C after installation and should only be accessed on the ground and changed by the installer.

To enable access the installation menu, ensure the unit is completely turned off. Press and hold the main control knob in while power is applied.

Figure 28 - Installation Menu Access

Keep the knob pressed until the startup logo has appeared. The installation menu will now be enabled for access but will not automatically appear on the screen.

Ensure the unit is in AI or DG mode; select the mode by pressing and holding the center button until the mode display changes. When in AI or DG mode, press and release the left MENU button three times until “INSTALL / ROT TO SEL” appears. The sequence of fields displayed is shown in Figure 29.

Figure 29 - Installation Menu Access

Rotating the knob left and right will access the various parameters that may be configured. Pressing the knob when the desired field is shown will allow the associated setting to be adjusted.

After adjustment, pressing the knob again will exit the editing mode but the installation menu will remain active.

Figure 30 - Exiting Edit Mode

Pressing DONE or a lack of user input for 30 seconds will exit the installation menu and return to the primary screen.

Figure 31 - Setup Done / Exit Option

Figure 1: Serial1 Setting

Important: Now work your way to the menu item **Serial1** and select **NMEA 9600**.

2 Connector Pin Assignment

This is an excerpt from the AV-30 installation manual:

11.9 Unit Pinout

Table 7 - Connector Pinout

Pin	Function	Type	Comment
1	Power	Power	+12 to +28 VDC
2	GPS Navigator	Input	GPS RS-232
3	Spare Serial	Output	Reserved - Do Not Connect
4	Serial 2	Input	Transponder RS-232
5	Serial 2	Output	Transponder RS-232
6	Serial 4	Input	AV-Mag Data
7	OAT Supply	Output	White Probe Wire
8	MFG Serial	Input	Reserved – Field Update
9	Ground	Power	Aircraft Ground
10	Aux Power Ret	Power	AV-Mag / Auxiliary Power return
11	Audio H	Output	Audio Alerts Hi
12	Audio L	Output	Audio Panel Lo
13	Aux Power Out	Power	AV-Mag / Auxiliary Power
14	OAT Return	Input	White / Blue Probe Wire
15	MFG Serial	Output	Reserved – Field Update

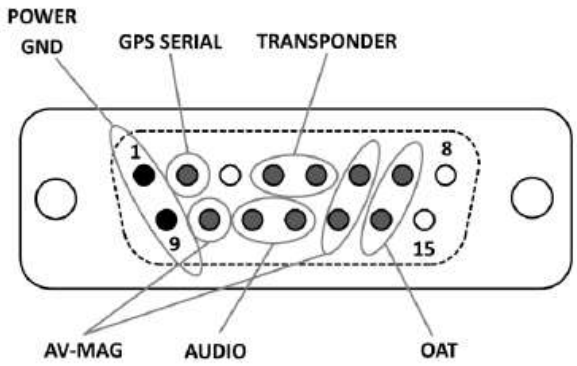


Figure 17 - Unit Connections – DB-15, Male (Rear Unit View)

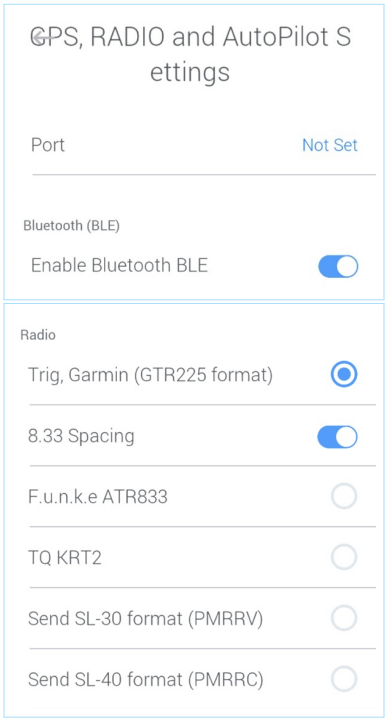
Figure 2: AV-30 Connector Pin Assignment

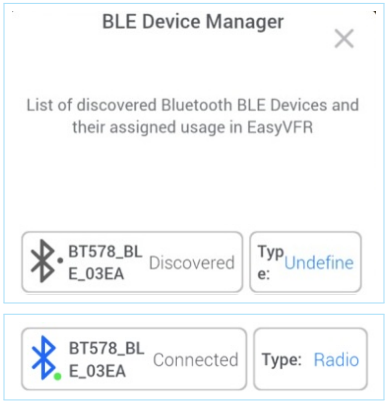
3 Configuration in EasyVFR

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

3.1 Enable Bluetooth and select radio

- Switch on aircraft power, turn on the radio.
- Enable Bluetooth on your phone / tablet.
- Start EasyVFR4.





