

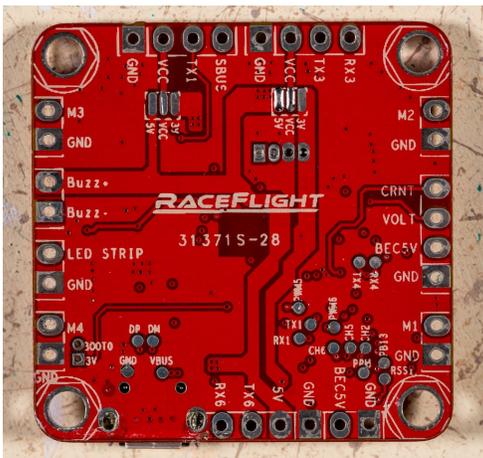
# RACEFLIGHT ONE

## Read Instruction Manual

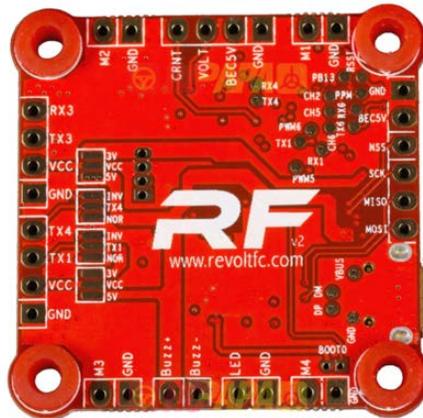
Read instruction manual carefully and follow rules for safe operation. Failure to do so could result in serious or fatal injury.



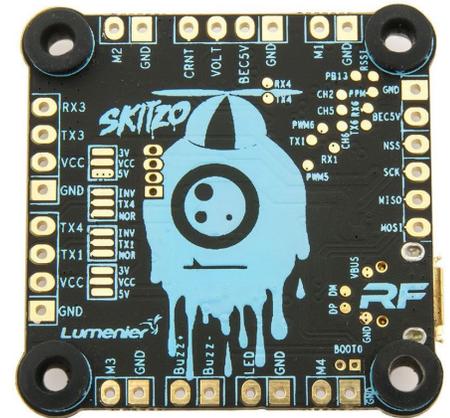
## Different Versions of Revolt Flight Controller



Revolt Version 1



Revolt Version 2



Skitzo same as Revolt Version 2, but with a different silk screen

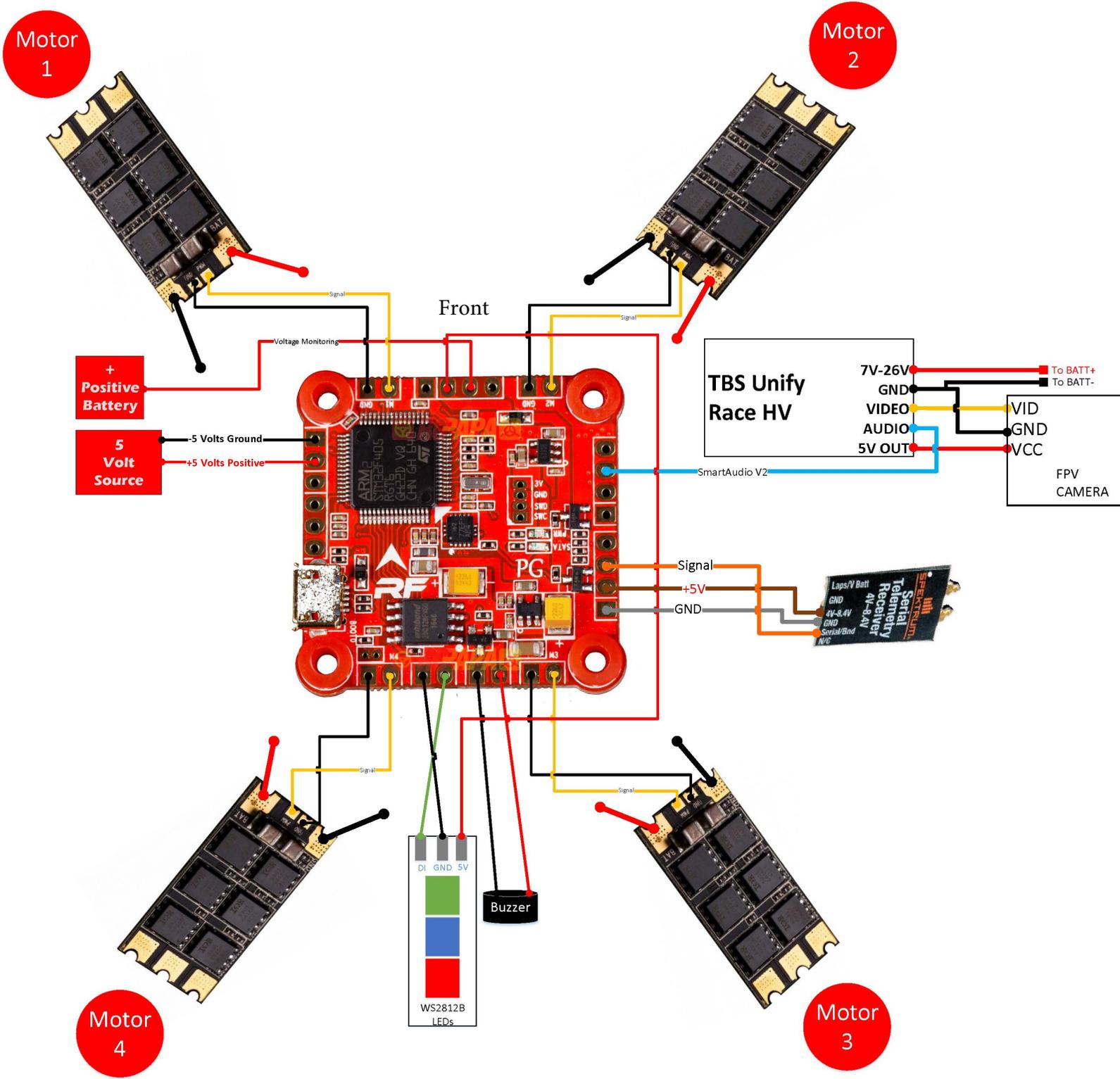
## QuickStart (After Revolt has been soldered)

