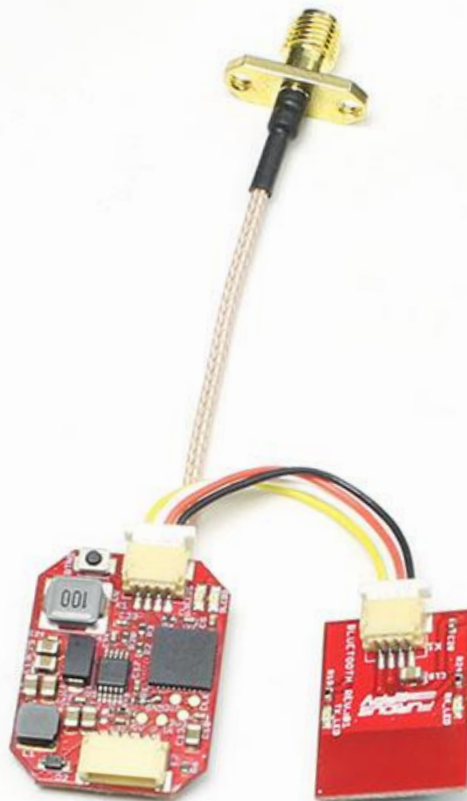




STEALTH RACE VTx

Video Transmitter

USER MANUAL VERSION 1.0



Please contact us if you need further assistance:

Tech support: tech@furiousfpv.com

Sales support: sales@furiousfpv.com

Website: <http://furiousfpv.com/>



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Introduction

Stealth Race VTx - Blink, and It's Gone.

At Furious FPV, we're massively excited to debut our flagship model that's destined to push the boundaries of FPV VTx technology. Nano sized & micron light, the all new Stealth Race VTx is a game changer, inside & out.

At half the size of competitive based VTx systems, the Stealth Race VTx will blow your mind when it comes to how much we have packed into this stamp sized beast. Able to fit in just about any racing quad on the market, the Stealth VTx boasts full size features in the smallest platform we have ever designed.

Incorporating a built in microphone for in flight audible feedback, Smart Audio support, built in LC filter for ultra clean video, thermal protection, and the ability to be powered up to 6S 22.2V input power, the Stealth Race VTx brings plenty to the table with a zero compromise layout. Combine this with an adjustable VTx power output of 0.1mW / 25mW / 200mW output, this VTx is an all in one FPV game changer that you can't live without.

Functionality is the game and simplicity is the key. With the Stealth Race VTx, the Furious team has been hard at work, incorporating intuitive setup capability via Bluetooth technology. This brilliant system offers a dedicated Furious FPV app for iOS & Android, allowing users to adjust channels & other functionality with ease via ultra simplified smart phone setup. It just doesn't get much more simple than that.

The Stealth Race VTx is ultra-compatible and incredibly easy to use. Simple, powerful and amazingly functional, the Stealth Race VTx is the ultimate VTx solution in a no compromise, ultra-brilliant design.

Features:

- Supports Smart Audio or IRC Tramp Functionality.
- Fully Adjustable via Bluetooth Capable Smart Phone App
- Built-In LC Filter for Ultra Clean Imagery
- Adjustable VTx Power Output with Pit Mode
- Flexible VTx Power for Race & Freeride Flight
- Stealth Power Up Capable - Built-In Full Thermal Protection
- High Voltage Ready with 6S Input Power Capability

Specifications:

Dimensions: 15x25x6 mm

Weight: 2.9 gram (without antenna)

Voltage Range: 2-6S Li-Po

VTx Power: 0.1mW / 25mW / 200mW

Micron Small - Half the Size, Triple the Features.

At half the size of traditional VTx units, the sheer mico sized layout of the Stealth Race VTx is simply mind blowing. And then, you begin to see what this system packs - nothing short of magic via pure **design brilliance**.

Built In Bluetooth Capability - Power In the Palm of Your Hands.

Incredibly simple to setup and utilize, Furious FPV brings the next evolution of functionality & brilliance to the table with full up smart phone adjustments. By downloading the Furious FPV iOS / Android app via your smart phone, you now can adjust your VTx in ultimate style. Like a boss, we might add.

Built In LC Filter - Keeping It Clean.

Ultra clean imagery is paramount, helping you avoid clipping gates and ending your race in shame & defeat. By incorporating a built in LC filter, your video imagery is kept clean and focused so you can push your FPV to the ragged edge & beyond.

Adjustable VTx with Pit Mode Technology - The Ultimate In Setup Flexibility.

Whether setting up your aircraft, pushing hard laps in the race, or relaxing with some epic freeride flight, the Stealth Race VTx offers it all. Utilizing Pit Mode Technology, you can now setup your gear while others are in flight by transmitting at an ultra low 0.1mW output. Time to race? Dial it up to 25mW, and after your laps, push it to 200mW for some epic freeride flight.

Stealth Power Up - Keeping the Airwaves Clean.

Protect other racers from signal interference with Stealth Power Up technology, allowing you to power up your aircraft while keeping your VTx output power at zilch - just where it needs to be.

Built In Thermal Protection - Keeping It Cool.

