

## Quick Start Guide

Thank you for purchasing the dAISy HAT AIS Receiver for Raspberry Pi.

**Disclaimer:** dAISy HAT is a reliable, dual-channel AIS Receiver. However, under no circumstances it should be solely relied on for collision avoidance or navigation. It's the user's responsibility to use the product prudently. Neither Wegmatt LLC nor its dealers accept responsibility or liability to the product user or their estate for any accident, loss, injury or damage whatsoever arising out of the use of this product.

Please refer to the manual on our website <http://www.wegmatt.com> for more detailed instructions.

### Installation

The dAISy HAT communicates with the Raspberry Pi through the serial port pins (8, 10) on the expansion header. By default, the serial port of the Raspberry Pi is used for Bluetooth and must be reconfigured.

#### OpenPlotter 2.x

To use the dAISy HAT with OpenPlotter, follow the instructions in the official documentation. The dAISy HAT is covered in the section Serial > Other examples > Connecting the dAISy HAT <https://openplotter.readthedocs.io/en/latest/serial/connectingdAISy.html>

#### Raspberry Pi OS

If you are running Rasperry Pi OS without OpenPlotter, use the [uart\\_control](#) shell script by Ilker Temir to configure the serial port.

Open a terminal window on your Raspberry Pi and execute the following commands:

```
wget https://github.com/itemir/rpi_boat_utils/raw/master/uart_control/uart_control
chmod +x ./uart_control
sudo ./uart_control gpio
sudo reboot now
```

This will download the script, make it executable, run it to reconfigure the serial port for use with a HAT, and rebooting the Raspberry Pi to make the new configuration active.

After completing the reboot, AIS data is available using the following parameters:

<b>Serial port</b>	/dev/serial0
<b>Baud rate</b>	38400
<b>Data bits</b>	8
<b>Parity</b>	None
<b>Stop bits</b>	1
<b>Flow control</b>	None

Use this information to configure OpenCPN or other programs. Keep in mind, that only one application at a time can consume serial data. dAISy immediately starts receiving AIS messages when powered up.

When connecting to dAISy with a serial terminal (like for example screen), you can press ESC to enter a debug and configuration menu. In this menu you can control the function of the 2<sup>nd</sup> serial port.

## LED status indicator

dAISy HAT features two red/green LEDs to indicate its status of each AIS channel.

Indicator	Description
Green, short flash every 5 seconds	Channel is in reception mode
Green, ¼ second flash	Channel received a valid AIS message
Red, ¼ second flash	Channel received an invalid message
Red, permanently on or fast continuous blinking	Device error
No LED activity	Device is not in reception mode

## Troubleshooting

Problem	Solution
No activity of the status LEDs	Verify that the HAT is properly seated.
Device in reception mode, but no valid AIS messages received (no ¼ second green flashes)	Verify antenna connection and location. Good AIS reception requires line-of-sight, verify your setup from a location that is certain to have traffic, e.g. near a harbor.
Device indicates valid AIS messages (¼ second green flashes), but no messages received on the Raspberry Pi.	Verify that the serial port shows up, if not verify the hardware configuration. Verify the serial configuration of your software. Verify the serial communication with a program like <i>screen</i> .
Software receives positions, but fewer than expected and/or with worse range than expected.	Verify antenna connection and location. Good AIS reception requires line-of-sight. Move the antenna away from sources of RF noise.
After some time, dAISy indicates a device error (fast blinking red LED)	This should not occur with the dAISy HAT. Power cycle the Raspberry Pi to resolve the issue.

If a problem persists or if you have any questions, don't hesitate to contact us at [daisy@wegmatt.com](mailto:daisy@wegmatt.com).

## Contact

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