Click on the button to navigate to the page





# Spektrum Telemetry RX & SmartAudio - V2 Top



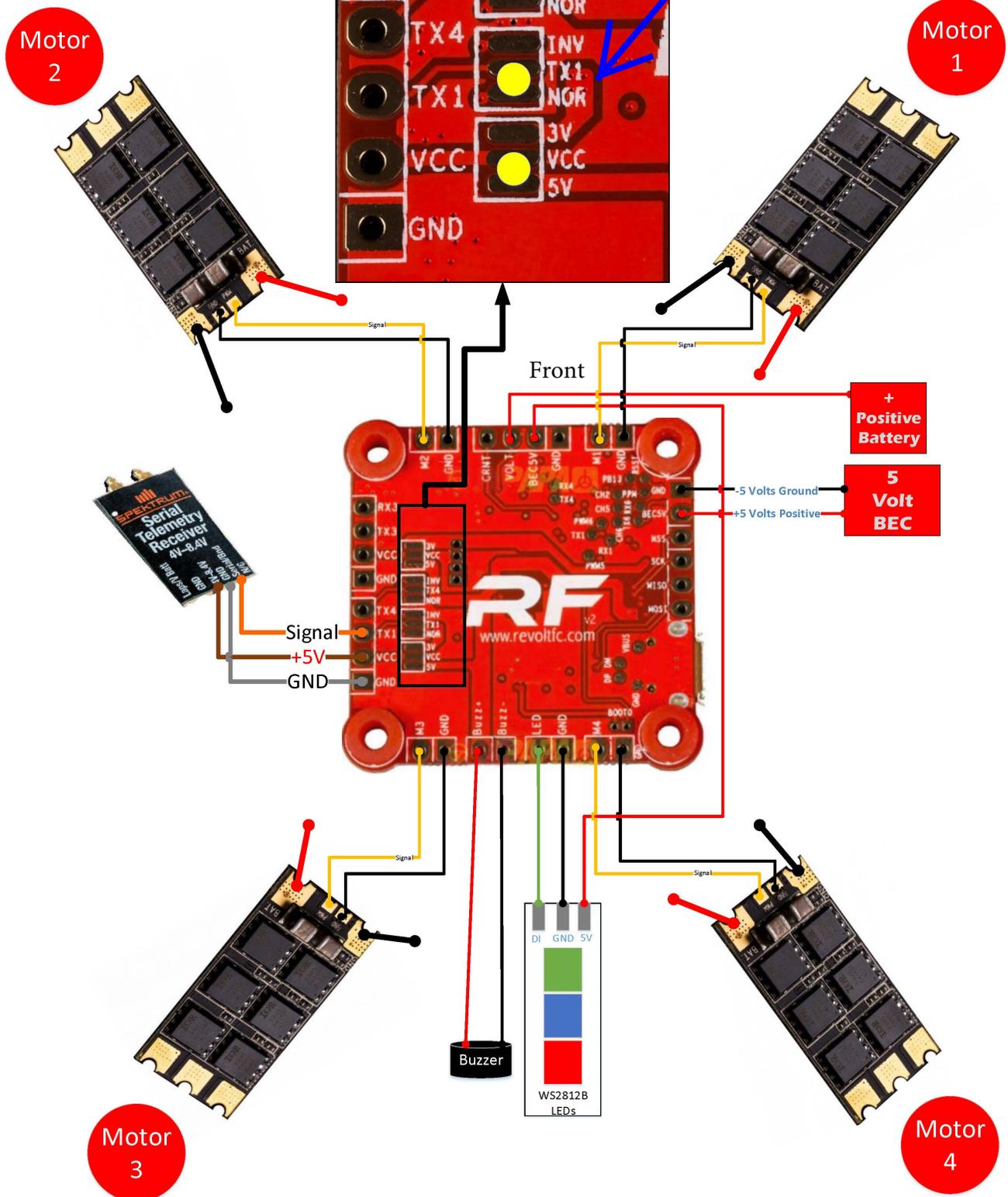
# Revolt V2 Bottom View

## Spektrum Telemetry RX - V2 Bottom

Dshot won't work with telemetry

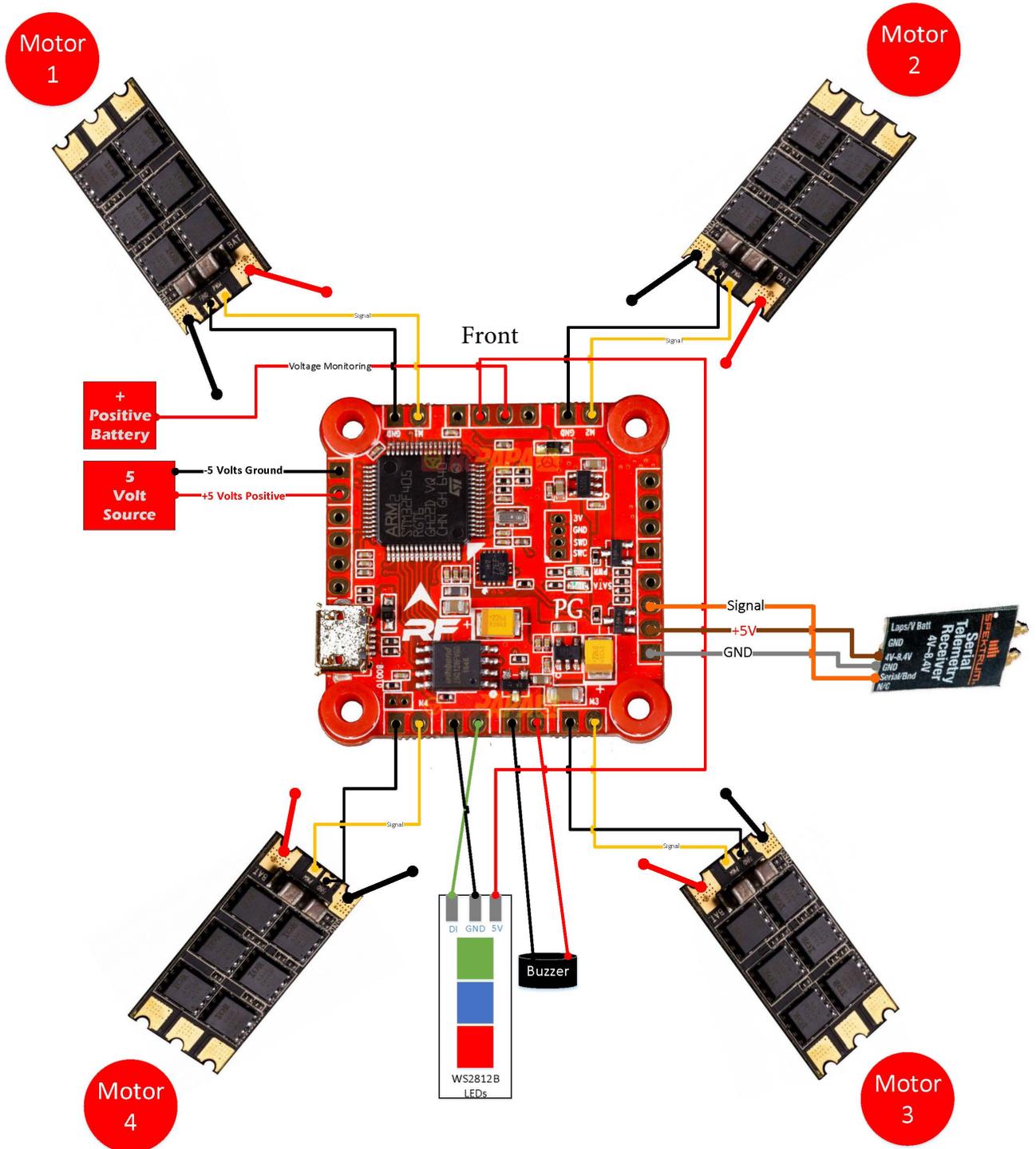
No SmartAudio

Yellow Dots represents where you would solder



# Spektrum Telemetry RX - V2 Top

No SmartAudio

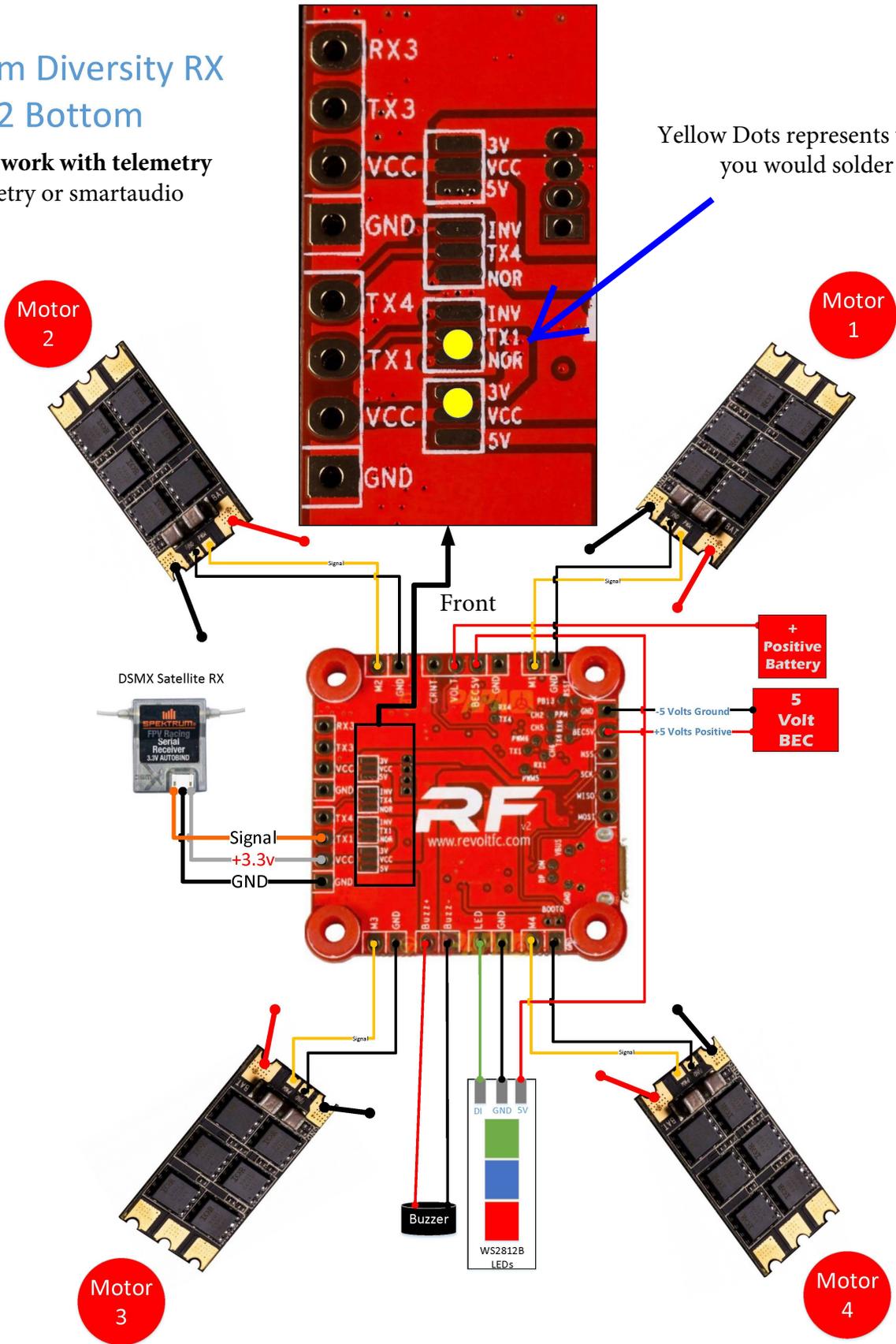


# Revolt V2 Bottom View

## Spektrum Diversity RX - V2 Bottom

Dshot won't work with telemetry  
No Telemetry or smartaudio

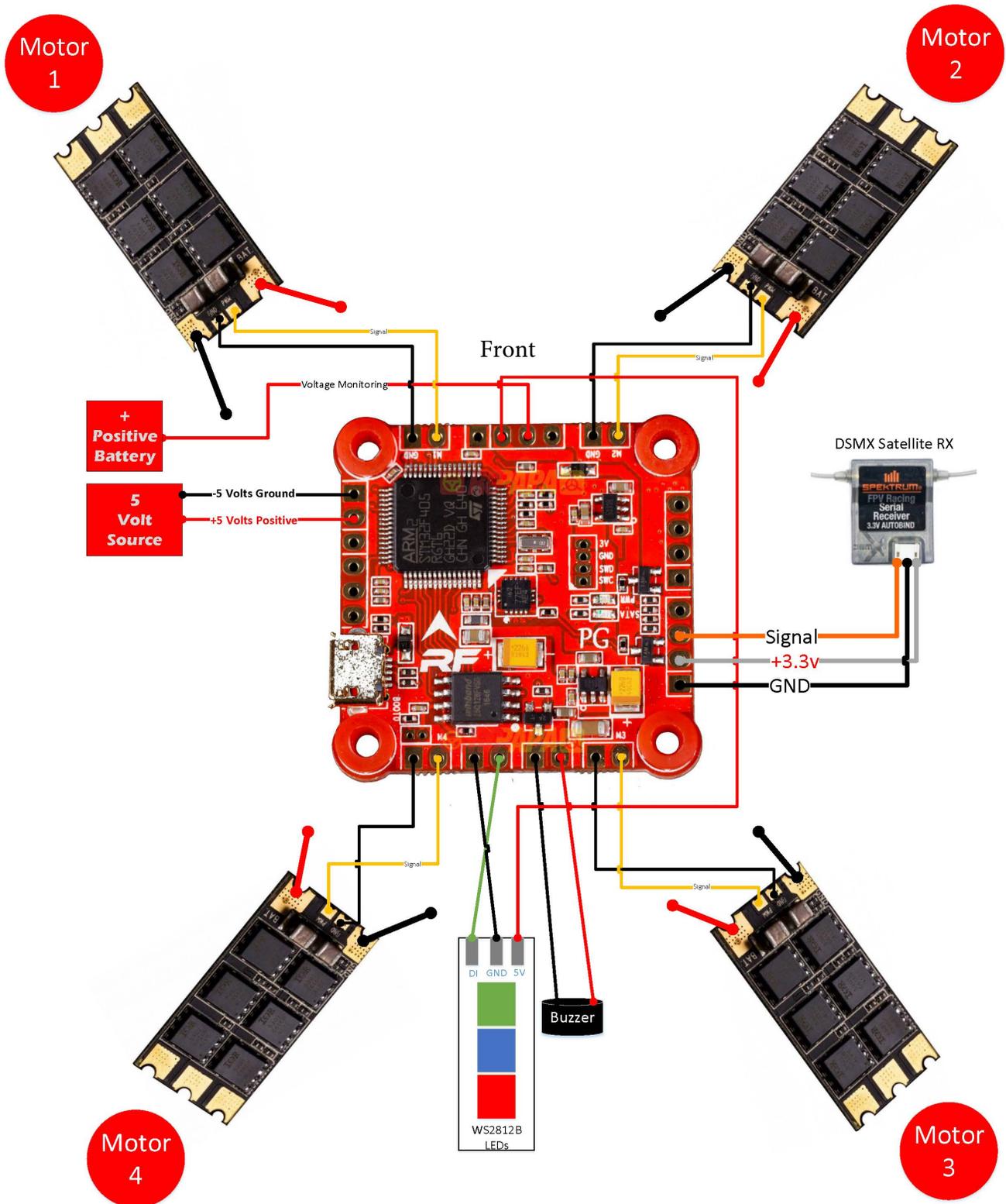
Yellow Dots represents where you would solder