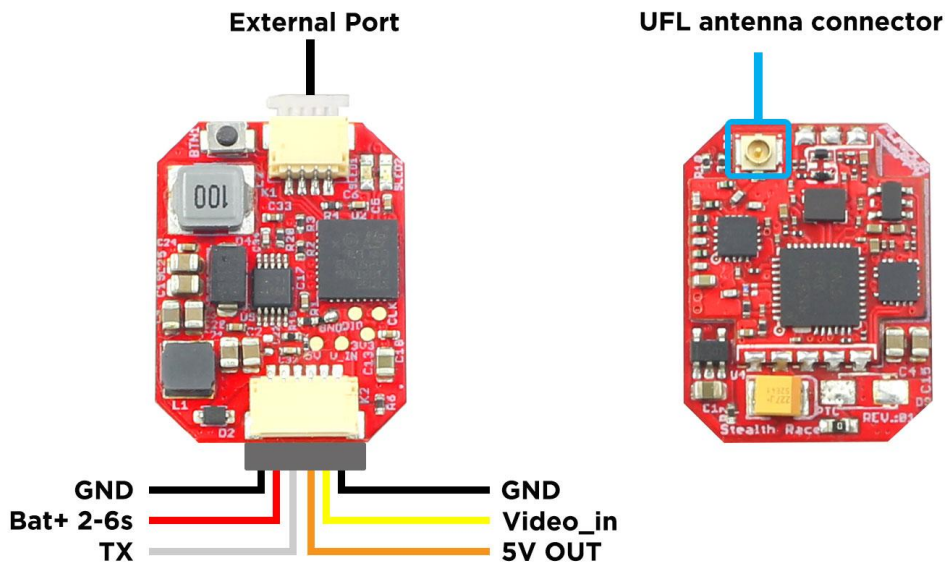
Crank up the speed without the heat. With built in thermal protection, the Stealth Race VTx keeps temps under control with built in thermal protection. So, go ahead and push it to the max - the Stealth Race VTx can take it.

High Voltage Ready - Power to the Max.

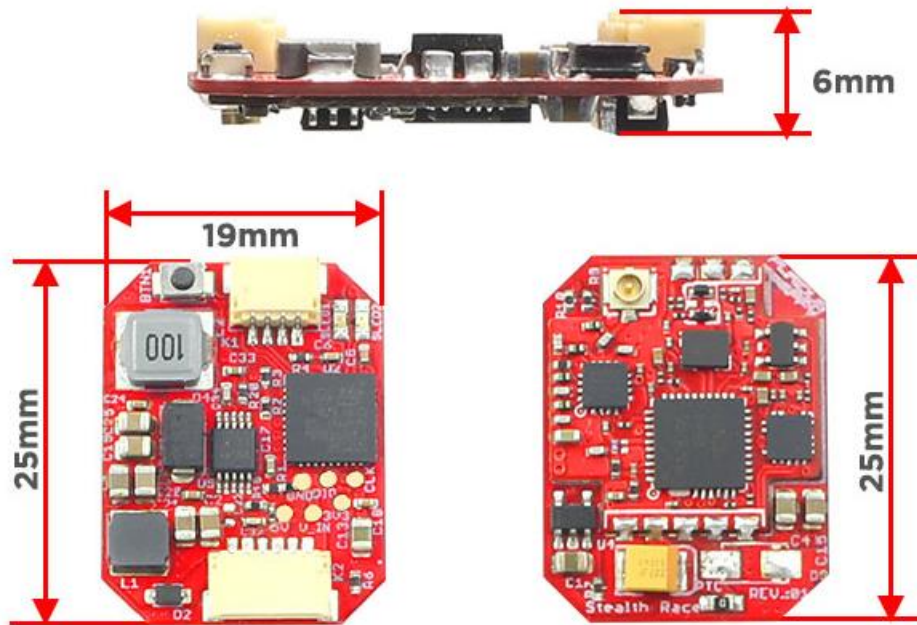
With the ability to handle a full 6S 22.2V input power, the Stealth Race VTx can handle all the voltage you can throw at it, offering ultimate voltage flexibility.



Pinout



Dimensions



Connections

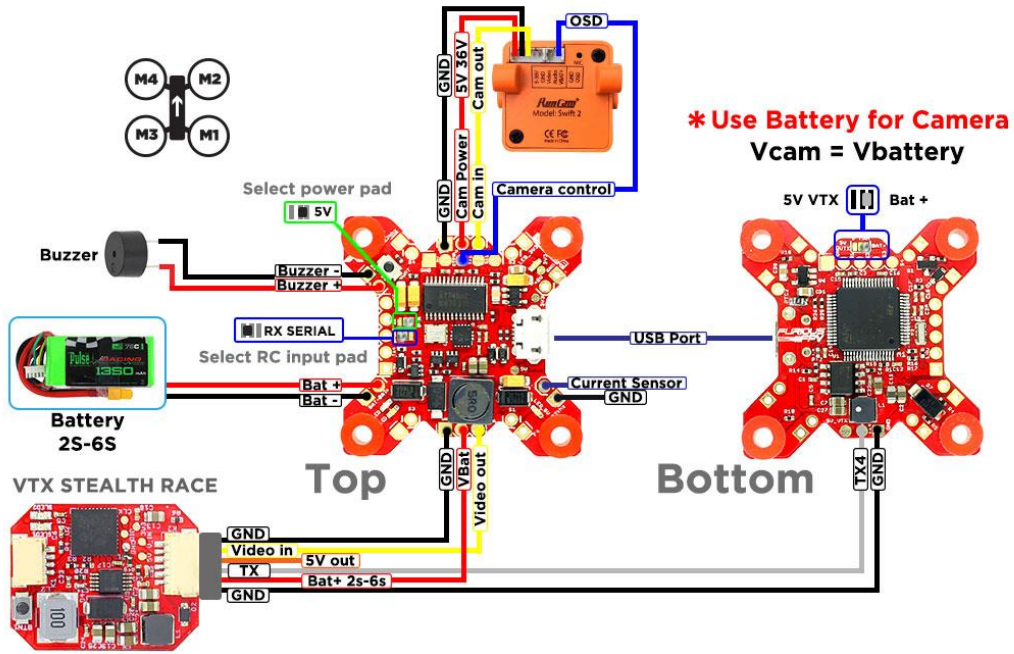
❖ Using Fortini F4 OSD:

