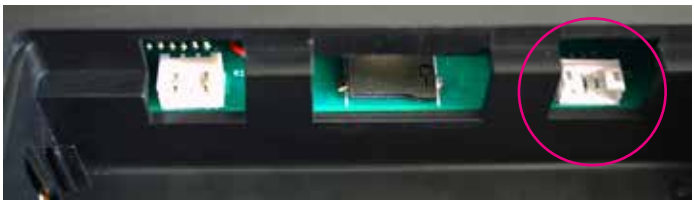
# Crossfire Telemetry over serial port (Taranis X9D+)

In the hardware section of the radio settings you can enable the serial port output.
Set it to **TelemetryMirror**.

The serial port is located in the battery bay:



**Pins from left to right:**

| | |
|---|---|
| GND | > ground |
| VMAIN | > Battery voltage! |
| UART_T | > transmit line from Taranis |
| UART_R | > receive line of Taranis |

## Connecting the BT Module (HC-05 or HC06)

First you need to set up the baud rate of the BT module to **115200** using AT Commands and configure it to your needs.

You will need to regulate the power to 5V as the taranis has **battery voltage on the VMAIN pin.** Connect the HC-05 or HC06 to the 5V Out of the BEC. **The signal line (UART_T) is inverted –** you will need an inverter to „invert it back" so the tracker can read the data. You can build your own or by a little s.bus inverter board.

**You can use this schematic:**
https://github.com/raul-ortega/u360gts/files/3488930/CRSF.Mirror.Sceme.R0.pdf
**Or order a simple PCB at OSHPARK:**
https://oshpark.com/shared_projects/V3HPfIeN

The signal out of the inverter needs to connect to the RX pin of your BT module.

Now set your BT module in the tracker to connect with the module on your taranis, set the baudrate to „**115200"** and select the telemetry protocoll to „**CROSSFIRE**". Look up the AT commands depending on yout BT firmware version. When the two modules are connected you should see the data streaming in at about 10Hz!

B.T.W. There is an APP that can also read the Crossfire telemetry stream:
https://github.com/CrazyDude1994/android-taranis-smartport-telemetry