Revolt V2 Bottom View

# Spektrum Diversity RX - V2 Top

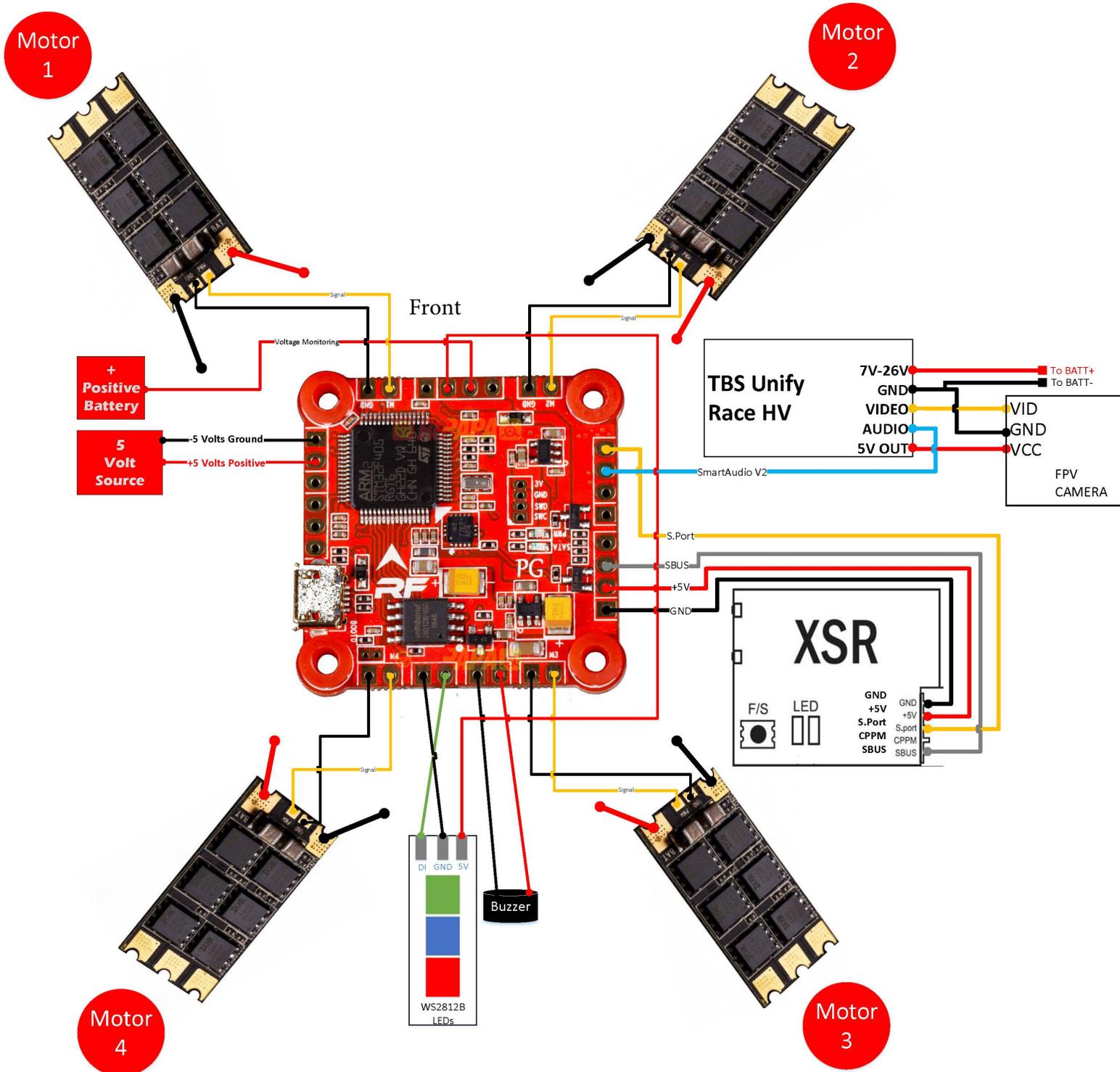
No telemetry  
No Smartaudio





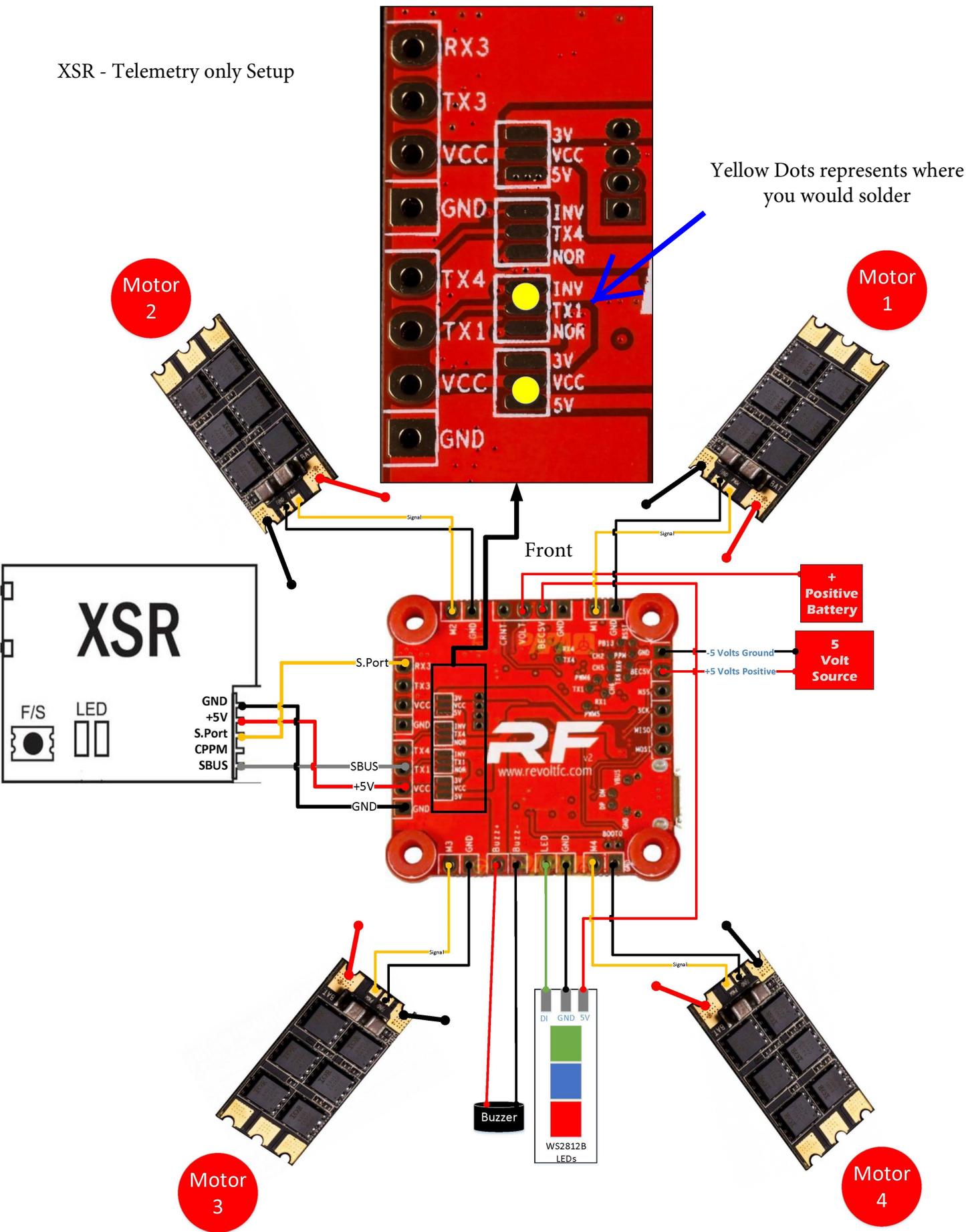
# XSR & SmartAudio - V2 Top

Dshot won't work with telemetry



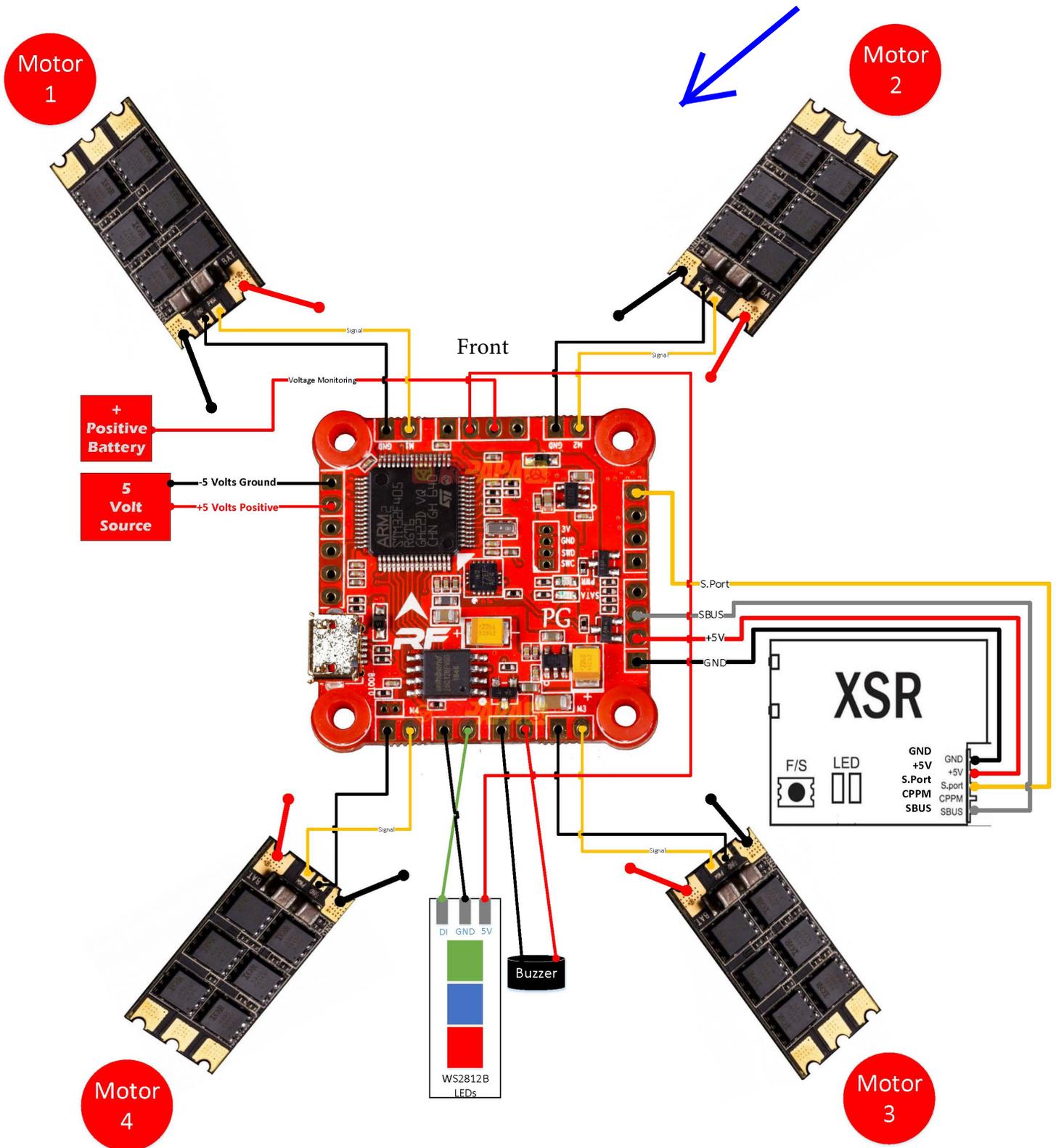
# XSR - Telemetry only Setup

Yellow Dots represents where you would solder



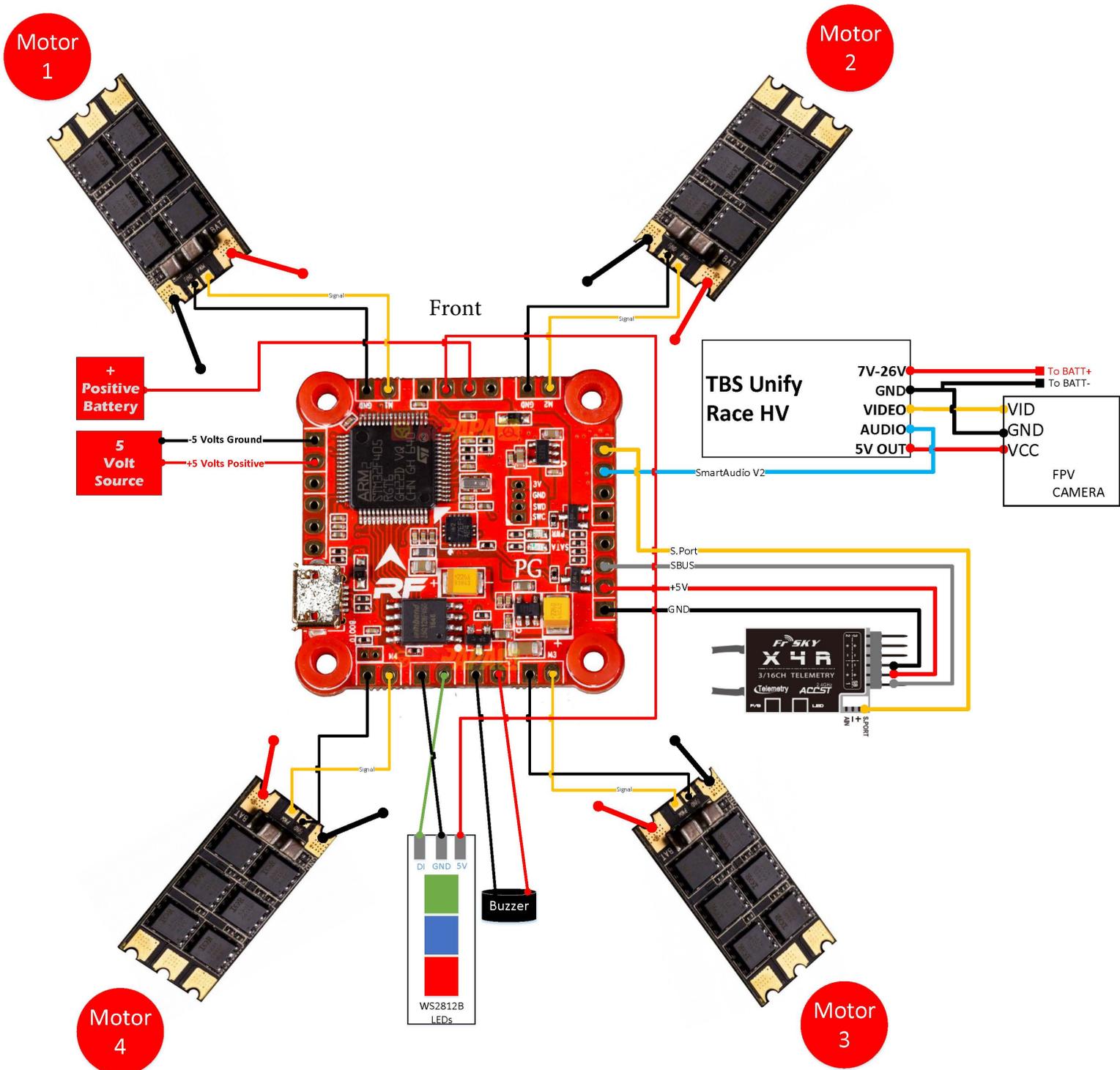
# XSR - V2 Top

XSR - Telemetry only Setup



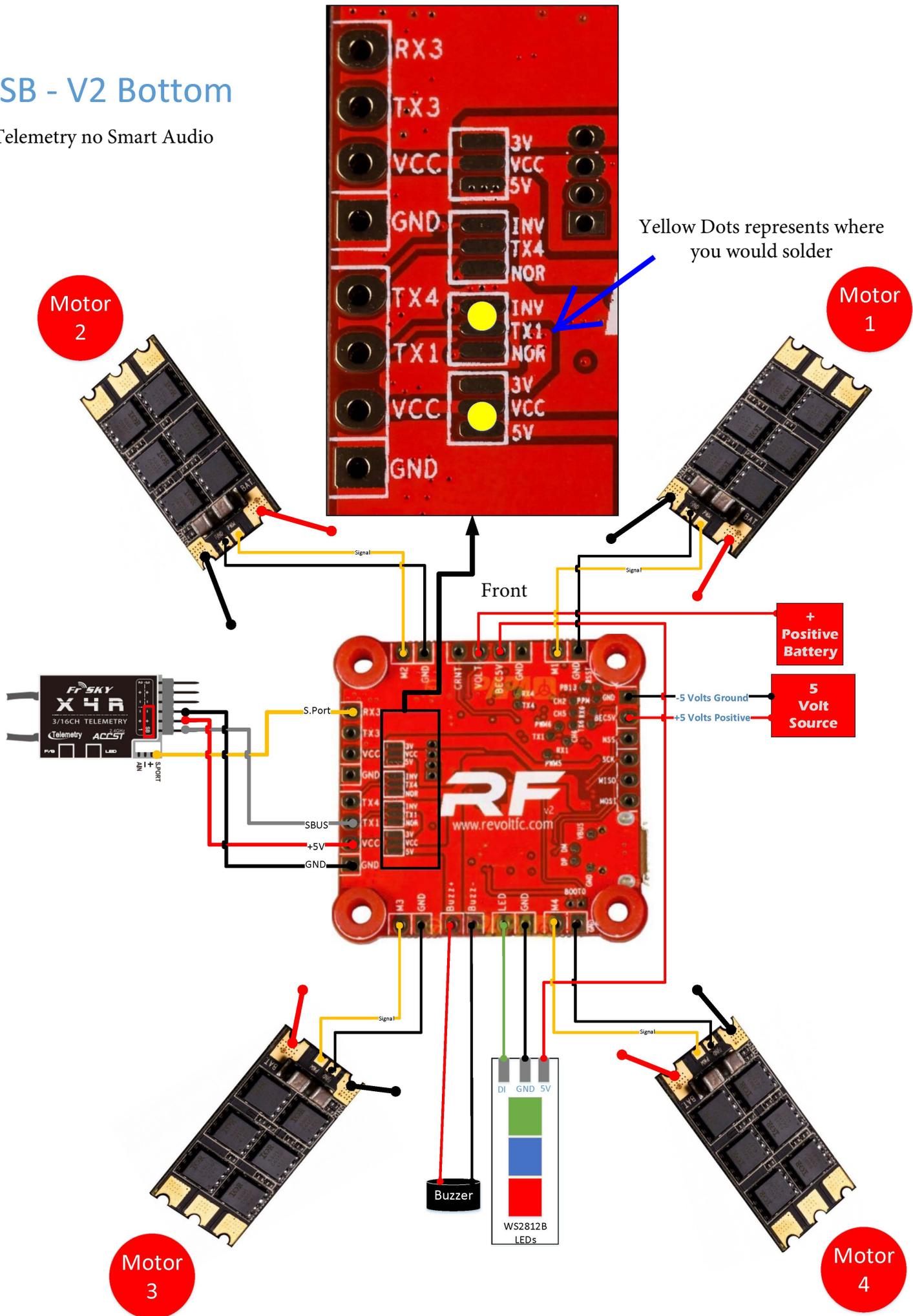


# X4R-SB & SmartAudio - V2 Top



# X4R-SB - V2 Bottom

with Telemetry no Smart Audio



Yellow Dots represents where you would solder

Motor 2

Motor 1

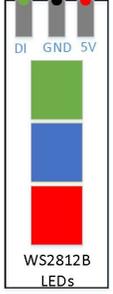
Front

+ Positive Battery

5 Volt Source

Motor 3

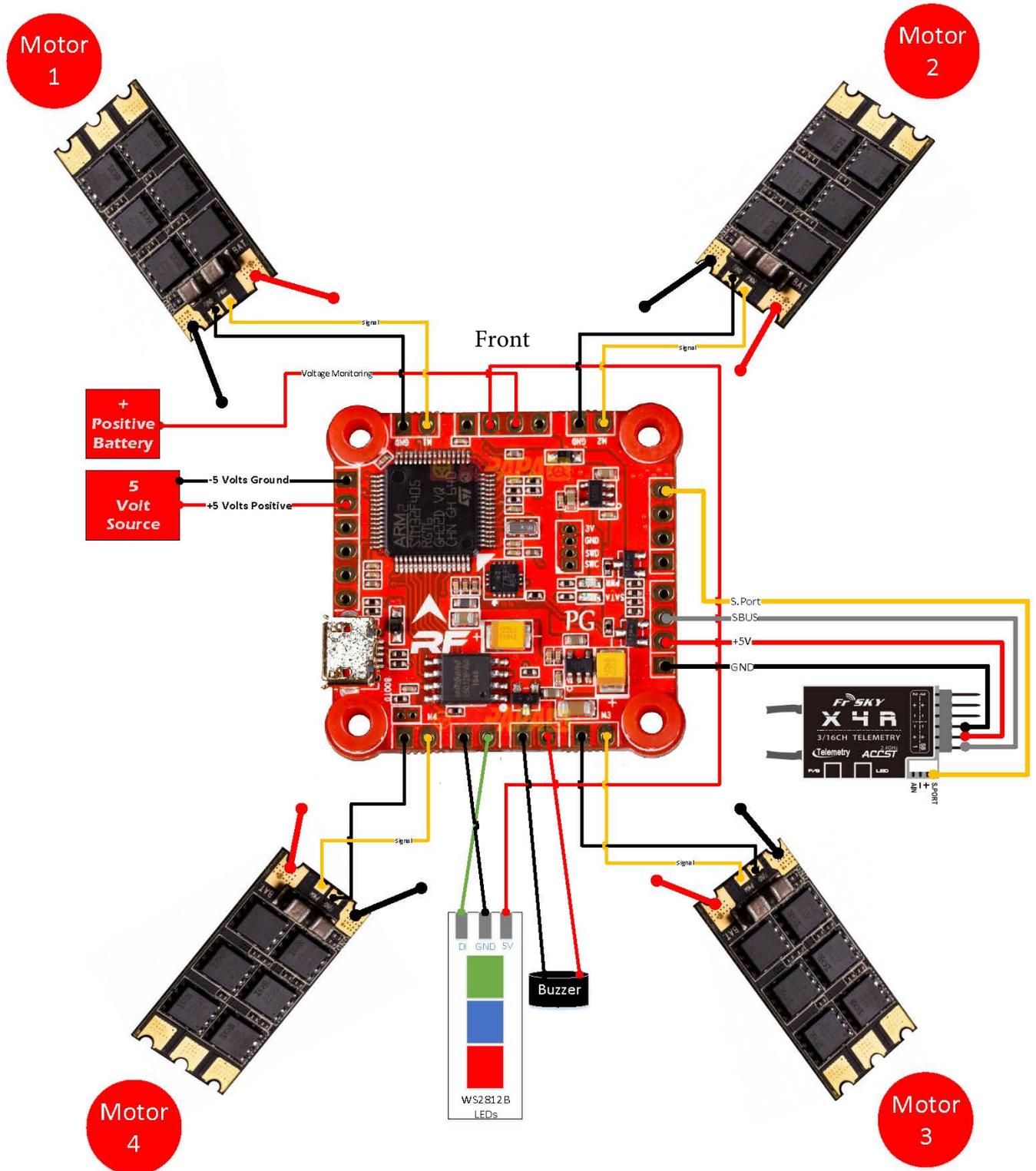
Motor 4



Buzzer

# X4R-SB - V2 Top

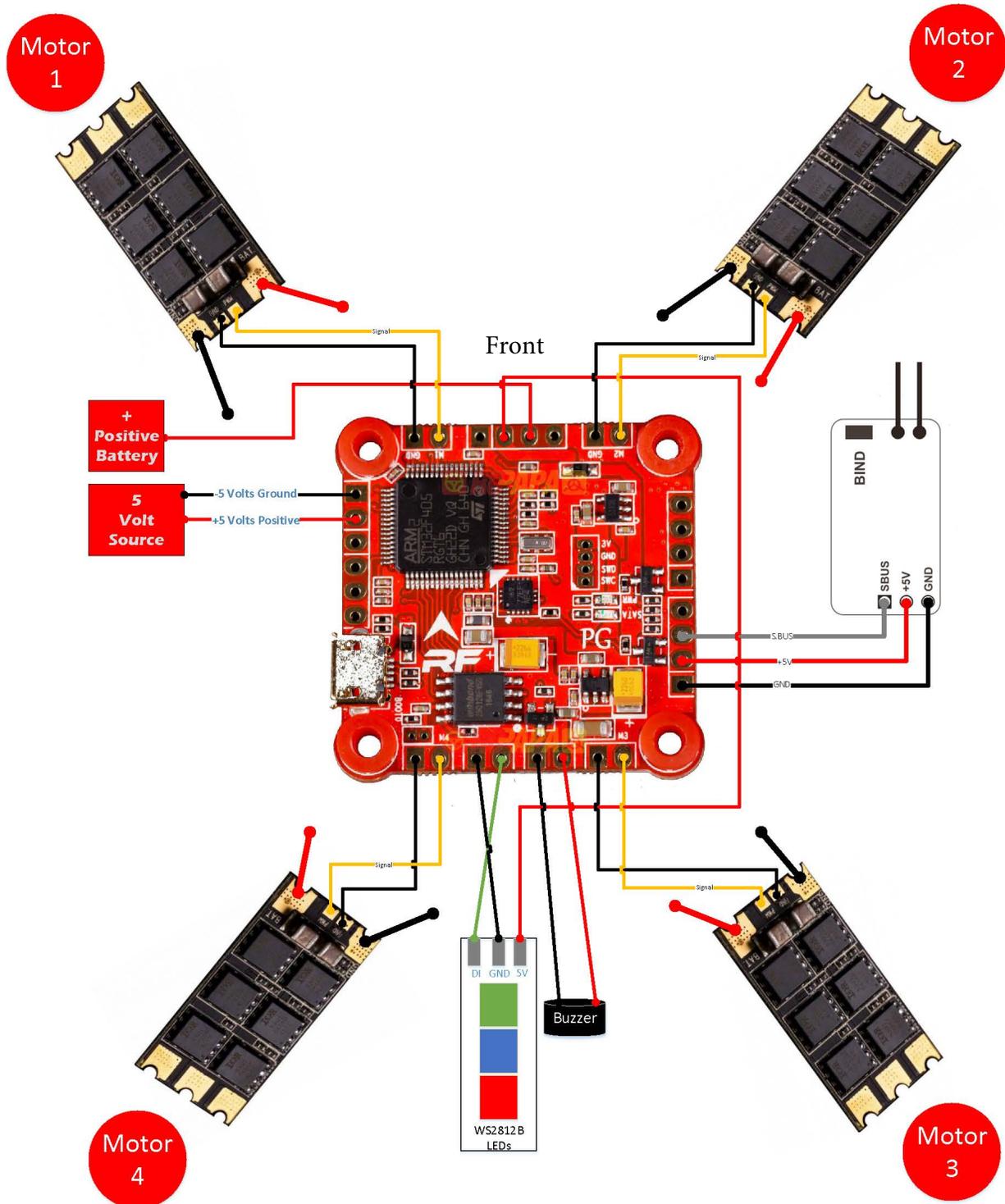
With Telemetry and No SmartAudio





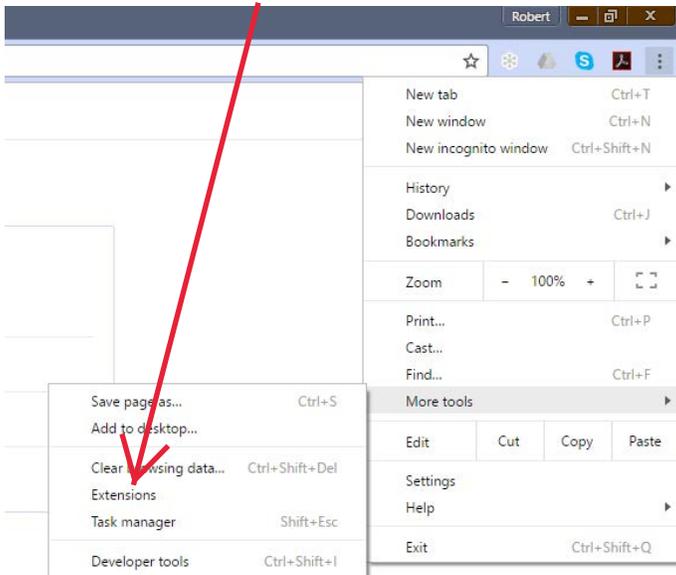
# XM/XM+ - V2 Top

No Telemetry or SmartAudio

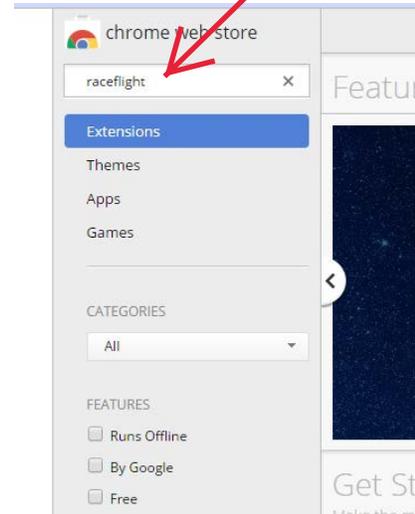


# Flashing from BBxxx(bb427) to RaceFlight One

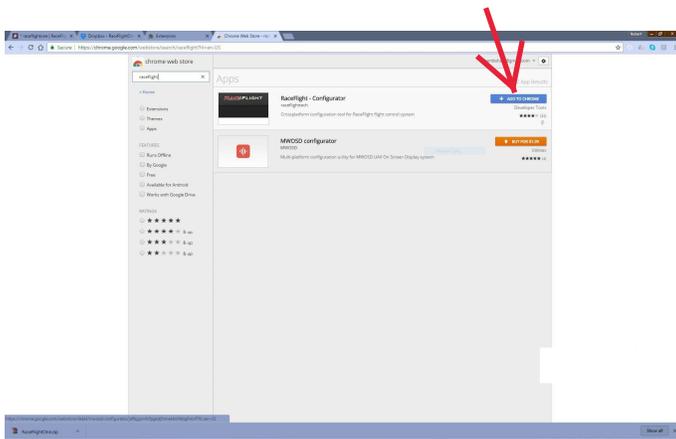
Go to Chrome Extensions



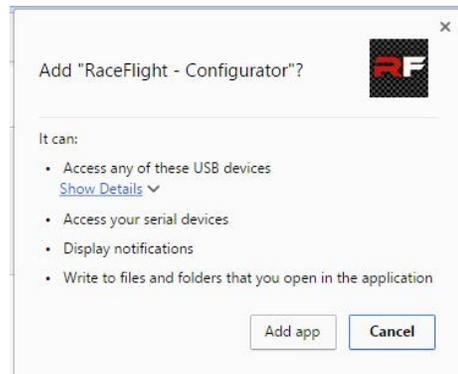
Search for raceflight



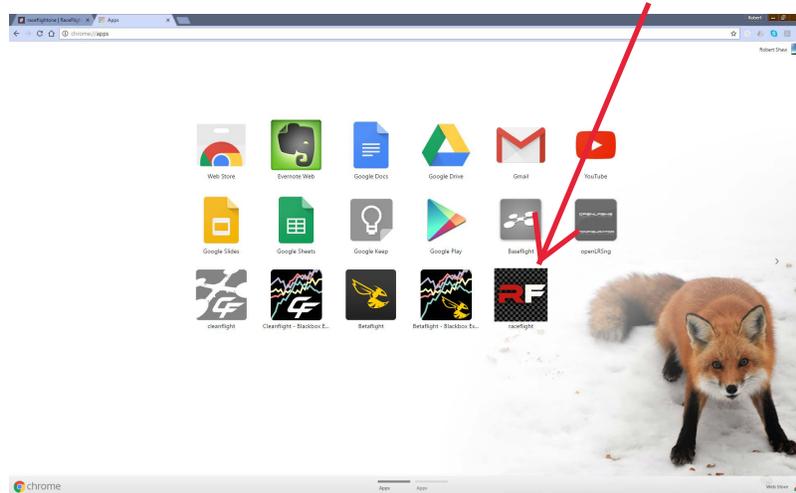
Click "add to chrome"



Click "Add App"



Now that the old Raceflight Configurator has been installed go ahead and launch Raceflight



# Downloading Files

Click on this link to download everything you need

<http://www.raceflight.net/rf1beta/>



**RaceFlight One RC7 Build 0.214.062**

[RaceFlight Revolt RF1 RC7 \(Build 0.214.062\)](#)

[RaceFlight Revolt RF1 RC1 \(Build 0.195.058\)](#)

[RaceFlight One Install Guide by Destro](#)

[Mac Client](#)

[Windows Client](#)

[Windows 64bit Client](#)

[Linux 64bit Client](#)

[Linux 32bit Client](#)

[RF1 Taranis Information Page](#)

Download the firmware and the Configurator for your OS

(Windows Client is 32bit)

To find out if your computer is running a 32-bit or 64-bit version of Windows in Windows 7 or Windows Vista, do the following:

Open System by clicking the Start button, right-clicking Computer, and then clicking Properties.

Under System, you can view the system type.

Windows 10

To do so, open the Settings app from your Start menu, select System, and select About. Look to the right of "System type." If you see "32-bit operating system or 64-bit operating system"

## To Launch RF1 Configurator in Linux

**On ubuntu do the following. For Fedora change plugdev to dialout**

**add a file /etc/udev/rules.d/46-revolt-permissions.rules containing**

```
# raceflight revolt hid bb
SUBSYSTEM=="usb", ATTRS{idVendor}=="0483", ATTRS{idProduct}=="5741", MODE="0666", GROUP="plugdev"
KERNEL=="hidraw*", SUBSYSTEM=="hidraw", ATTRS{idVendor}=="0483", ATTRS{idProduct}=="5741", MODE="0664", GROUP="plugdev"

# raceflight revolt hid rf1
SUBSYSTEM=="usb", ATTRS{idVendor}=="0483", ATTRS{idProduct}=="5742", MODE="0666", GROUP="plugdev"
KERNEL=="hidraw*", SUBSYSTEM=="hidraw", ATTRS{idVendor}=="0483", ATTRS{idProduct}=="5742", MODE="0664", GROUP="plugdev"

# DFU (Internal bootloader for STM32 MCUs)
SUBSYSTEM=="usb", ATTRS{idVendor}=="0483", ATTRS{idProduct}=="df11", MODE="0664", GROUP="plugdev"
```

Then:

```
sudo udevadm control --reload
```

```
sudo adduser yourusername plugdev
```

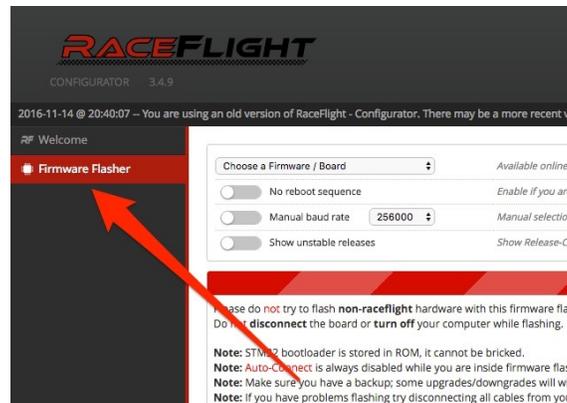
# RACEFLIGHT ONE

While shorting the boot pins, plug in the Revolt. Once plugged, in the tweezers can be removed. You should see a solid green light.