Ports

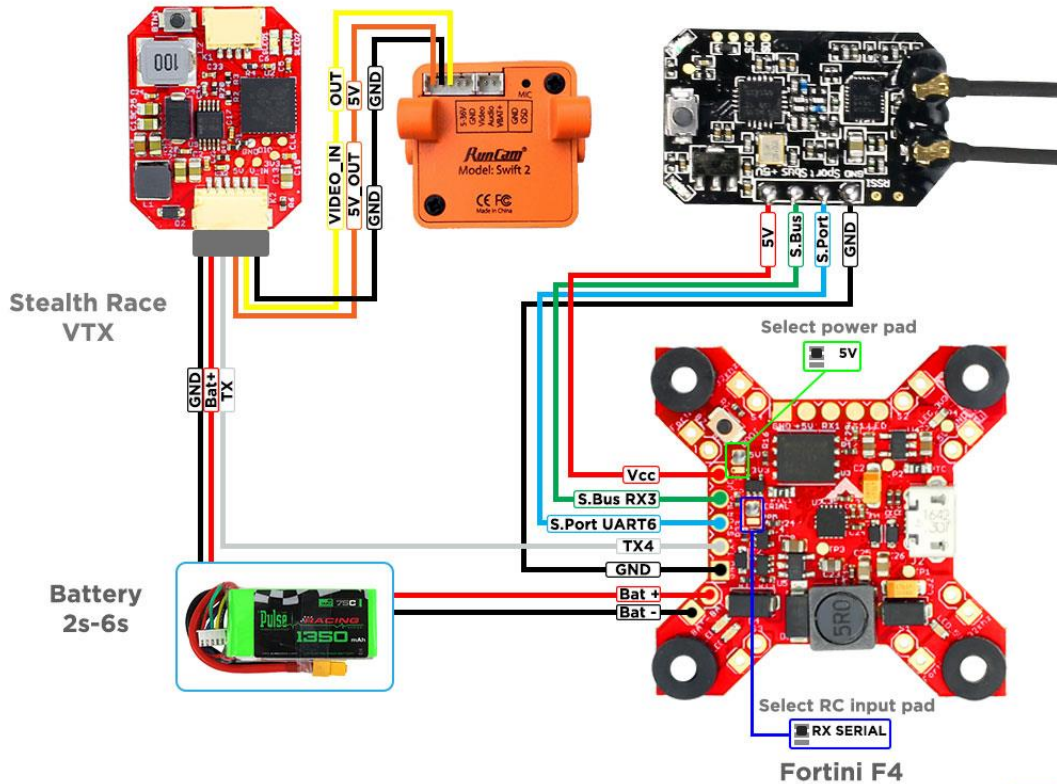
WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.
 Note: Do NOT disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

Port Identifier	Configuration	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Serial RX	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART1	<input type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Serial RX	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART3	<input type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Serial RX	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART4	<input type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Serial RX	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	IRC Tramp ▼ AUTO ▼
UART6	<input type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Serial RX	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼



❖ Using Fortini F4:



Ports

WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.
Note: Do NOT disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

Port Identifier	Configuration	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Serial RX	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Serial RX	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART3	<input type="checkbox"/> MSP 115200	<input checked="" type="checkbox"/> Serial RX	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART4	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Serial RX	Disabled AUTO	Disabled AUTO	IRC Tramp AUTO
UART6	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Serial RX	SmartPort AUTO	Disabled AUTO	Disabled AUTO



You can buy Fortini F4 right here: <https://goo.gl/H5QgX8>

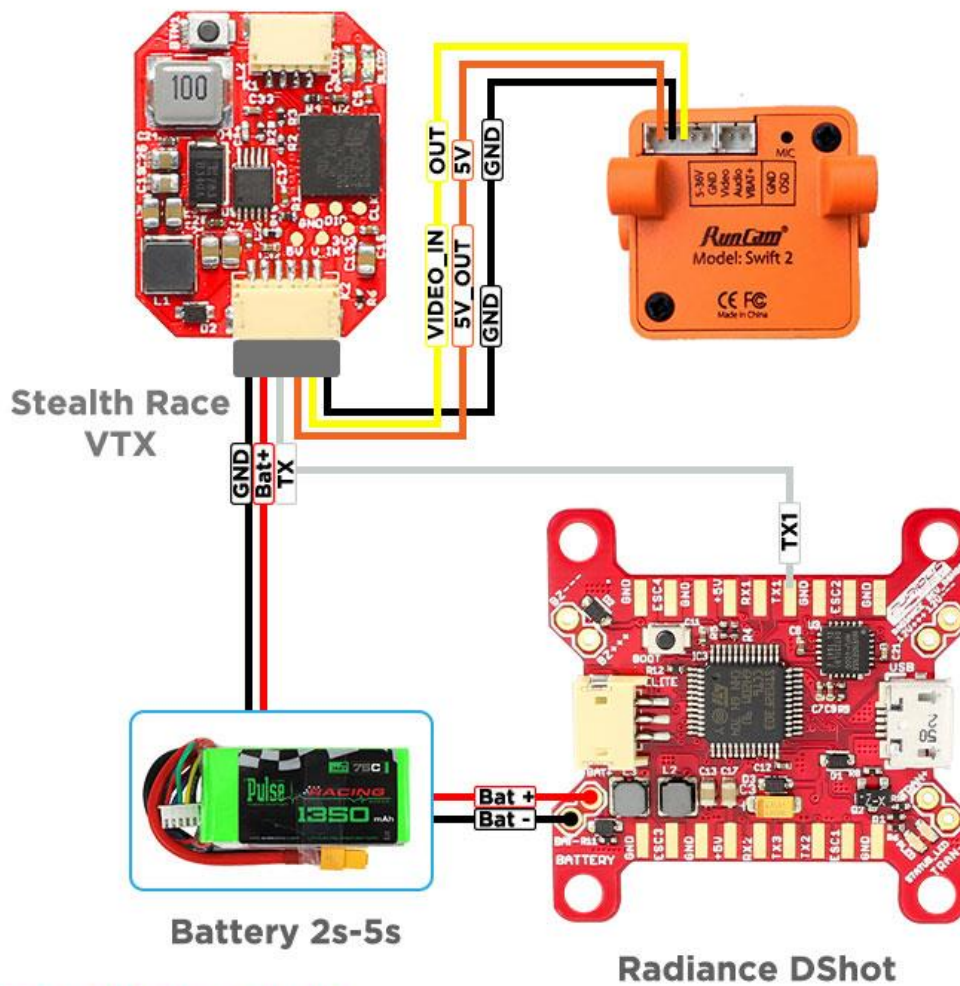
❖ Using Radiance Dshot Version:

