

OH5X Tracker is a "plug-and-play" APRS set which consists of the tracker main unit, Polstar PGM-648 GPS receiver and programming and power cables. The main unit has a 5W VHF transceiver and an APRS encoder with OT+ chip in an aluminium case. Tracker is not TX only but receives packets in order to avoid packet collision and to utilize Opentracker+'s DCD (data carrier detect) feature. DCD does not rely on squelch opening to hold transmission but identifies 1200 baud packets and will not transmit over other stations.

Operation as KISS tnc or weather station hasn't been tested.

**Antenna connector (BNC)**

Connect 50 ohm antenna with proper ground plane, swr < 2. NEVER use this unit without antenna or dummy load - not even for a second!

**Data connector**

Connect supplied GPS receiver for operation or data cable for configuration with otwincfg.exe program. Refer OT+ manual for configuration instructions.

Pinout:

Pin 1 – 1-wire connection for weather station or 1-wire sensor, for example DS18S20 (not tested feature)

Pin 2 – data in

Pin 3 – data out

Pin 4 - 5V for GPS

Pin 5 – gnd

**GPS status indicator led**

Single red flash once: power on

Rapid green blinking: channel is in use

Single green flash: valid GPS fix

Double red flash: invalid GPS fix, GPS may not be ready

Solid red: transmitting or in configuration mode

**DC Connector**

10-18 V DC. 3A fuse, center pin positive.

**Notes**

Design goal was to make a simple, low cost and compact APRS transceiver that could be thrown in the trunk of a car and forget it. The goal was met by choosing readily available VHF hand held transceiver body and popular Opentracker+ APRS encoder as the main components for the set. Low power consumption (approx. 100mA) allows continuous operation in vehicle use.

Opentracker+ has an onboard temperature sensor which enables temperature reporting along with other information. Sensor is inside the aluminium case so absolute accuracy of outside temperature should not be expected. Refer to the OT+ manual for calibrating the sensor with the programming software.

Programming cable is a simple 3 wire null modem cable with pins 2 and 3 crossed. Do not use fully connected cables.

Configuration software: <https://www.argentdata.com/support/firmware/otwincfg.exe>

OT+ manual: <https://www.argentdata.com/support/otplus-manual.pdf>