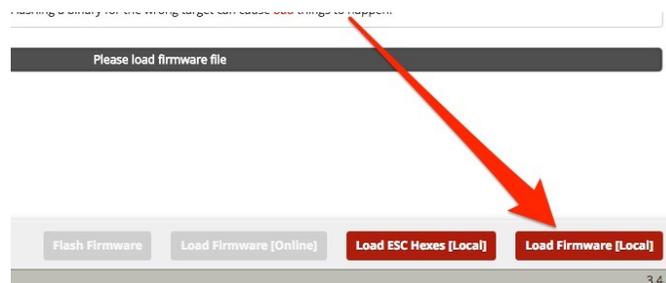


Next go to RFC and check the top right to make sure it says the board is in DFU mode. **If it doesn't say DFU. Download the ImpulseRC Driver Fixer** ← [Link](#)

Once you can confirm this, click the Firmware Flasher tab on the left.



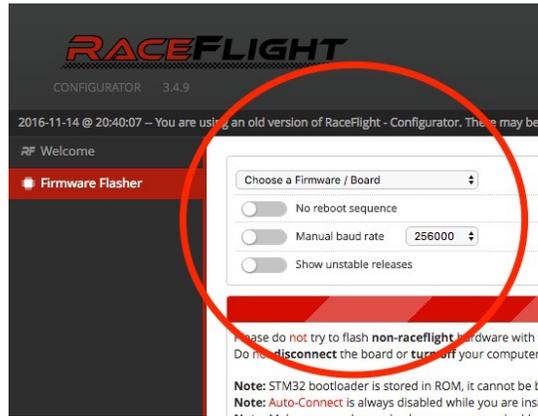
Click the Load Firmware [Local] on the bottom right.



Navigate to the Bin file. (once you downloaded and extracted the files from the Pinned Section)

Make sure all three check marks are DESELECTED. (No Reboot Sequence, Manual Baud Rate, Show Stable Releases)

Click Flash Firmware button on bottom which is now red.



It will erase and then flash your Revolt. Once finished it will say Programming: SUCCESSFUL.

Unplug your Revolt then plug back in.

**Congratulations! RaceFlight One is now installed on your Revolt!**

## Launching Raceflight One Configurator

Once you have the files you downloaded unzipped, go to the extracted folder.

(Make a desktop shortcut if you want to)

Name	Date modified	Type	Size
locales	2/18/2017 11:19 PM	File folder	
credits.html	2/18/2017 11:19 PM	Chrome HTML Do...	1,793 KB
d3dcompiler_47.dll	2/18/2017 11:19 PM	Application extens...	4,367 KB
ffmpeg.dll	2/18/2017 11:19 PM	Application extens...	982 KB
icudtl.dat	2/18/2017 11:19 PM	DAT File	9,892 KB
libEGL.dll	2/18/2017 11:19 PM	Application extens...	93 KB
libGLSv2.dll	2/18/2017 11:19 PM	Application extens...	2,425 KB
natives_blob.bin	2/18/2017 11:19 PM	BIN_File	332 KB
node.dll	2/18/2017 11:19 PM	Application extens...	5,716 KB
nw.dll	2/18/2017 11:19 PM	Application extens...	87,986 KB
nw_100_percent.pak	2/18/2017 11:19 PM	PAK File	488 KB
nw_200_percent.pak	2/18/2017 11:19 PM	PAK File	745 KB
nw_elf.dll	2/18/2017 11:19 PM	Application extens...	526 KB
resources.pak	2/18/2017 11:19 PM	PAK File	7,109 KB
rf_configurator.exe	2/18/2017 11:19 PM	Application	64,890 KB
snapshot_blob.bin	2/18/2017 11:19 PM	BIN_File	813 KB

Launch rf\_configurator.exe

If RF1 FC is not being detected in new configurator  
Check zadig, if it doesn't show HidUsb as the driver for rf1 revolt in normal or rfb1 modes go to the device manager, right click on the revolt's entry, select update driver software, Browse my computer, let me pick from a list, and pick USB input device. Click next and then close on the final screen.

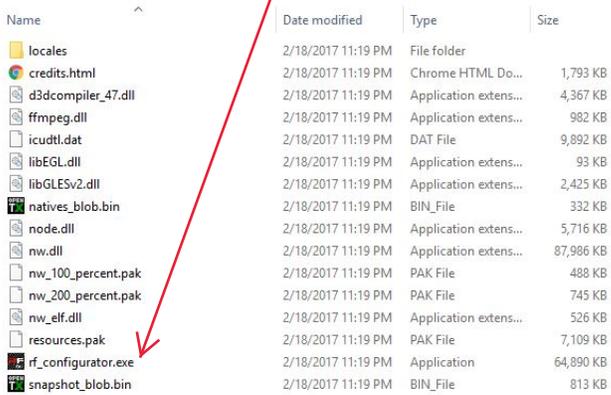
Click on this link to download Zadig

[Zadig Download](#)

# To Flash the latest firmware

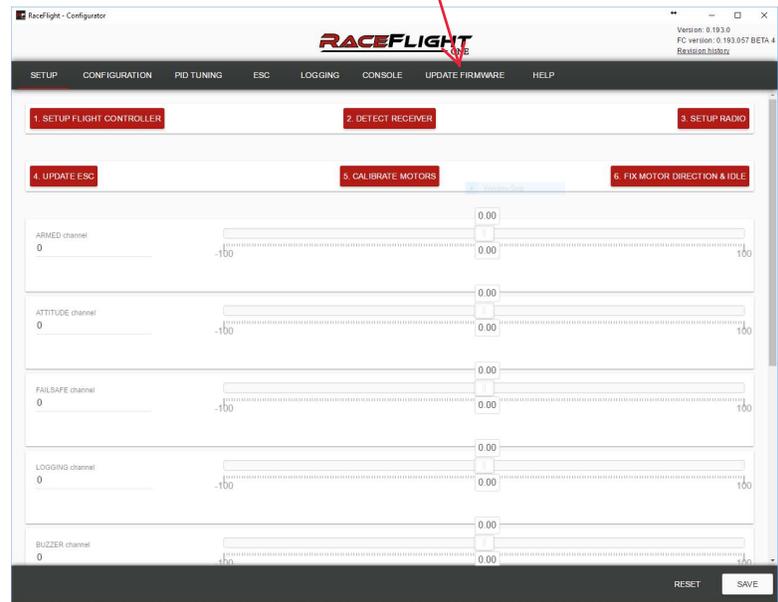
1. This applies to updating to newer versions of RF1 once you have RF1 Flashed ex. going from RF1 200 to 214
2. Download newest Raceflight Configurator
3. Download newest Firmware:
4. Open RaceFlightOne Configurator

## Launch rf\_configurator.exe

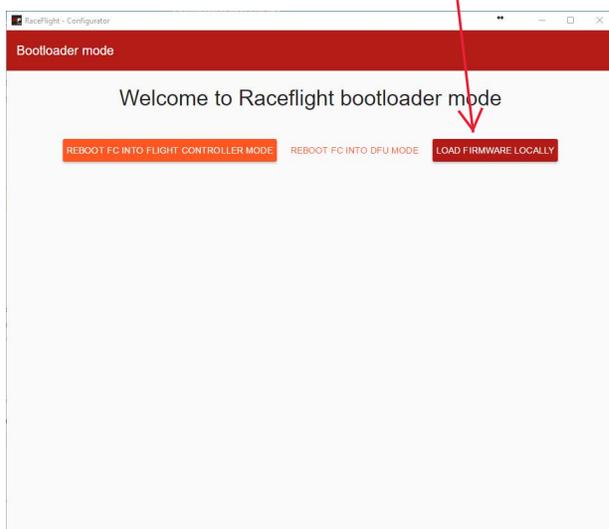


Name	Date modified	Type	Size
locales	2/18/2017 11:19 PM	File folder	
credits.html	2/18/2017 11:19 PM	Chrome HTML Do...	1,793 KB
d3dcompiler_47.dll	2/18/2017 11:19 PM	Application extens...	4,367 KB
ffmpeg.dll	2/18/2017 11:19 PM	Application extens...	982 KB
icudt.dat	2/18/2017 11:19 PM	DAT File	9,892 KB
libEGL.dll	2/18/2017 11:19 PM	Application extens...	93 KB
libGLESv2.dll	2/18/2017 11:19 PM	Application extens...	2,425 KB
natives_blob.bin	2/18/2017 11:19 PM	BIN_File	332 KB
node.dll	2/18/2017 11:19 PM	Application extens...	5,716 KB
nw.dll	2/18/2017 11:19 PM	Application extens...	87,986 KB
nw_100_percent.pak	2/18/2017 11:19 PM	PAK File	488 KB
nw_200_percent.pak	2/18/2017 11:19 PM	PAK File	745 KB
nw_elf.dll	2/18/2017 11:19 PM	Application extens...	526 KB
resources.pak	2/18/2017 11:19 PM	PAK File	7,109 KB
rf_configurator.exe	2/18/2017 11:19 PM	Application	64,890 KB
snapshot_blob.bin	2/18/2017 11:19 PM	BIN_File	813 KB

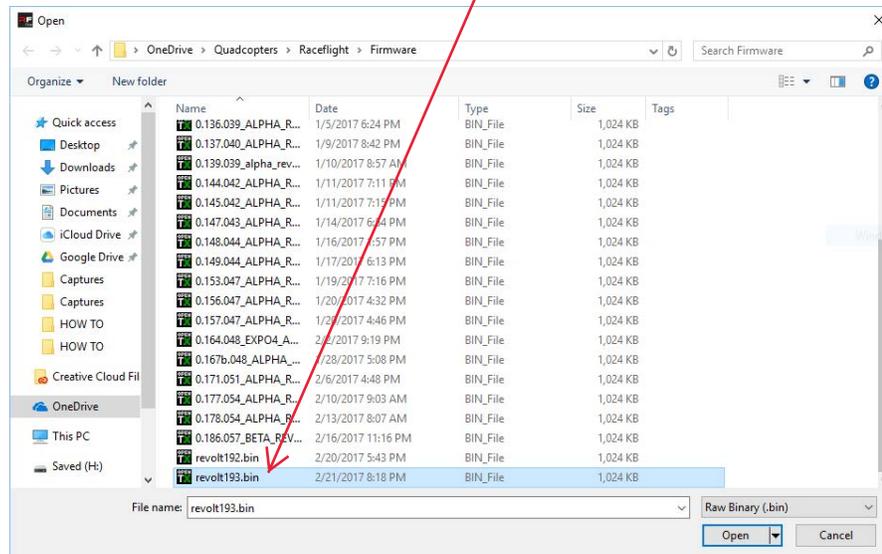
## Click on Update Firmware tab



## Click on Load Firmware Locally

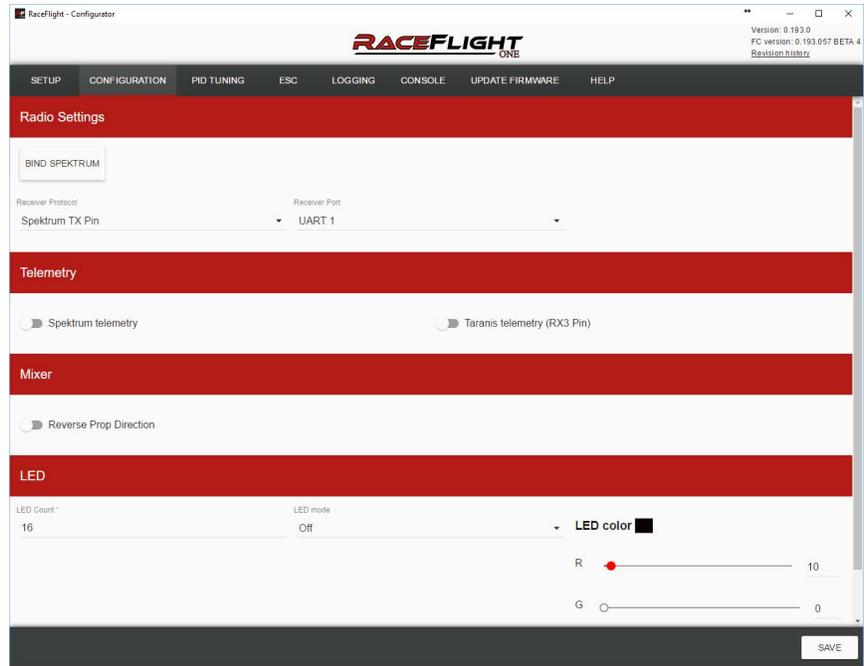


## Choose the Firmware

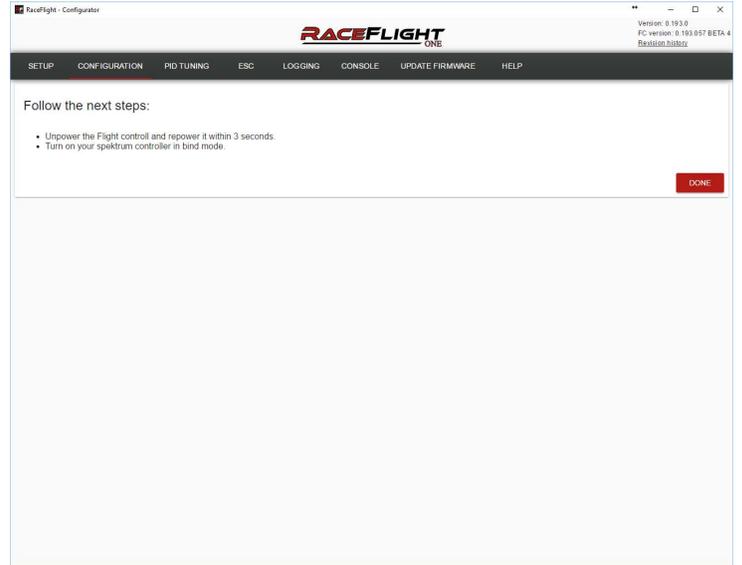
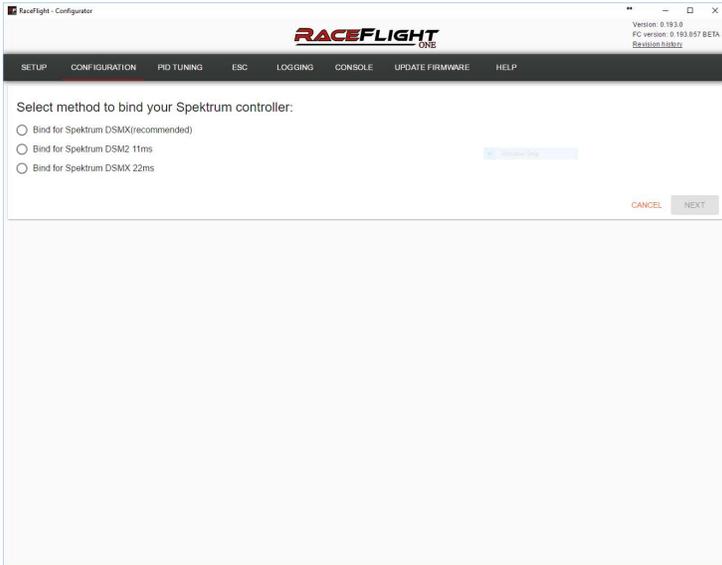


# Binding Spektrum Receivers

Click on the Bind Spektrum →



Follow the prompts until your receiver is binded



# STEP 1: Setup Flight Controller

Click on Setup Flight Controller

The screenshot shows the RaceFlight configurator interface. At the top, there is a navigation menu with options: SETUP, CONFIGURATION, PID TUNING, ESC, LOGGING, CONSOLE, UPDATE FIRMWARE, and HELP. The main content area displays six numbered steps: 1. SETUP FLIGHT CONTROLLER (highlighted in red), 2. DETECT RECEIVER, 3. SETUP RADIO, 4. UPDATE ESC, 5. CALIBRATE MOTORS, and 6. FIX MOTOR DIRECTION & IDLE. Below these steps, there are five horizontal sliders for channel calibration. Each slider has a numerical input field on the left (all set to 0) and a numerical display on the right (all set to 0.00). The sliders are labeled: ARMED channel, ATTITUDE channel, FAILSAFE channel, LOGGING channel, and BUZZER channel. At the bottom right, there are 'RESET' and 'SAVE' buttons.

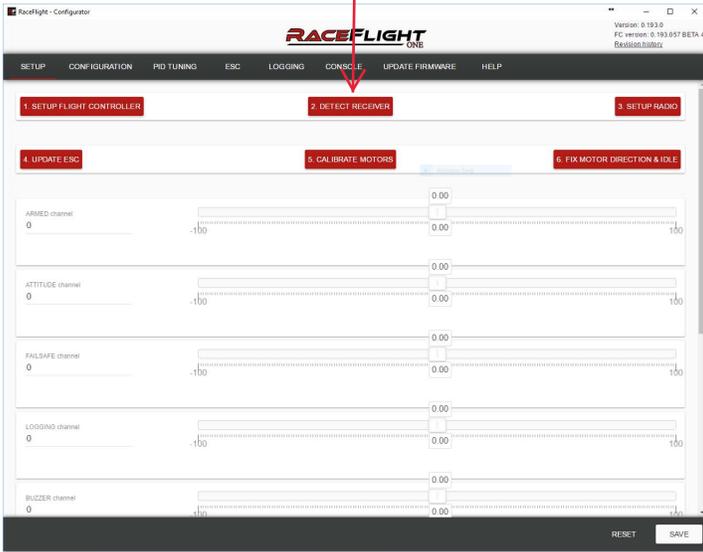
## Follow the steps and orientation of the Quadcopter

The screenshot shows the 'Place your quad flat' step in the RaceFlight configurator. The interface includes the same navigation menu as the previous screenshot. The main content area displays the text 'Place your quad flat' and 'Flight Controller Setup Step 1'. To the right, there is an image of a quadcopter drone lying flat on its side. At the bottom right, there are 'CANCEL' and 'NEXT' buttons.