Ports

WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.
 Note: Do NOT disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	IRC Tramp AUTO
UART2	<input type="checkbox"/> 115200	<input type="checkbox"/>	SmartPort AUTO	Disabled AUTO	Disabled AUTO
UART3	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO



Stealth Race VTX
 Connection with Radiance DS

You can buy Radiance DShot Vesion right here: <https://goo.gl/RBxRJ6>

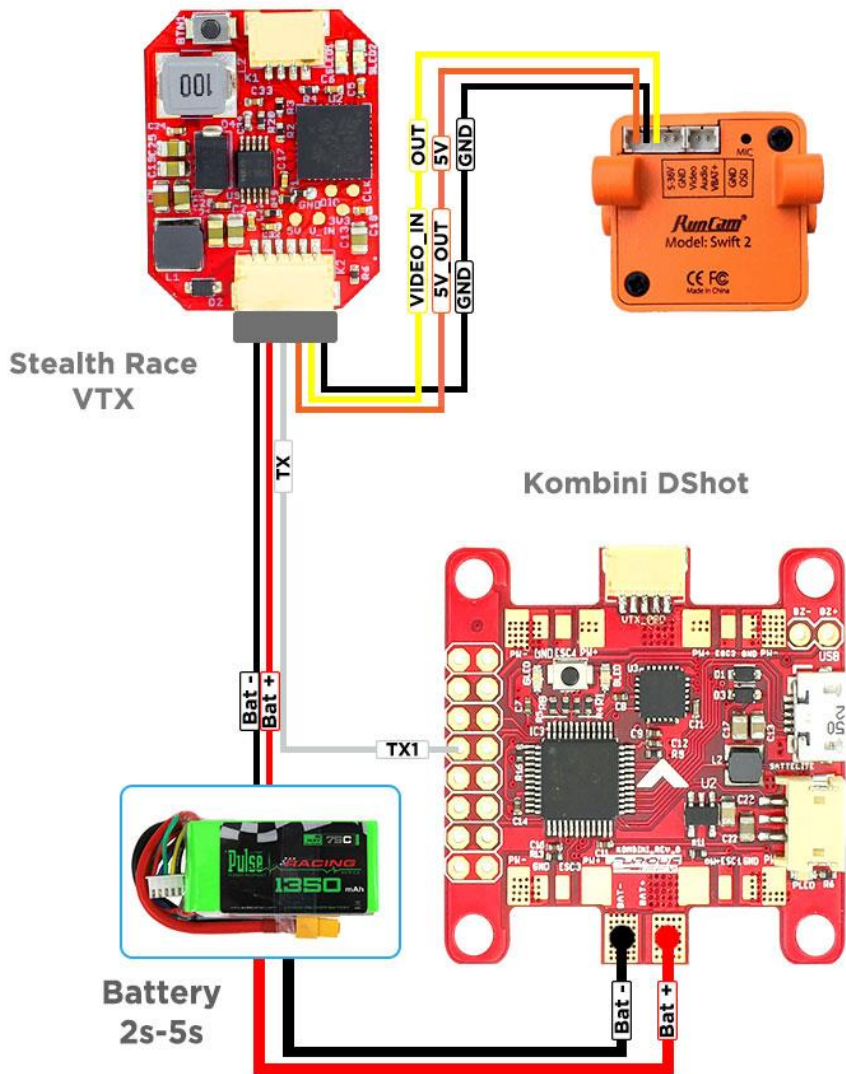
❖ Using Kombini Dshot Version:

Ports

WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.
 Note: Do NOT disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

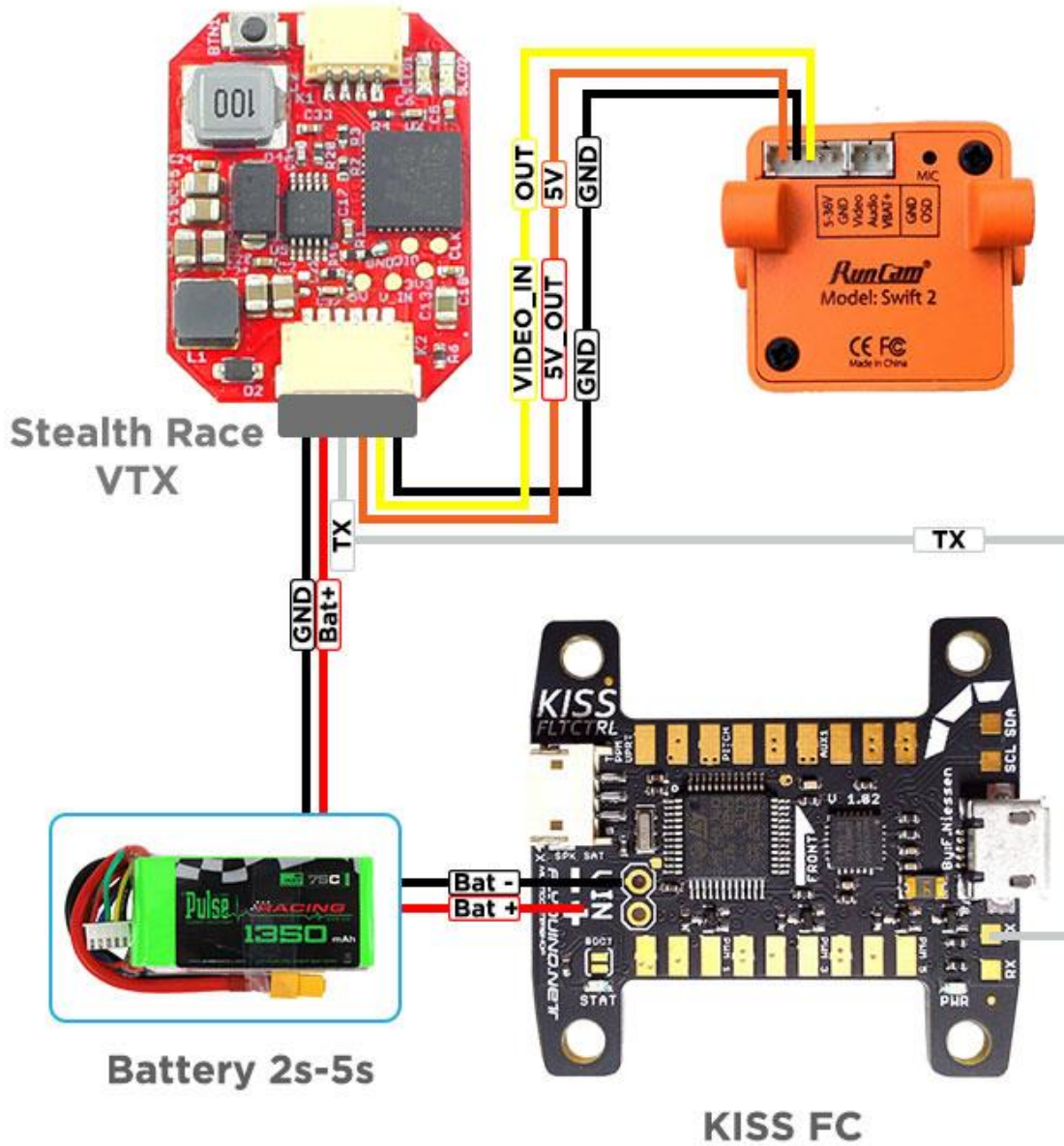
Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	IRC Tramp ▾ AUTO ▾
UART2	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	SmartPort ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