3.1.1 Enable Bluetooth BLE in EasyVFR

1. Open menu
2. **System** → **GPS, Radio and AutoPilot Settings**
3. Scroll down and activate option **Enable Bluetooth BLE**

3.1.2 Select radio protocol

1. Continue scrolling down to the Radio section
2. Select matching radio/protocol
3. If your device is not listed: test protocols, recommended from top to bottom
   - **GTR225** is the most comprehensive (incl. 8.33 kHz),
   - **SL40/SL30** are older legacy protocols.

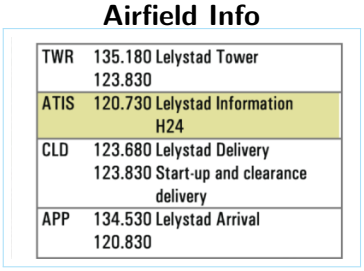
3.1.3 Open BLE device list and assign adapter

1. EasyVFR now continuously scans for BLE devices
2. Menu → **Bluetooth BLE devices**
3. Select the adapter from the list (e.g. **SD-AV-30**)
4. Tap the Type until **Radio** is set (cycle: AutoPilot / GPS/Traffic / Radio / undefined)
5. EasyVFR connects; indicated by "Connected" (incl. Bluetooth icon).

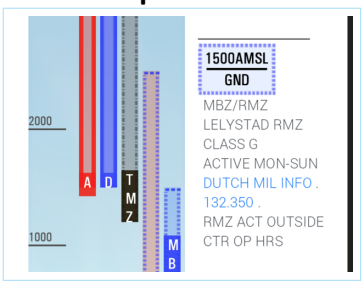
3.1.4 Send frequencies (Remote Tuning)

1. Tap frequency in:

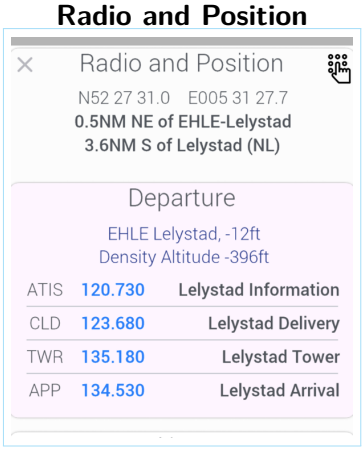
Airfield Info

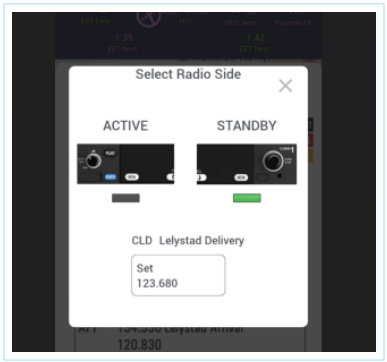


Airspaces Info



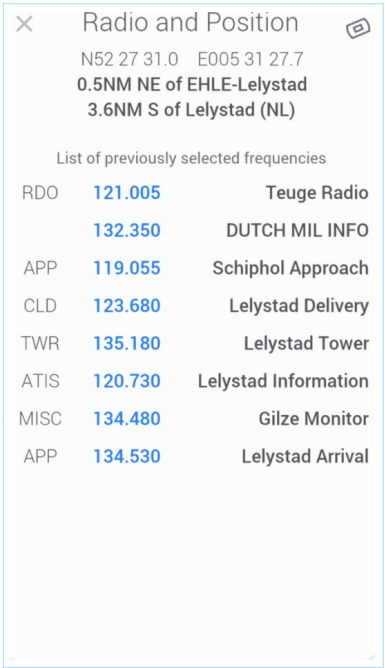
Radio and Position





2. Then select **Active** or **Standby** (depending on the radio, only Standby may be possible) → press **Set**.

3.1.5 Optional control aids (Radio Card)



1. Keypad icon: manual frequency entry
2. Clock icon: recently set frequencies (History)

4 Contact

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

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