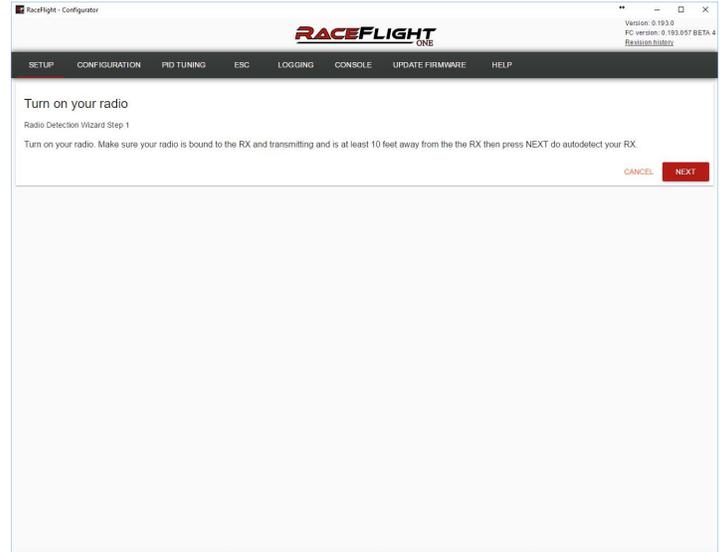
The screenshot shows the 'Place your quad on its nose' step in the RaceFlight configurator. The interface includes the same navigation menu. The main content area displays the text 'Place your quad on its nose' and 'Flight Controller Setup Step 2'. To the right, there is an image of a quadcopter drone lying on its nose. At the bottom right, there are 'CANCEL', 'BACK', and 'NEXT' buttons.

# STEP 2: Detect Receiver

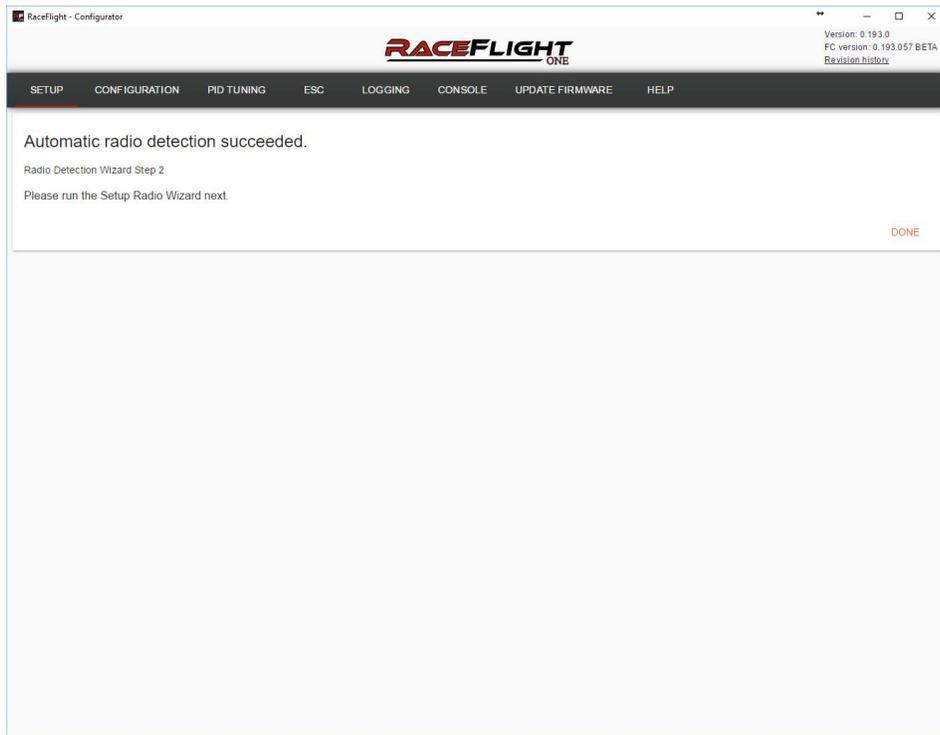
Click on Detect Receiver



Turn your Radio on



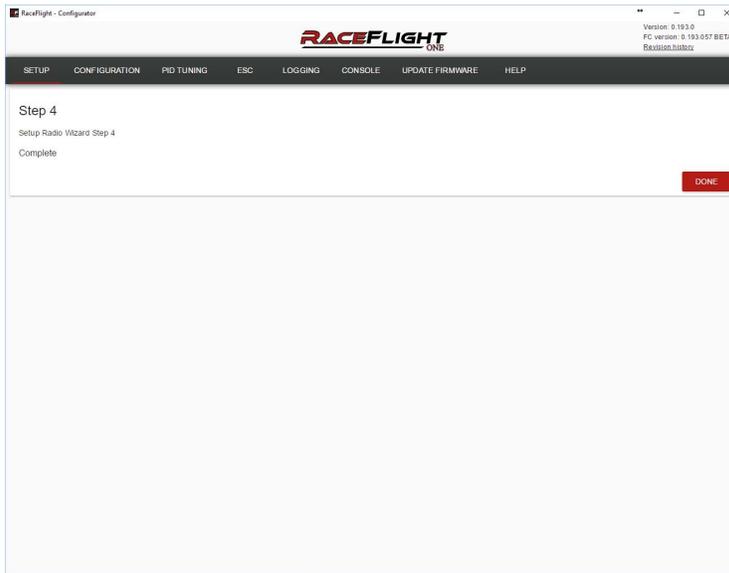
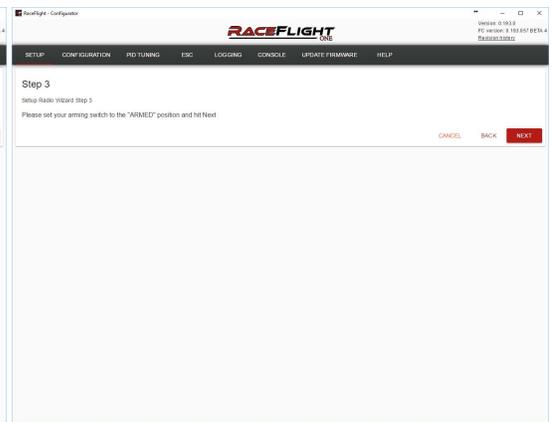
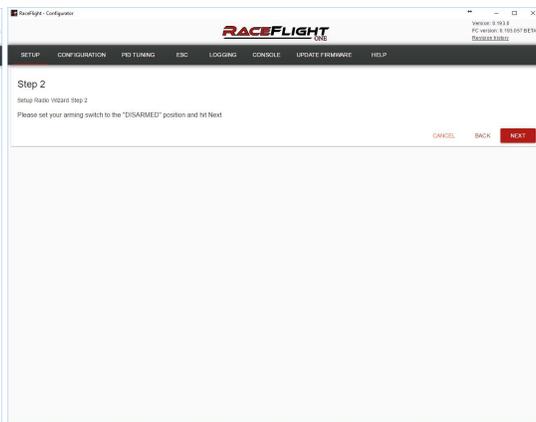
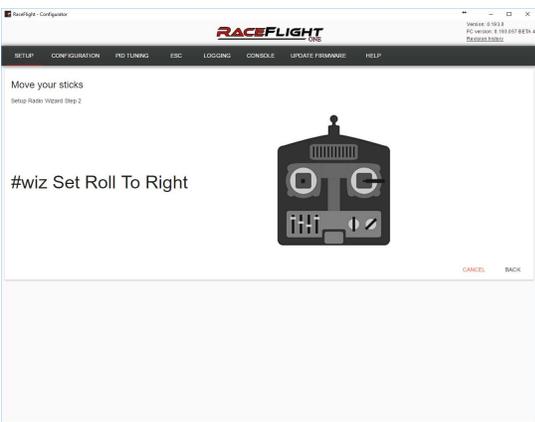
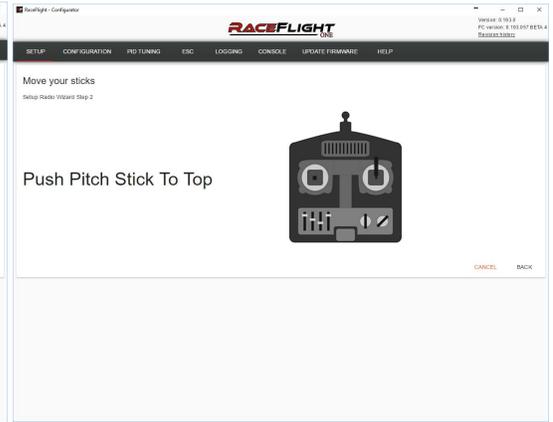
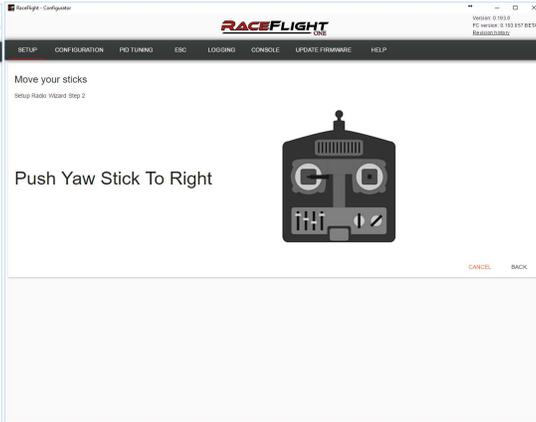
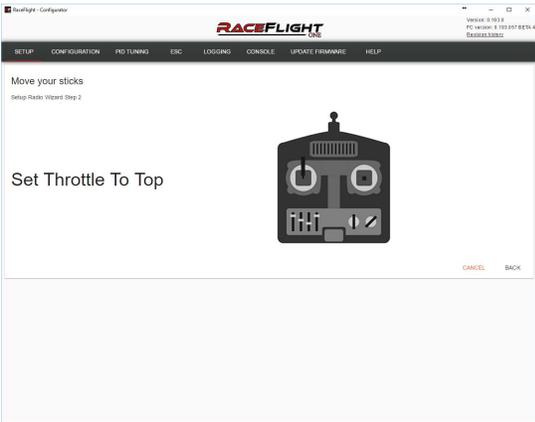
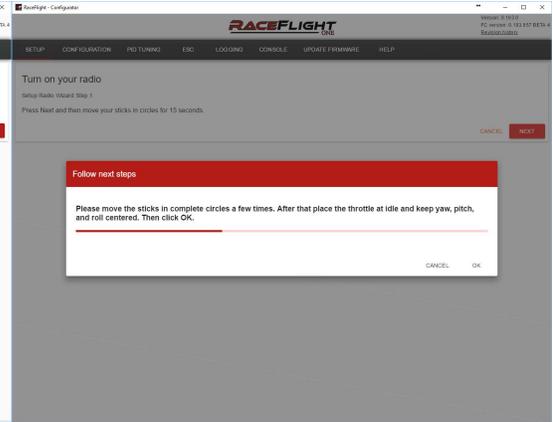
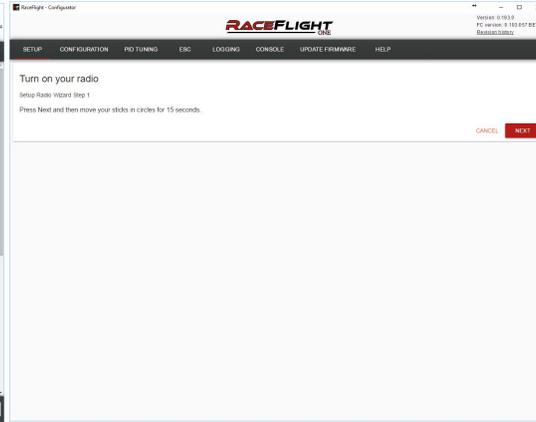
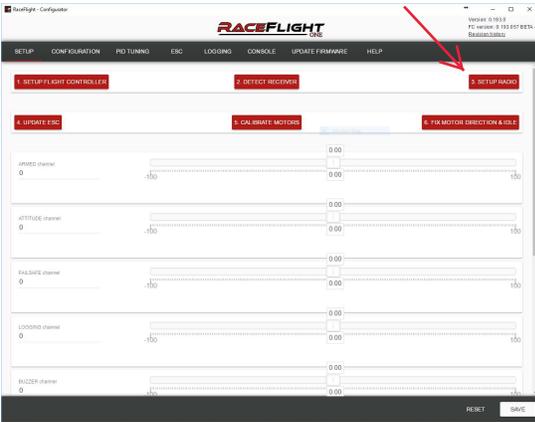
Successful Detection