Stealth Race VTX
 Connection with Kombini DS

You can buy Kombini DShot Vesion right here: <https://goo.gl/EzQnak>

❖ Using KISS FC:



Stealth Race VTX
Connection with KISS FC
FURIOUS
FPV

Setup

LEDs Status

LED Flash Codes for Channel, Band and Power

The FuriousFPV Stealth Race VTx signals selected channel, band and power levels using a startup sequence of LED codes. The same sequence is also repeated in the menu to make it unified. First the **RED** LED flashes to indicate the item being shown. One flash for channel, two flashes for band, three flashes for power level. Subsequently, the **BLUE** LED will indicate the value.

RED LED	Indicate item – Channel, band or power setting
Blue LED	Indicate value



For example, Channel 2, Band B, Power of 200mW, will have the following startup LED code:

- 1x **Red** and 1x **Blue** = Channel 1 => Channel 2
- 2x **Red** and 5x **Blue** = Band Race (C) => Band R (C)
- 3x **Red** and 2x **Blue** = Status 2 => No power
- 4x **Red** and 2x **Blue** = Power 2 => 200mW

Code LED Status: Status 1 – Pitmode, Status 2 – No Power, Status 3 – Normal

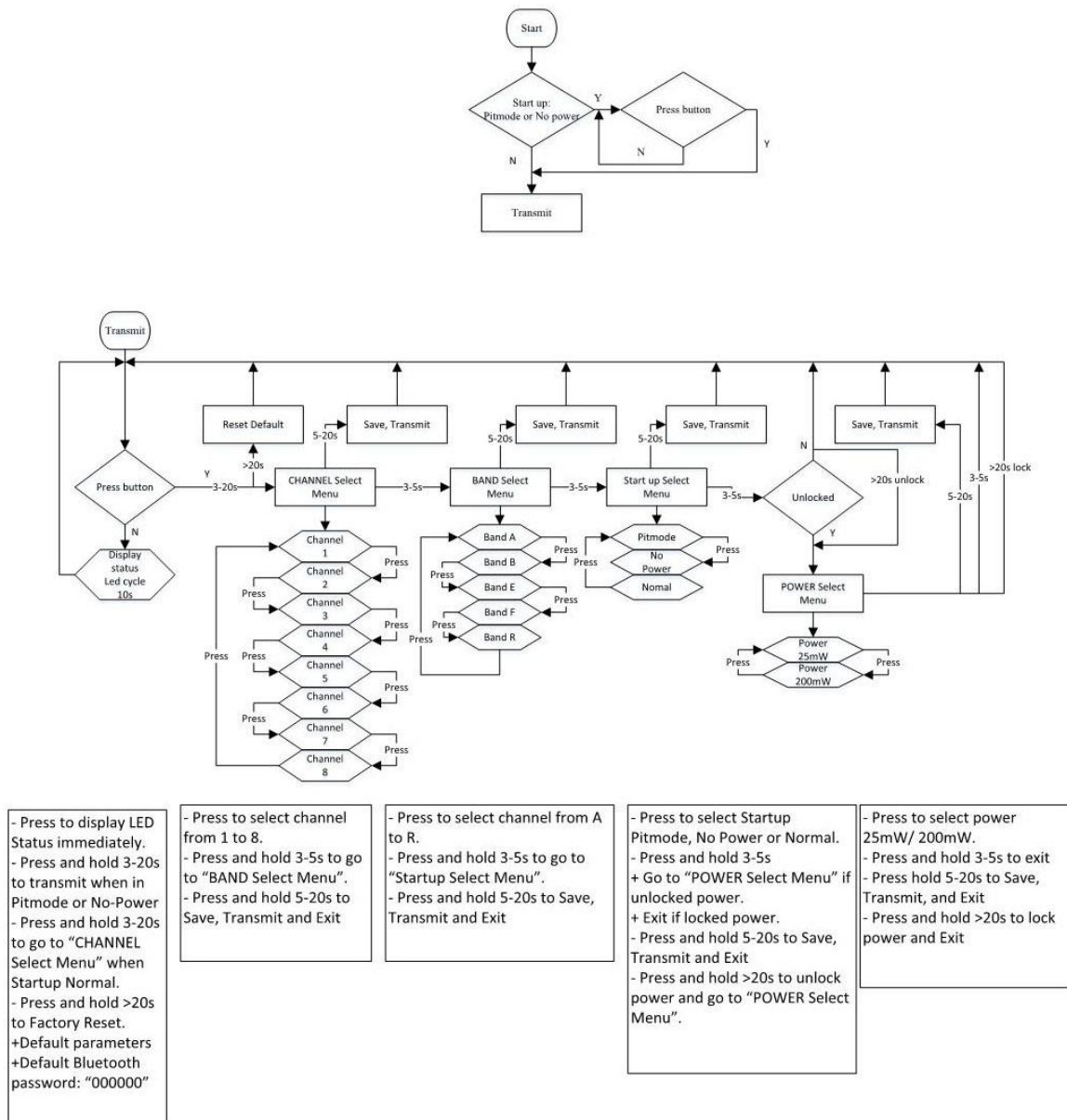
Band	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Band A	5865	5845	5825	5805	5785	5765	5745	5725
Band B	5733	5752	5771	5790	5809	5828	5847	5866
Band E	5705	5685	5665	5645	5885	5905	5925	5945
Band F	5740	5760	5780	5800	5820	5840	5860	5880
Band R (C)	5658	5695	5732	5769	5806	5843	5880	5917

