RFDESIGN

RFD TXMOD EARLY ADOPTERS SUPPORT

ADDING S.PORT SUPPORT TO YOUR RFD TXMOD

PURPOSE

This document assists advanced users and beta testers to add S.PORT support to their RFD TXMOD telemetry radios. This allows compatible RC's to display telemetry data on the screen and improve the flight experience and situational awareness. The user is required to make a minimally invasive change to the PCB and load the compatible firmware and configure the RC.

This guide is intended to be used by experienced users that are comfortable using a soldering iron. Keep in mind that this operation might damage your TXMOD and RC if not done properly. RFDesign's warranty will not the cover the costs of repairing your unit should that happen. Proceed at your own risk.

COMPATIBILITY

Before modifying you TXMOD, you must ensure your RC supports the S.PORT protocol. Another requirement is using Mavlink as telemetry link protocol, so the TXMOD can convert some of those packages into S.PORT parameters.

Yaapu's LUA script for OpenTX can also be used to display telemetry on a variety of RC's. The scripts displays telemetry data in a very intuitive way and improves flight experience. Check this link for supported devices and installation instructions.

Figure 1 - Telemetry screen on a Taranis running Yaapu's LUA script.
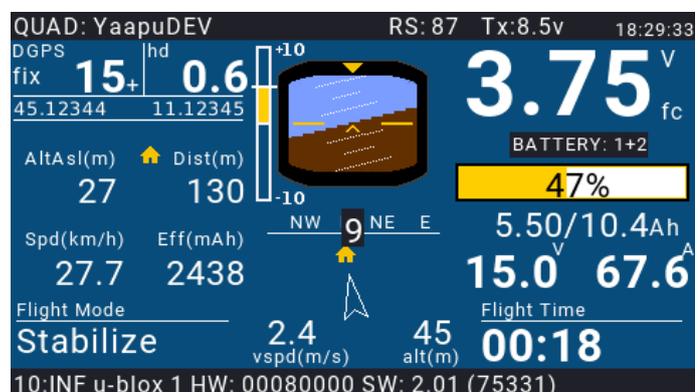
Figure 2 - Telemetry screen on a Horus RC running Yaapu's LUA script

HARDWARE MODIFICATION FOR TXMOD V1

The user is required to add a connection between the ESP module and the female header. You will need a soldering iron, cyanoacrylate and a female-pin jumper wire.

1. Disassemble your TXMOD by removing the two top screws
2. Cut the jumper wire 4cm long
3. Trim the jumper wire insulation and tin the exposed conductor
4. Solder it to pin 14 of the ESP8266 module (GPIO5)
5. Glue the jumper wire female pin socket to the side of the 4-way connector using cyanoacrylate. Make sure the female socket aligns with the existing hole in the PCBA.
6. Update your TXMOD firmware to version 1.4 or later
7. Reassemble your TXMOD
8. You might need to update your RC receiver to achieve full S.PORT support.
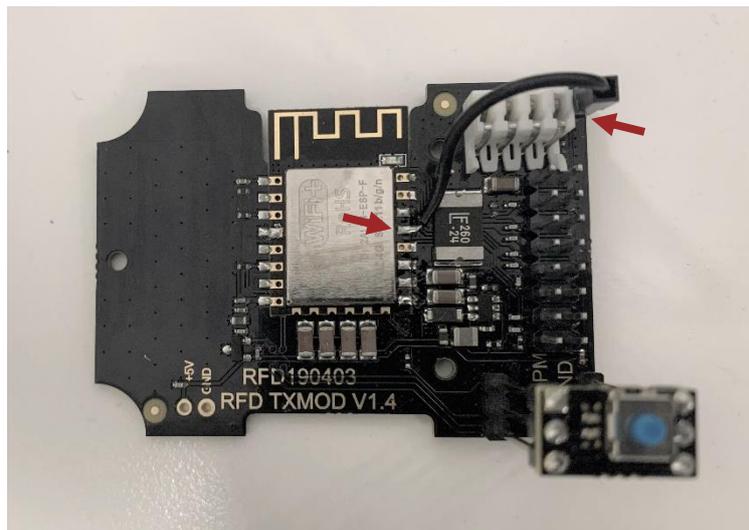
REFERENCE

1. Yaapu's LUA script Installation on Taranis radios, https://github.com/yaapu/FrskyTelemetryScript/wiki/Installation-on-Taranis-radios
2. TXMOD firmware binaries, http://files.rfdesign.com.au/firmware/