# STEP 3: Setup Radio

Click on Setup Radio

Follow the prompts until your done



# Once Flashed follow each of the following steps

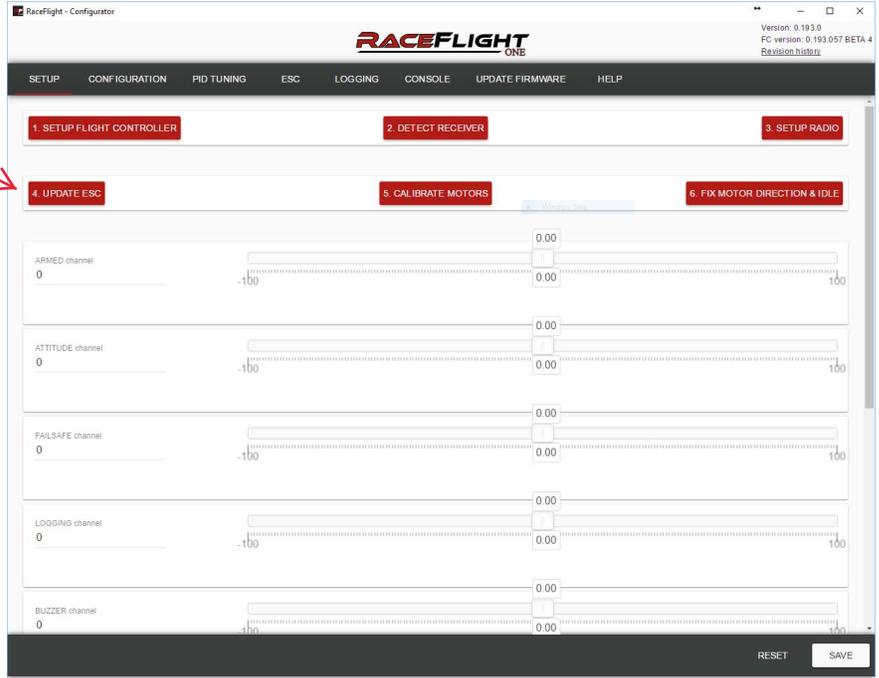


**REMOVE PROPS** Step 4. Update ESC **REMOVE PROPS**

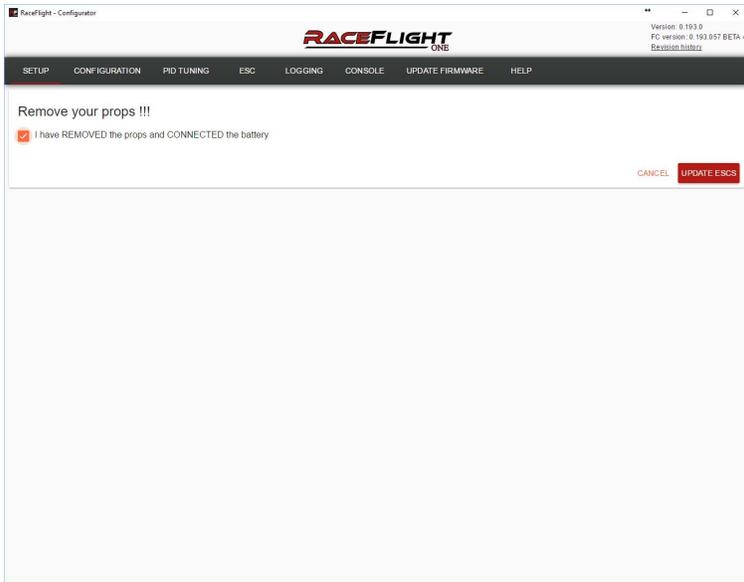
**DANGER**

For this step you will need your battery handy

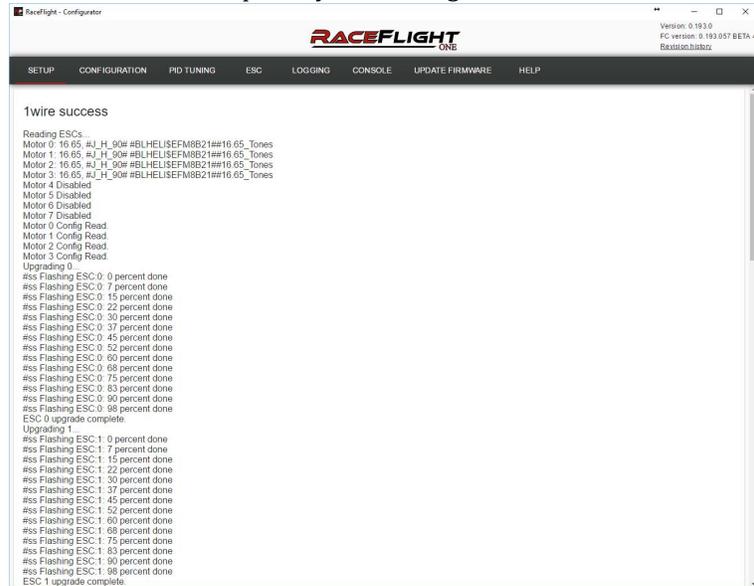
Click on Update ESC



Plug your battery in at this Point and Click Update ESC



Once Complete , you should get 1wire success

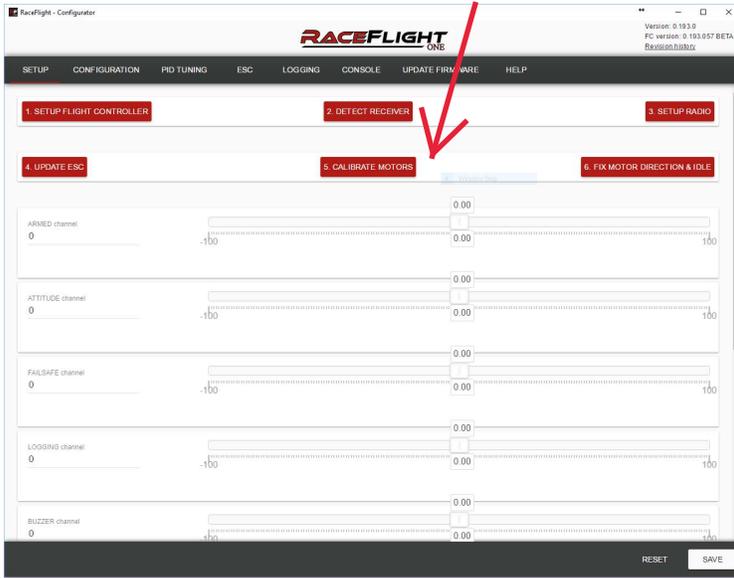




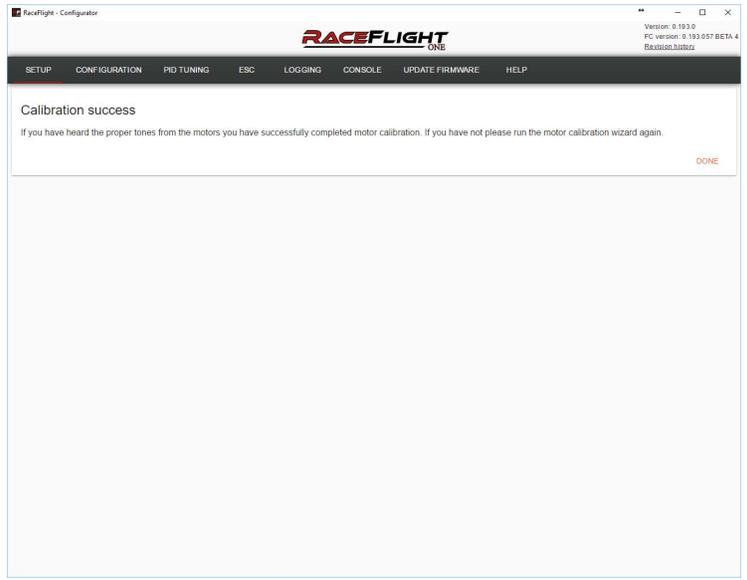
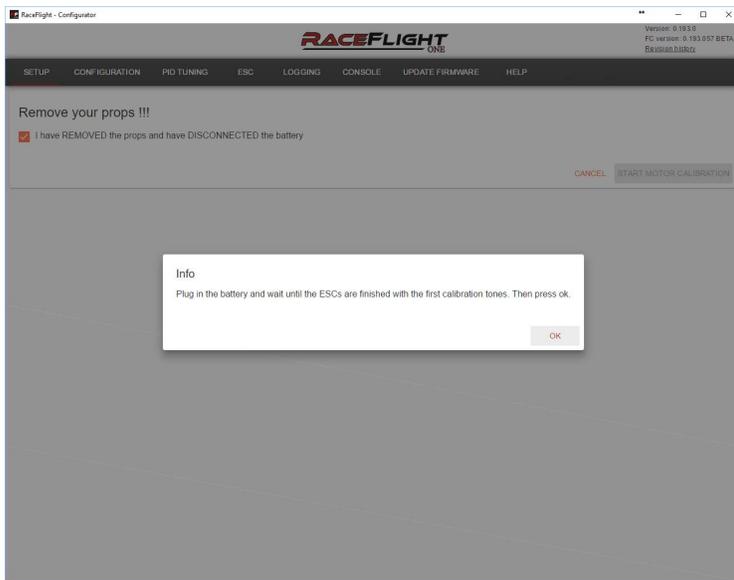
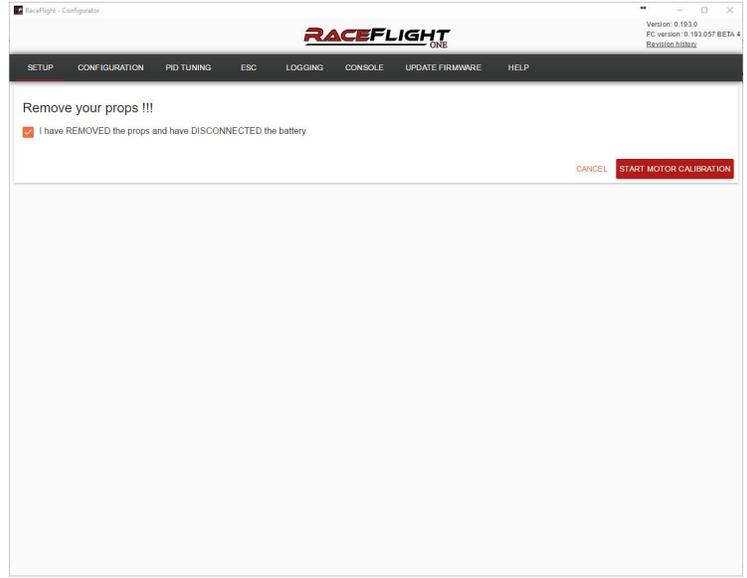
# REMOVE PROPS STEP 5: ESC Calibration REMOVE PROPS

For this step you will need a battery. Plug in the battery when the prompt tells you too

## 1. Click on Calibrate Motors



## 2. Follow the prompts until ESC Calibration is complete



If esc calibration fails: Change in Gui Configuration TAB or Go to console and type the following "esc\_frequency = 8000" without quotes. Once they Calibrate change back to "esc\_frequency = 32000"

### Motor Test Commands

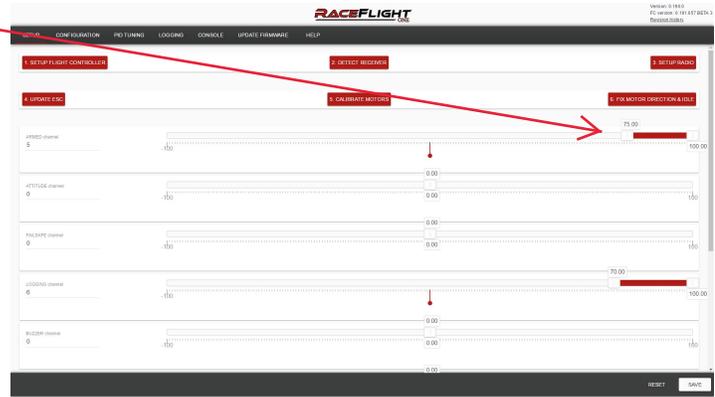
- idle 0
- idle 1
- idle 2
- idle 3

idlestop = Stops all motors

# Hover Test

Now that you have flashed RF1 and gone through all the steps, it's now time to Hover Test

1. Make sure that your Armed is setup. It gets setup during Setup Radio
2. The 1st time you arm. It will be a double arm, after that it's a single arm
3. Arm the Quad in a safe area. Hover(30sec hover) then land. Feel the motors and make sure they are not hot.
4. If they are not hot you are good to go.
5. If motors are hot, then you will need to change some settings. Seek help in the raceflightone channel in slack



Added Double-Double arm method and made it default is: set arm\_method=1  
Double-Single arm method is: set arm\_method=0

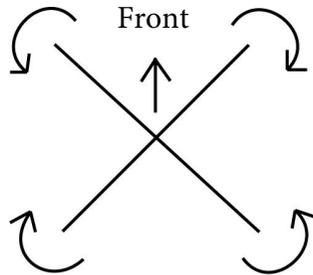
**Now go FLY!!!**

# Telemetry and LEDS

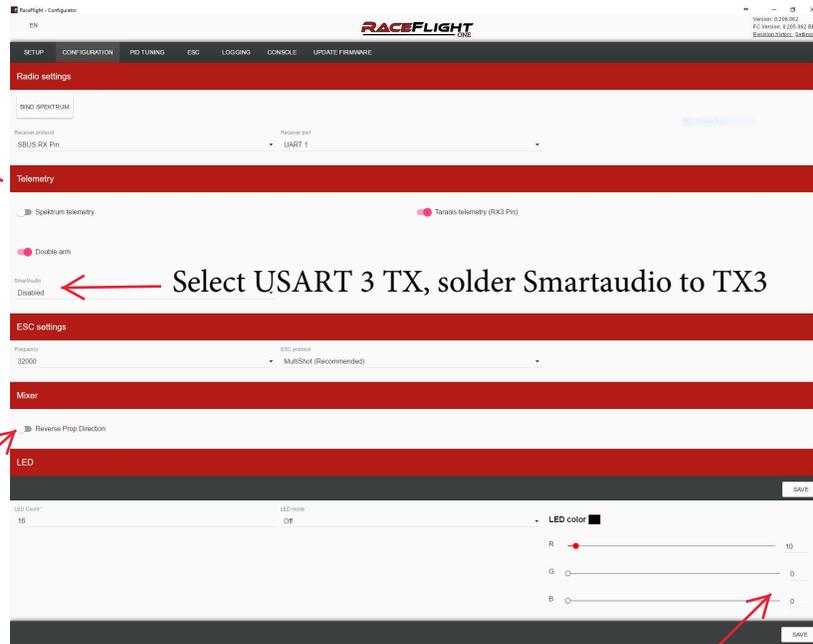
DSHOT won't work with Telemetry currently.

Taranis Telemetry needs to be soldered to RX3

Spektrum slider works fine



This option makes the props spin outwards



Click on this link for color codes

[http://www.rapidtables.com/web/color/RGB\\_Color.htm](http://www.rapidtables.com/web/color/RGB_Color.htm)

**Change Motor output. This is for when you flip your FC upside down.** You can change the order by changing the mout number to the output number For those remapping settings to work... The escs need to be soldered to nearest corner

Video by @adriel showing how to change motor output

[https://www.youtube.com/watch?v=W2l2SoLa\\_Jw&feature=youtu.be](https://www.youtube.com/watch?v=W2l2SoLa_Jw&feature=youtu.be)

Default is

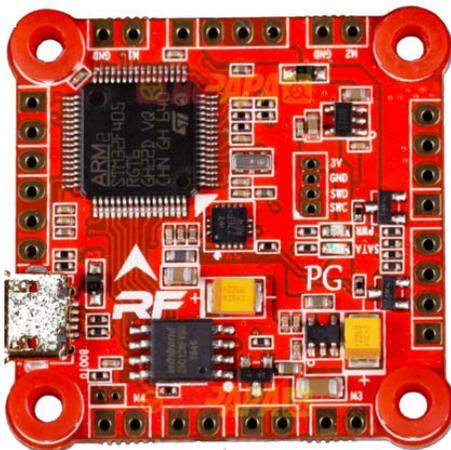
set mout1=0  
set mout2=1  
set mout3=2  
set mout4=3

For upside down use

set mout1=1  
set mout2=0  
set mout3=3  
set mout4=2

Motor 1

Motor 2

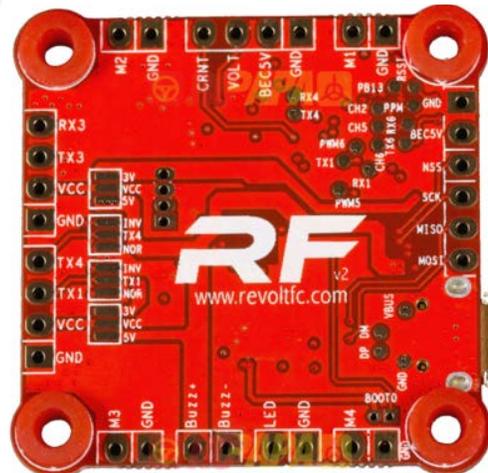


Motor 4

Motor 3

Motor 1

Motor 2



Motor 4

Motor 3



## Installing Taranis OpenTX 2.2 and Adding RF.LUA

Before Proceeding make a backup of the models and settings  
Under Read/Write choose Backup Radio to a file

Lua download page and Video how to update by @rs2k <https://raceflight.net/taranis/>

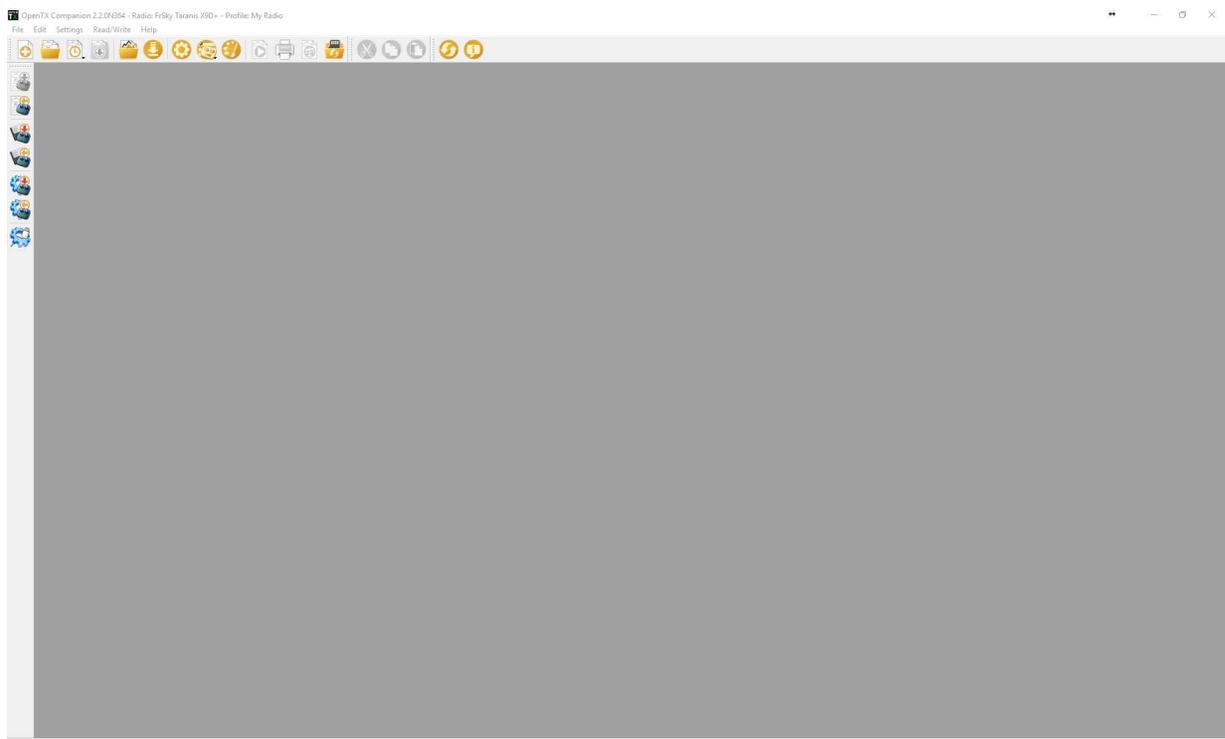
### Files Needed

Click Here to download

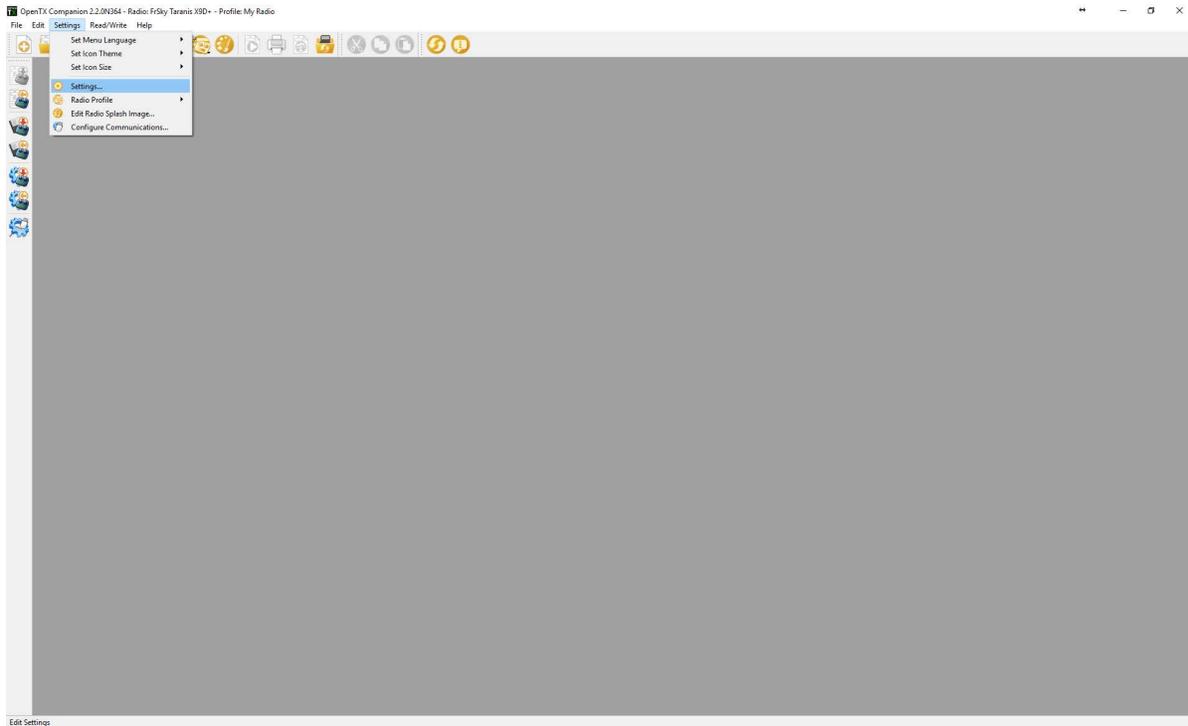
Download OpenTX from <http://downloads.open-tx.org/2.2/nightly/companion/windows/companion-windows-2.2.0N364.exe>