Set frequency and power for Stealth Race VTx

- ❖ **Option 1: Configure FuriousFPV Stealth Race VTx by button**

Please configure VTx by button follow as diagram:

NOTE: You need Unlock Stealth Race VTx to use full frequency and 200mW power



❖ Option 2: Configure FuriousFPV Stealth Race VTx by app on Smartphone

This is the first app to configure for VTx in the world at the moment of talking,

Android: <https://play.google.com/store/apps/details?id=com.VTxandroid>

iOS: <https://itunes.apple.com/vn/app/imagination-configuration/id1271196332?mt=8>

STEP 1: You need connect your Stealth Race with Bluetooth module



STEP 2: DOWNLOAD app *Imagination Configuration*



STEP 3: Connect Stealth Race with app *Imagination Configuration*

Plug battery power to Stealth Race VTX then open *Imagination Configuration* on your mobile.

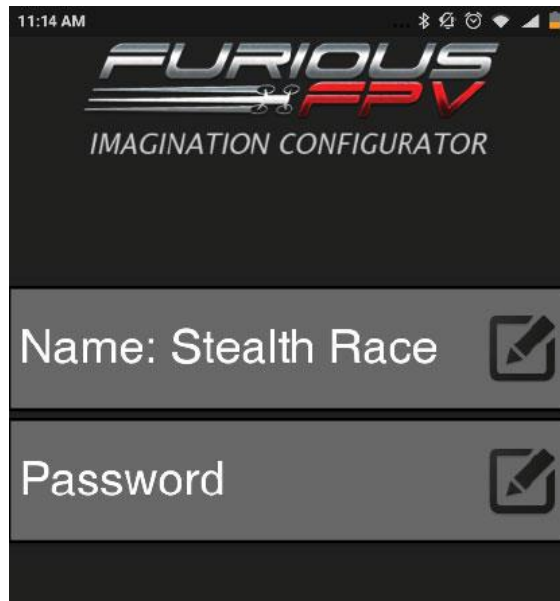
On *Imagination Configuration* click **PAIR DEVICE** to app search your Stealth Race VTx.

Default password is: **000000**

***NOTE:** If you changed password and forgot it, you can press and hold button on VTx 20 second to reset your password to default is **000000**.

STEP 4: Change name and password

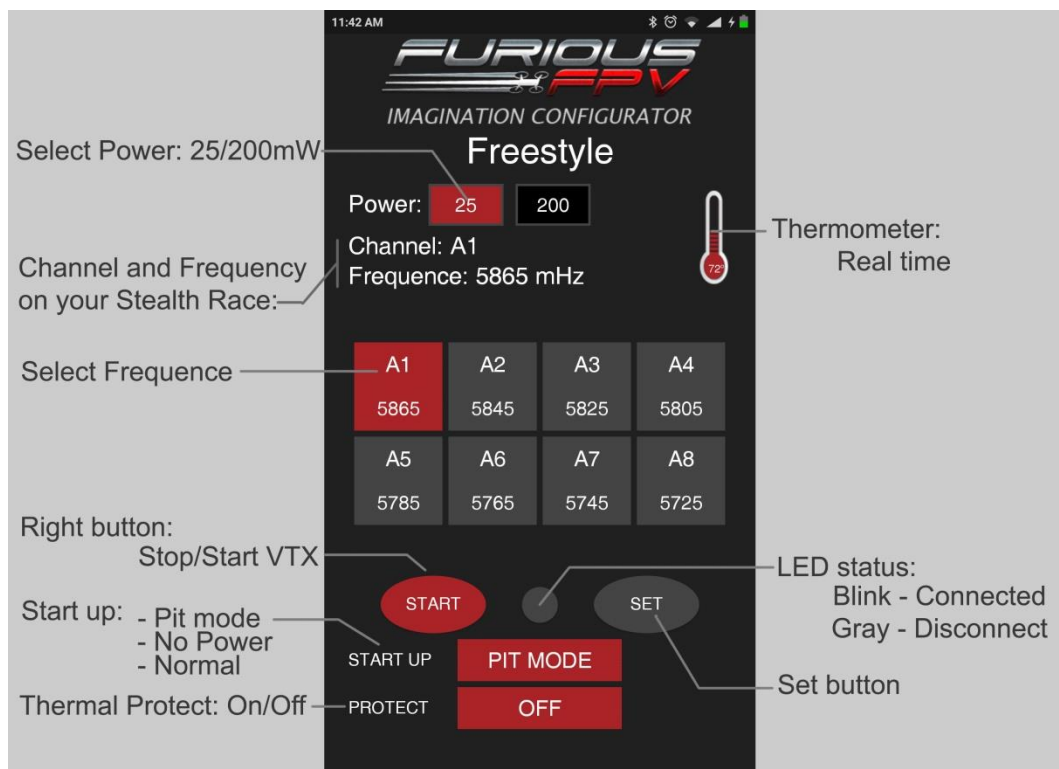
To change your **device name** and **password**, please hit **PROFILE** tab on app. You can use 12 character for Name and 6 numbers for Password
Hit **BACK** on your mobile to come back to home menu.



STEP 5: Select you style quad at home screen using

- **Racing:** only pitmode/25mW with frequency use for Racing quad.
- **Freestyle:** pimode/25mW/20mW with 40CH/5 Bands.

STEP 6: Configuration your Stealth Race VTx with app



Meaning of icons on app:

- **Start-up** have a pop-up with 3 selections for VTX power when you plug battery
 - **Pitmode:** when you plug battery, VTx will be working with Pitmode 0.1mW
 - **No power:** when you plug battery, VTx will not be working until you hit START
 - **Normal:** VTX will be working with your channel when you plug battery.
- **RIGHT BUTTON:** use to turn ON/OFF your VTX.
- **SET BUTTON:** set your configurations from app to VTX.
- **LED STATUS:** this icon will blink **RED/GRAY** when connected and not blink **GRAY** when disconnected

STEP 6: Save your configuration

After selecting your configurations on app please hit SET button to save your configurations to VTx

***** NOTE:** When VTx at the NO POWER/PIT MODE please click START button on app or hit BUTTON on VTx to Transmit power

❖ Option 3: Configure FuriousFPV Stealth Race VTx by Transmitter Taranis

You can now adjust rates and VTx settings right from your Taranis menu with Betaflight using LUA script and Smart Port. In this tutorial we are going to show you how. Furious FPV uses this article is written by Artur Banach, Oscar and edited by Furious FPV. This guide is written specifically for Betaflight firmware - Fortini F4.

Hardware Requirement

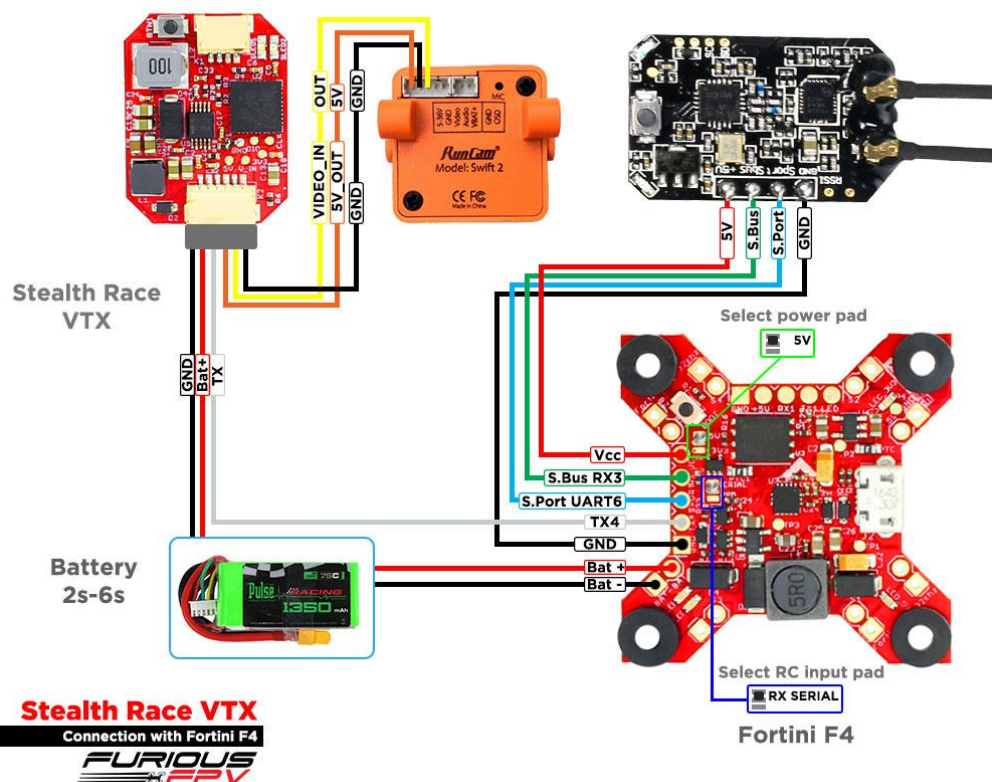
- Taranis X9D or QX7 TX
- Furious FPV SPD15 or XSR RX (Smart Port required)
- Fortini F4 Flight Controller with Betaflight FW, find out if Smart Port is supported natively.
- FuriousFPV Stealth Race VTx – to change VTx settings from Taranis

Hardware Connection

To allow VTx configure from Taranis, simply connect **S.PORT** from SPD15 or XSR RX to **UART TX6** pin on the Fortini F4

For changing VTx settings, Telemetry port from **FuriousFPV Stealth Race VTx** also needs to be connected to one of the **UART TX4**

Please connect as below picture:



Update Taranis OpenTX Firmware

Your Taranis TX has to be updated to the latest OpenTX firmware (we tested V2.2 RC14 successfully). The process is simple, and it's covered here:

<https://oscarliang.com/flash-opentx-firmware-taranis/>

Download LUA Script for Betaflight

The LUA script for Betaflight can be downloaded here:

<https://github.com/betaflight/betaflight-tx-lua-scripts/releases>

Latest release

 v0.3
 4cd7539

BFSetup v0.3

raphaelcoefficient released this on 24 Feb · 1 commit to master since this release

This version includes a nice GUI re-design by JR63 (Thx!!!). Please read the release notes for v0.2 & v0.1 for more details on installation and limitations (especially for X7).