Download RF.LUA    Slack channel: Raceflightone: Pinned section

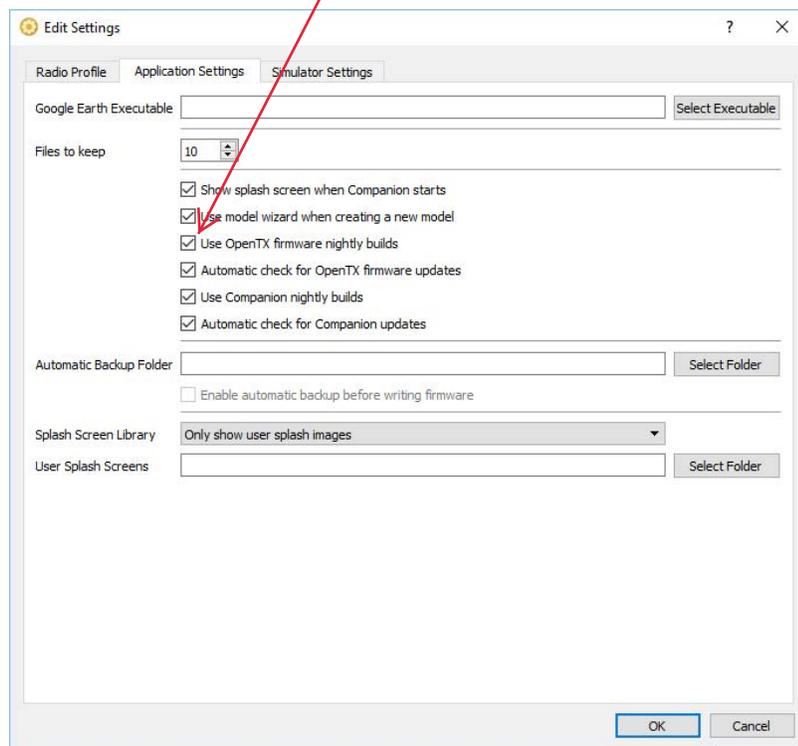
Once installed, launch Opentx 2.2



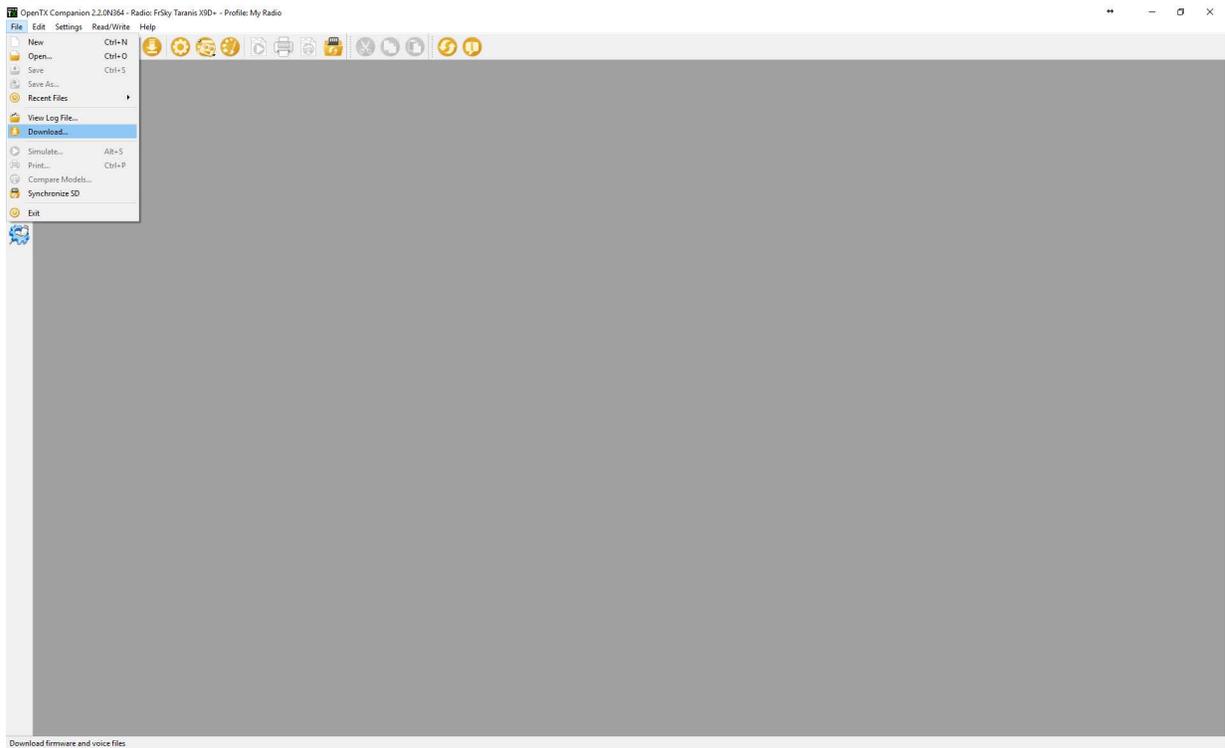
Click on Settings and Settings again



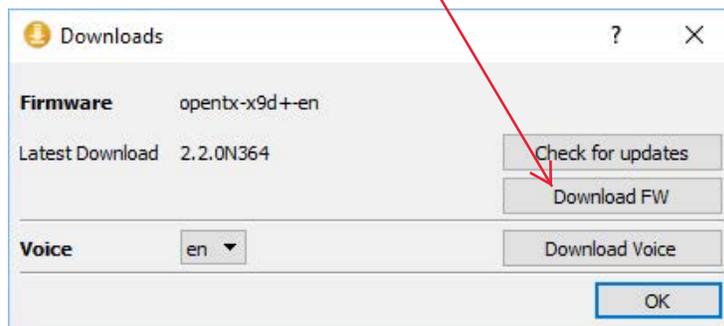
Check Mark the option "Use OpenTX firmware nightly builds"



# Click on File and Download



# Click Download FW

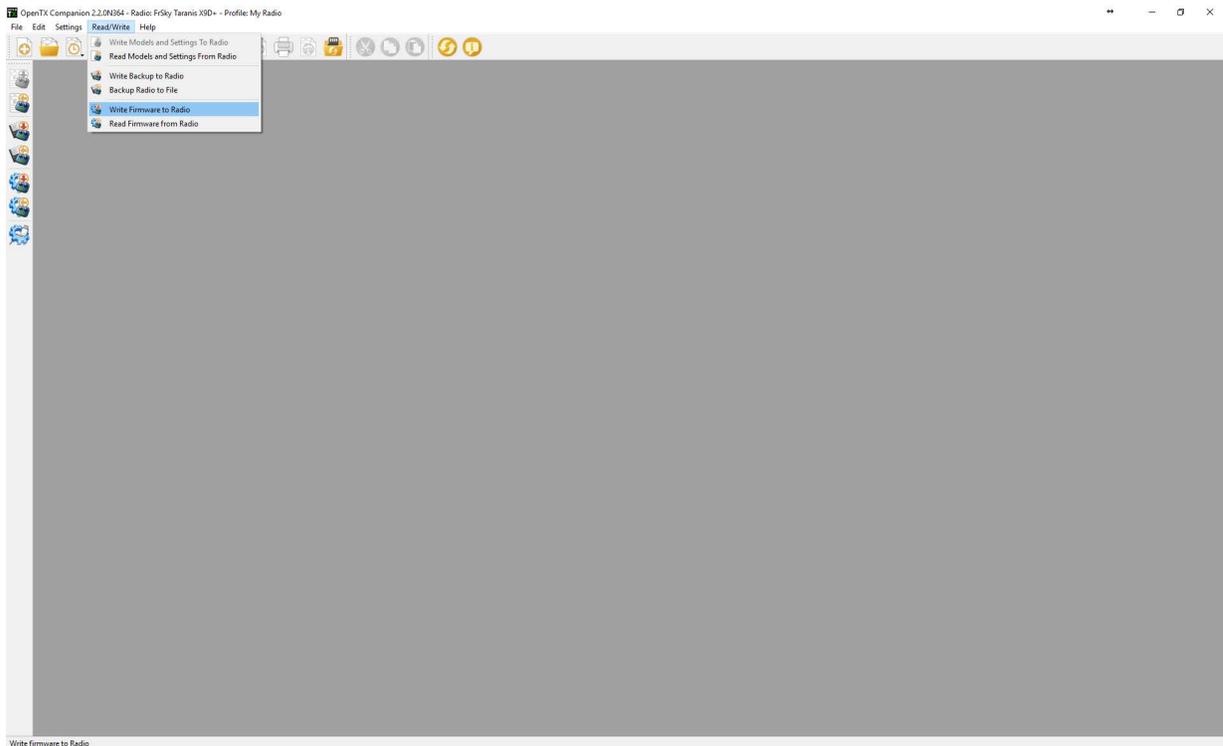


1. Enable the bootloader, by pressing the 2 trim buttons at the bottom towards the center holding them while powering on the Taranis. Let go once you see the bootloader. Then Plug in the USB cable and it should say USB Connected

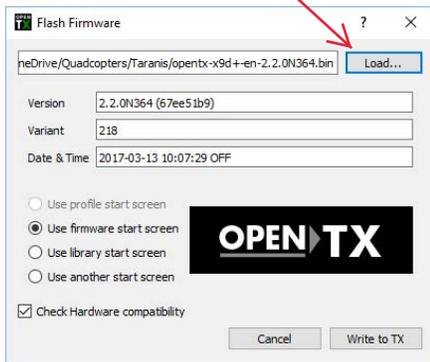


## Flashing Firmware

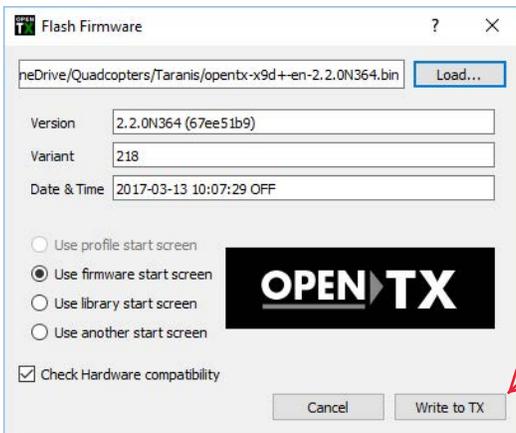
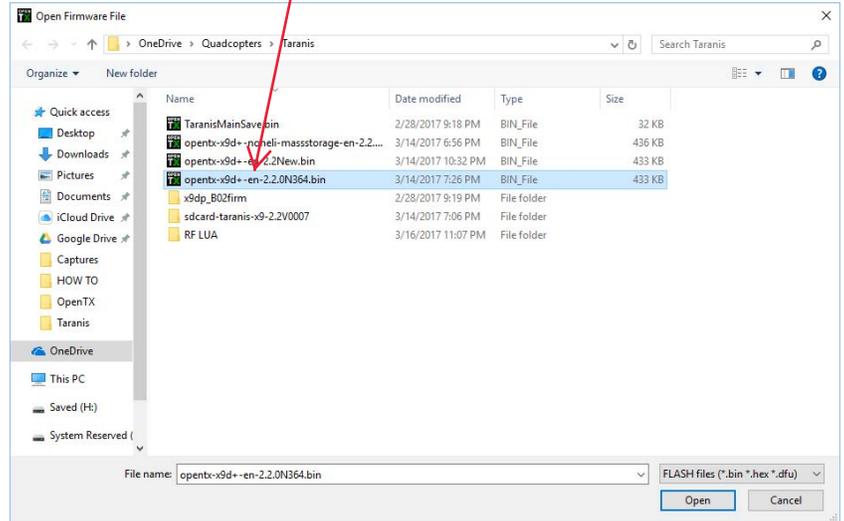
Click on Read/Write, Write Firmware to Radio



Click on Load



Chose the firmware you just downloaded



Click on Write to TX

Once Flashed you will have OpenTX 2.2 on your Taranis

You will need to redo your SDCARD on the Taranis.

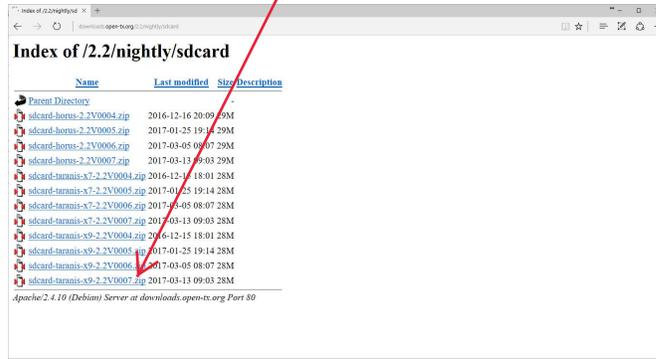
Download the SDCARD Files

<http://downloads.open-tx.org/2.2/nightly/sdcard/>

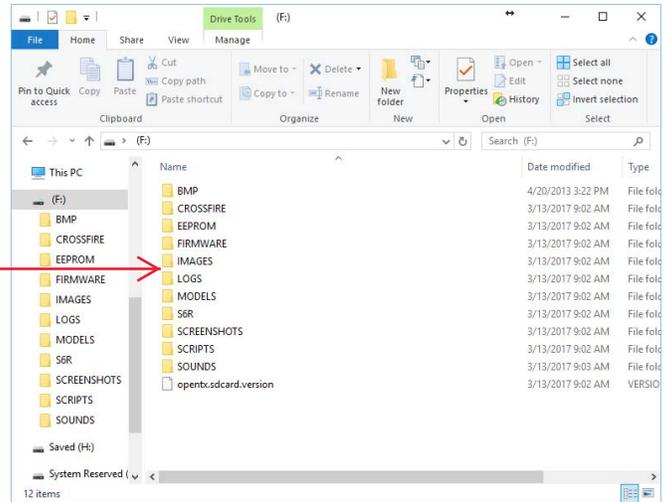
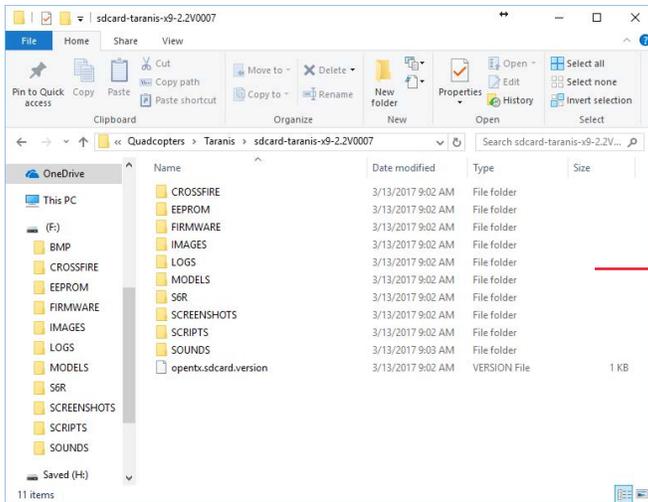
Click here to download



Download the latest file

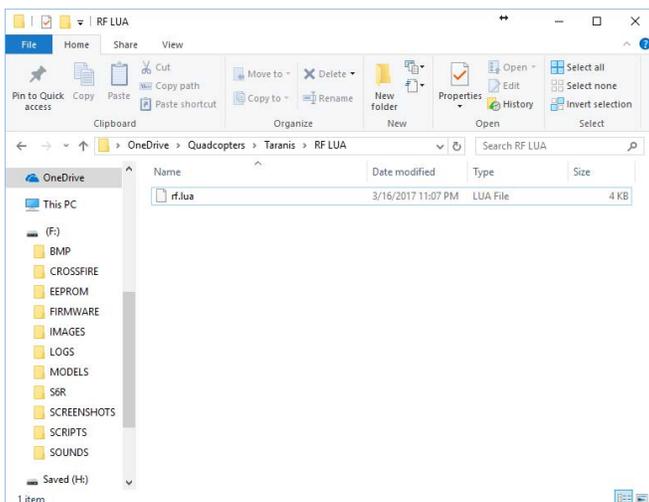


Extract the files and drag and drop them onto the SDCARD on the Taranis

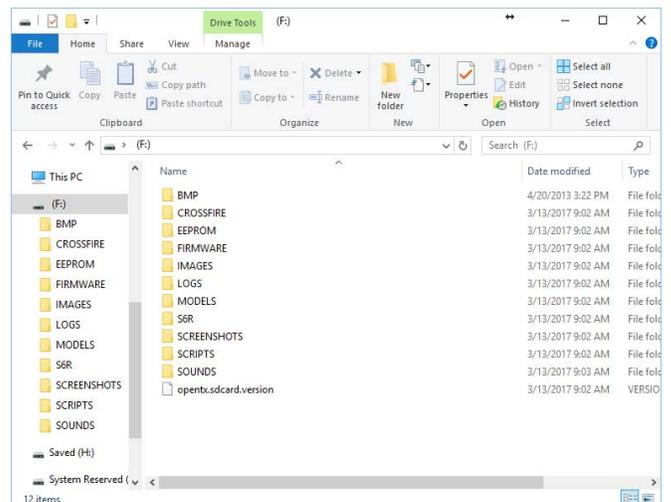


Your Taranis should now be updated

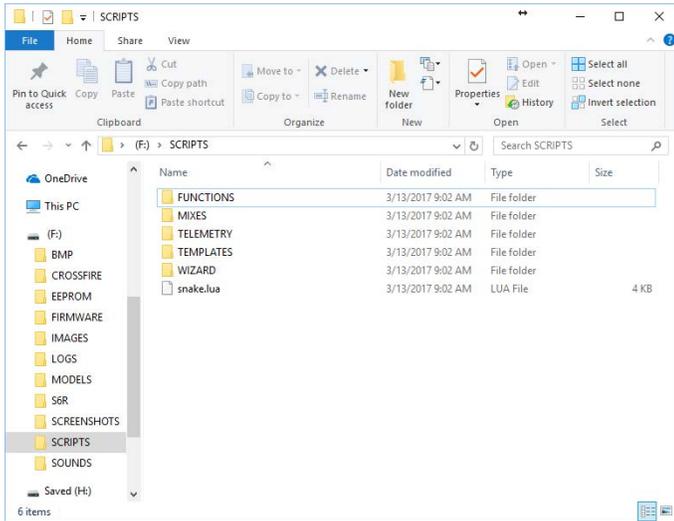
Go to the the rf.lua file you downloaded



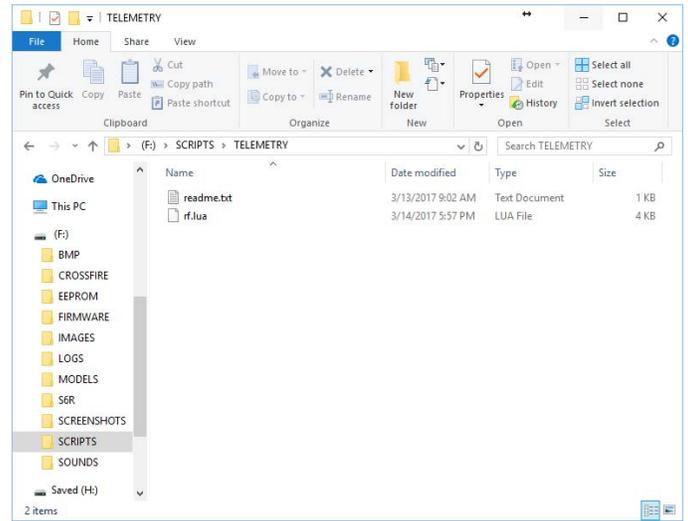
Open the SDCARD on the taranis



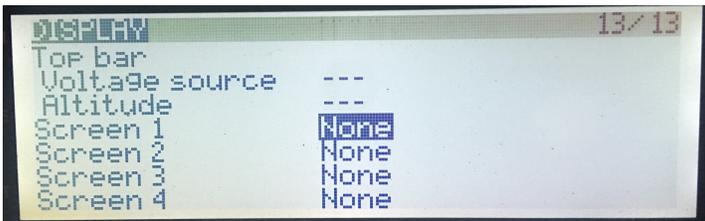
## Open the Scripts Folder



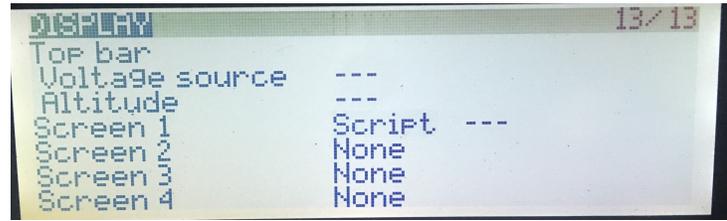
## Copy the rf.lua file to the telemetry folder



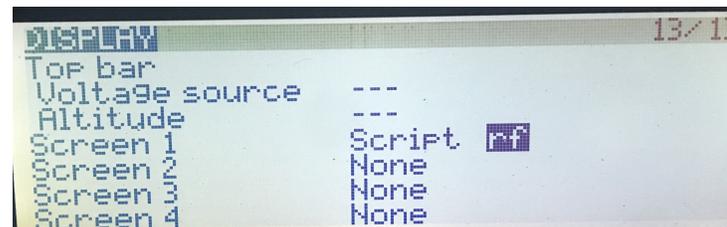
On the Taranis go to page 13  
Select screen 1 change none to script



Once script is selected go the right and select rf



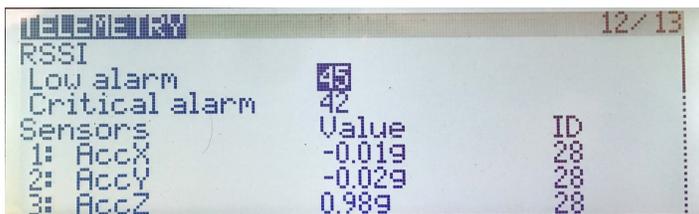
Once Finished, it should look like this



Now you have RF.LUA installed. To enable it from the main screen on Taranis press and hold PAGE for a few seconds until the RF Menu appears

Next discover the sensors

Go to the Telemetry page: Page 12



Scroll down to "Discover new Sensors"



After it discovers the new sensors. You should see 10 sensors total. You now have telemetry setup

# PID and VTX Menu Navigation

Spektrum Dx9 / Dx8 g2 PID Tuning. (Telemetry RX required)

1. Use scroll wheel to scroll across to the PID's screen. DX9 states RF1 Tuning - Dx8 g2 states PID Tuning.
2. Yaw right and roll left with the sticks at the lowest value. ie: bottom of pitch and throttle.
3. On Dx9 a > will appear to the left of values. On Dx8 g2 the value will flash.
4. Use your pitch stick to scroll through the values you want to change.
5. Right roll at the value you want to change, On the Dx9 a \* will appear. On Dx8 the value will stop flashing.
6. Use pitch stick to go up and down in value.
7. Roll left will exit the value. On Dx9 a > will appear again and on the Dx8 the value will flash again. You can then scroll through the other values again.
8. Select "save" at the bottom to save any changes.