PLEASE NOTE WELL: there is currently an issue in OpenTX ([opentx/opentx#4560](https://github.com/OpenTX/OpenTX/issues/4560)) which prevents many LUA scripts to work correctly with OpenTX 2.2.0-RC11. So stay away from RC11.

Downloads

File Name	Size
BFSetup-Horus-v0.3-0-g4cd7539.zip	5.7 KB
BFSetup-X7-v0.3-0-g4cd7539.zip	5.55 KB
BFSetup-X9-v0.3-0-g4cd7539.zip	5.57 KB
Source code (zip)	
Source code (tar.gz)	

Please be aware that the LUA script files are different for Frsky X9D, QX7 and the Horus.

Download the latest version available for your transmitter model.

The zip file contains 2 folders: **BF** and **TELEMETRY**, and the files need to be copied to the SD card in your Taranis.

1. Copy **BF.lua** file in TELEMETRY folder to the **/SCRIPTS/TELEMETRY/** folder in your Taranis SD Card.
2. And copy the whole BF folder to **/SCRIPTS/** folder in the SD card. These are the script interface files needed to make it work.

Betaflight Configurator Settings

First of all, make sure SmartPort is setup properly:

1. In Betaflight configurator, **PORTS** tab, find the **UART** where you have connected S.PORT to, then select **SmartPort** as the Telemetry Output
2. Enable option **TELEMETRY** in **Configuration** tab

<input type="checkbox"/>	SOFTSERIAL	Enable CPU based serial ports
<input type="checkbox"/>	SONAR	Sonar
<input checked="" type="checkbox"/>	TELEMETRY	Telemetry output
<input type="checkbox"/>	LED_STRIP	Multi-color RGB LED strip support
<input type="checkbox"/>	DISPLAY	OLED Screen Display

Extra Steps for VTx setup

Go to **PORTS** tab, find the **UART4** you connected the VTX to, and choose which VTX you have under **Peripherals** is **IRC TRAMP [Auto]**

With Fortini FC I am using **SmartPort** in **UART6**, **FuriousFPV Stealth Race VTX** in **UART4** please select **IRC Tramp**, and **SBUS** in **UART3**.

Ports

WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.
Note: Do **NOT** disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

Port Identifier	Configuration	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Serial RX	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Serial RX	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> MSP 115200 ▾	<input checked="" type="checkbox"/> Serial RX	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Serial RX	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	IRC Tramp ▾ AUTO ▾
UART6	<input type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Serial RX	SmartPort ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾

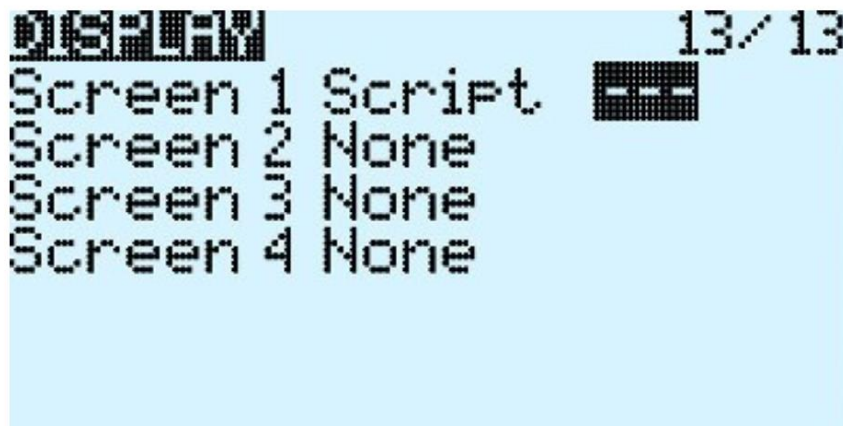
Don't forget to hit "Save and Reboot" when you finish.

Setting up LUA script on telemetry page

We are almost there!

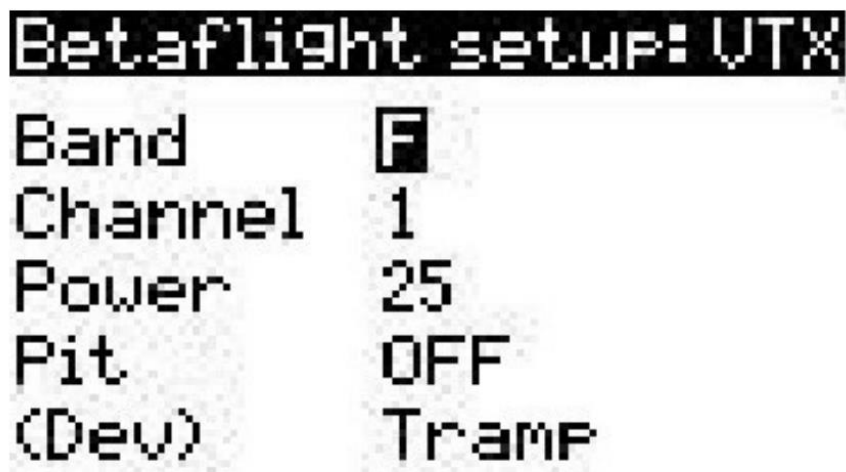
Once you have SmartPort set up, and you have copied the **BF.lua** file to **/SCRIPTS/TELEMETRY/** folder on the Taranis SD card, we can proceed to the final step.

Go to page 13 **DISPLAY** in your Taranis. Here you can configure which telemetry screen to execute the LUA script. In **Screen 1**, choose **Script** as the first option, and then select the BF Lua script in the 2nd option.



You should be able to activate BF LUA script now by holding down the PAGE button (LUA script is triggered by entering Telemetry Screen 1).

Page 1 of the script is for VTx settings.



After making VTx setting changes on your Taranis, you can **save it by long pressing the MENU button**.

That's it!! I hope you enjoyed it, and have fun playing changing VTx channels from your Taranis in the field! :)



Thanks for using our product