## Taranis

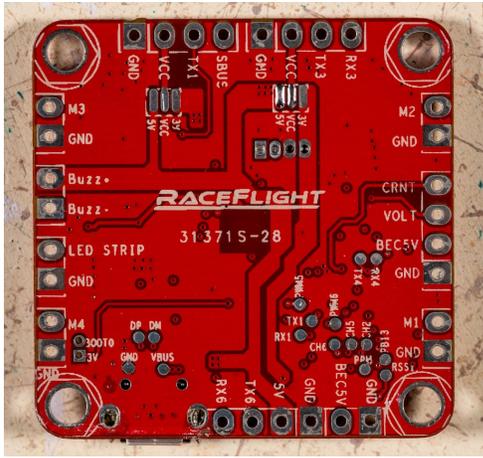
Press and hold Page Until the Menu Appears  
Then move the sticks towards the middle and down. Hold for 3 secs.



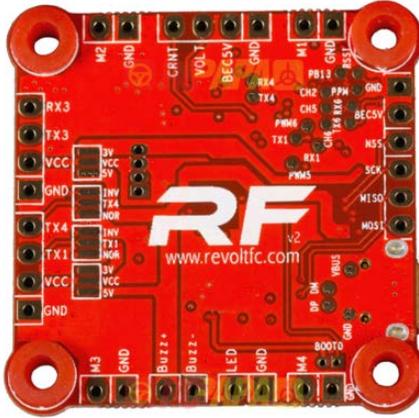
The Menu will appear Afterwards  
You can use Roll to move over  
Pitch to select  
select save once you made your changes  
once done press and hold exit

# Radio Settings

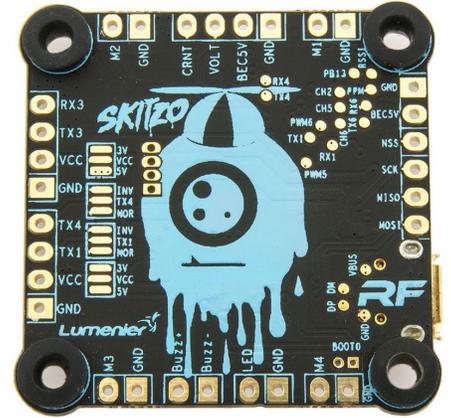
This section is for when Detect Radio doesn't work



Revolt V1

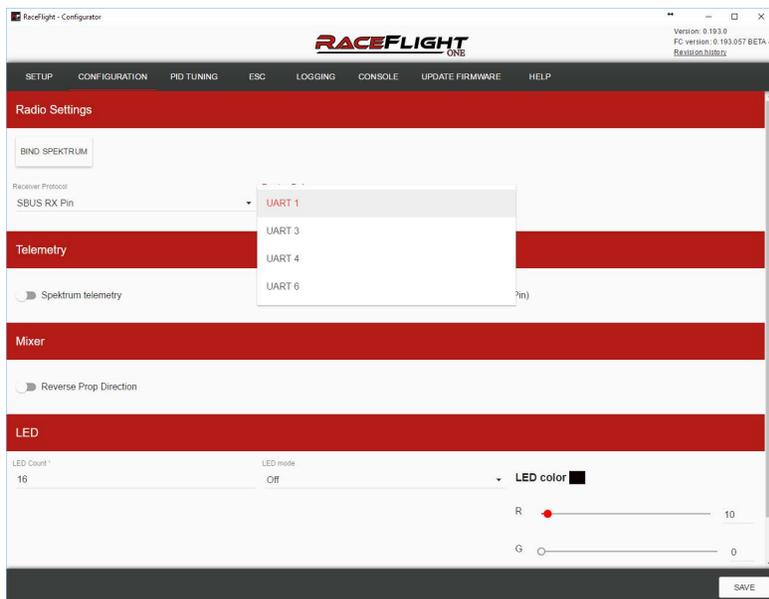
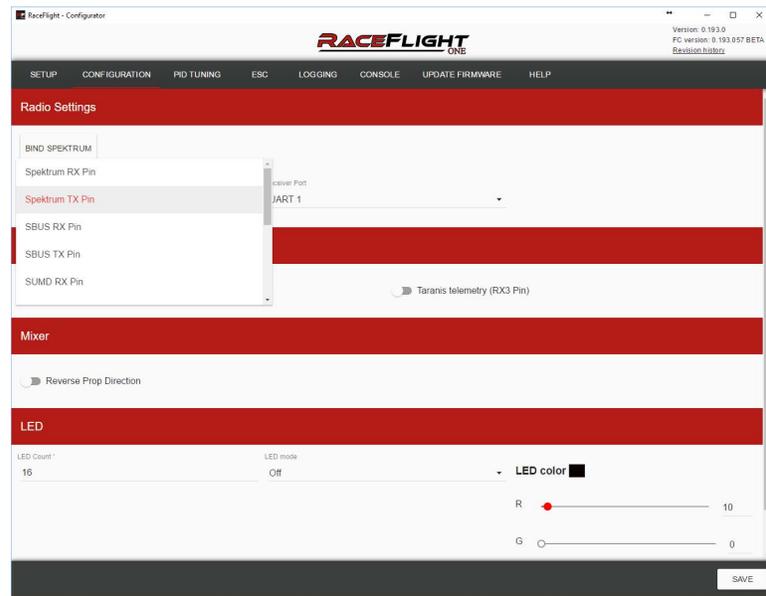
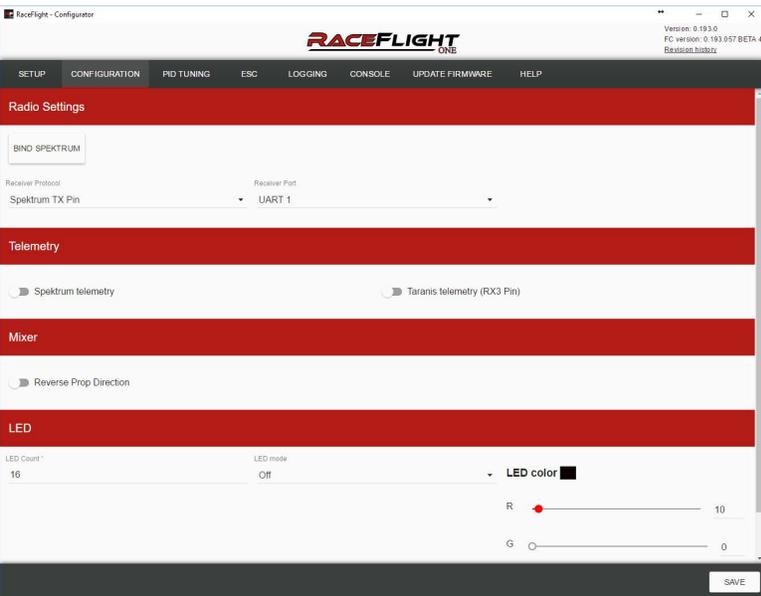


Revolt V2



Revolt V2 Skitzo Edition

Depending what protocol and where you have it soldered you can make changes here. If Detect Radio doesn't work



Receiver Protocol : Depending on what protocol you use and where it's Soldered

UART 1, 3, and 6 are for Revolt V1

UART 1, 4, and 3 Are for Revolt V2/Skitzo

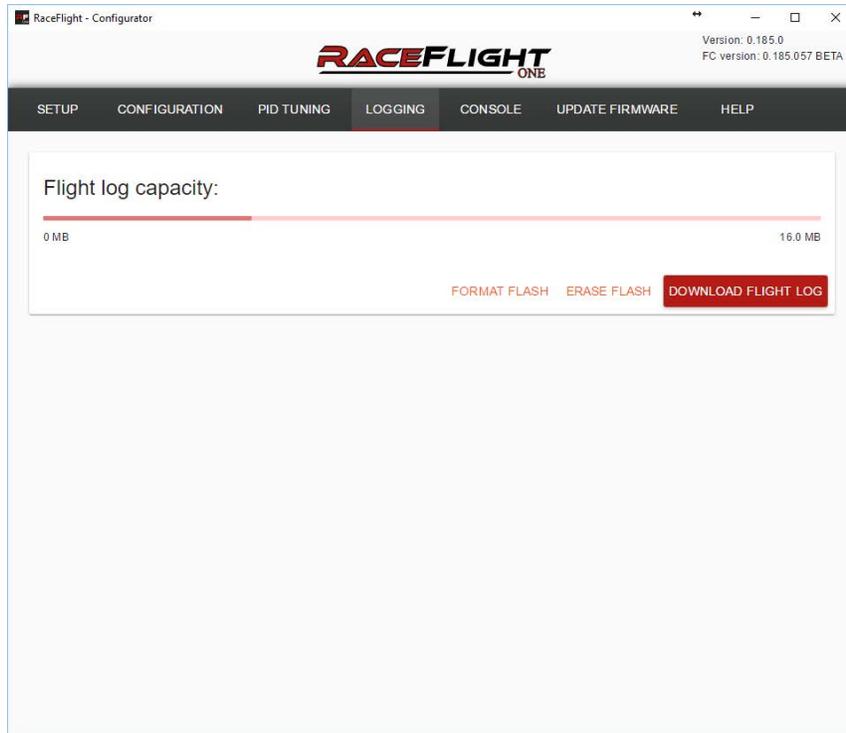
Example Using Revolt V1.

Taranis Receiver soldered to SBUS Which is RX1

On protocol pick SBUS RX Pin

On Port pick UART 1

# BB Log Downloading and Viewing



To download BB log. Click on " Download Flight Log"  
Save the file

Download and install Cleanflight Blackbox Explorer(Chrome Extension) to view your BB log



## Welcome to Blackbox Explorer!

This tool allows you to view and analyze logs created by Cleanflight's Blackbox feature.

[Open log file/video](#)

Google Chrome is dropping support for "Chrome Apps" like this one, so this Chrome version of Blackbox Explorer will stop working sometime in late 2017. To replace it, we've developed a new desktop app version of Blackbox Explorer for Windows, macOS and Linux (.deb). Please install the latest release of this new app from our [GitHub page](#). The new app has all the same features as this version of Blackbox Explorer. In the future we will be able to add new features that were not possible with the old Chrome App, particularly with video export.

Introduction to Blackbox	Tuning your craft	Other tools
<p>The Blackbox feature is built in to Cleanflight, and is supported on most of CF's flight controllers (Naze32, CC3D, SFRacingF3, etc.).</p> <p>To get started with Blackbox recording, read <a href="#">Cleanflight's Blackbox feature documentation</a>.</p> <p>Already have a log recorded? View the <a href="#">documentation for this log viewer</a> for details on how to best use this tool.</p> <p>If you believe you've found a bug in this viewer (e.g. the viewer crashes upon attempting to open a log file), or you have a suggestion, please add it to the viewer's <a href="#">GitHub bug tracker</a>.</p>	<p>The Blackbox can deliver insights on your flight performance that will allow you to tune variables such as your PIDs and low-pass filter settings.</p> <p>For help and instructions on how to tune your craft, please read some of these resources:</p> <ul style="list-style-type: none"><li>• <a href="#">Mini quad PID tuning from start to finish</a> by Joshua Bardwell on RCGroups.com</li><li>• <a href="#">Blackbox log analyzation/help thread</a> on RCGroups.com</li><li>• <a href="#">Cleanflight's PID tuning documentation</a></li><li>• <a href="#">Cleanflight support topic</a> on RCGroups.com</li><li>• <a href="#">Blackbox announcement topic</a> on RCGroups.com</li></ul>	<p>If you want to analyze your logs with your own mathematics package (such as Matlab) you can use the separate <a href="#">blackbox_decode tool</a> to convert your log file into a CSV file for analysis.</p> <p>If you want to share your log as a video, you can use the "export video" button at the top to render a WebM video, or use the commandline <a href="#">blackbox_renderer tool</a> to turn your log into a series of PNG files, or use a screen recording tool to record the playback of this log viewer.</p>

## **Setting Min\_Throttle (which is now Idle\_Percent)**

1. To adjust your idle speed, navigate to the CLI tab and type, "set idle\_percent=x" (without the quotes. X ranges from 3 to 12. Higher numbers mean higher idle speed.
2. Be aware that having an idle percent too low may make the motors stutter or not spin when armed. If you think you are arming (flipping the correct arm switch) and the motors do not start spinning, then try slowly raising throttle to see.
3. If the motors then start spinning this means your idle\_percent needs to be higher so they will spin at idle.

## **Modes**

**Armed = Pick the switch you want to ARM with**

**Attitude is being worked on**

**Failsafe can be set to a switch**

**Logging = Starts the Blackbox Logger**

**Buzzer= Turn Buzzer on or off requires soldering a buzzer to FC**

**led\_mode change will cycle through the modes**

**led\_color change will cycle through 7 colors**

**Direct Mode = Racing Mode with sharper response**

**- also decreases AuW and increases Thrust by 20% on every quad :)**

**Advanced User Section only****Setting ESC Protocol**

1. You can select the loop\_ctrl to change the loop speed. This might come into play while testing new features that could be cpu intensive like Dshot.
2. Navigate to the CLI tab and type, "set esc\_protocol=0" (without the quotes) and hit enter.
3. Type "save" (without the quotes) and hit enter to save your changes.

**ESC Protocol****"set esc\_protocol=" only****Example set esc\_protocol=0**

```
ESC_MULTISHOT=0
ESC_ONESHOT=1
ESC_PWM=2
ESC_ONESHOT42=3
ESC_DSHOT150=4
ESC_DSHOT300=5
ESC_DSHOT600=6
ESC_SPOOKY_ACTION_AT_A_DISTANCE=7
ESC_MULTISHOT25=8
ESC_MULTISHOT125=9
```

**Defaults = Multishot**

**Default is set to esc\_protocol=0, esc\_frequency = 32000, rf\_loop\_ctrl=16**

**For Dshot try rf\_loop\_ctrl=8 or rf\_loop\_ctrl=15 or rf\_loop\_ctrl=14 only for now and set esc\_protocol = 4 or 5 or 6**

```
ESC_DSHOT150=4
ESC_DSHOT300=5
ESC_DSHOT600=6
```

**rf\_Loop\_Ctrl Key****Example set rf\_loop\_ctrl=16**

Difference between h and uh

rf\_loop\_ctrl=10 is = to h32 32khz filtered

rf\_loop\_ctrl=16 is = to uh32 32khz less filtered

LOOP_M1=1	LOOP_H2=6	LOOP_UH1=11
LOOP_M2=2	LOOP_H4=7	LOOP_UH2=12
LOOP_M4=3	LOOP_H8=8	LOOP_UH4=13
LOOP_M8=4	LOOP_H16=9	LOOP_UH8=14
LOOP_H1=5	LOOP_H32=10	LOOP_UH16=15
		LOOP_UH32=16

# 1wire Commands

1WIRE Commands (Must have battery plugged in and Props removed)  
Always do a **1wire save** after any changes)

The following commands work as follows

```
Example using beepstrength
1wire m0=beepstrength=93
1wire m1=beepstrength=93
1wire m2=beepstrength=93
1wire m3=beepstrength=93
1wire save
1wire Stop
```

m0 = Motor 1, m1 = Motor 2, m2 = Motor 3, m3 = Motor 4,

```
1wire read (reads the esc info)
1wire save (saves 1wire changes)
1wire auto (Automatically updates all esc firmware)
1wire stop (stops the 1wire connection)
1wire m0/1/2/3=beacondelay=2min (Change esc beacon setting)
1wire m0/1/2/3=upgrade (upgrades esc firmware)
1wire m0/1/2/3=timing=medium/high/low (Changes esc timing)
1wire m0/1/2/3=brakeonstop=disable/enable (changes esc stop)
1wire m0=direction=reversed/normal (changes motor direction)
1wire m0/1/2/3=beepstrength=93
```

## Manually updating ESC

```
1wire read
1wire list
1wire mX=forceupgrade=Y
(where X is the esc number starting with 0 and Y is the listed firmware
number you wish to flash)
1wire stop
```

example

```
1wire read
1wire m0=forceupgrade=6
1wire m1=forceupgrade=6
1wire m2=forceupgrade=6
1wire m3=forceupgrade=6
1wire stop
```

ESC List from 1wire list cmd

```
#ss ESC POSITION:0 HEX:#A_H_20#
#ss ESC POSITION:1 HEX:#A_H_15#
#ss ESC POSITION:2 HEX:#XRotor40A#
#ss ESC POSITION:3 HEX:#XRotor20A#
#ss ESC POSITION:4 HEX:#RotorGeeks20AP#
#ss ESC POSITION:5 HEX:#RotorGeeks20A#
#ss ESC POSITION:6 HEX:#FVTLibee30A#
#ss ESC POSITION:7 HEX:#FVTLibee20APro#
#ss ESC POSITION:8 HEX:#FVTLibee20A#
#ss ESC POSITION:9 HEX:#FC_Rapt390_20A#
#ss ESC POSITION:10 HEX:#DYS_XM20A#
#ss ESC POSITION:11 HEX:#M_H_30#
#ss ESC POSITION:12 HEX:#L_H_00#
#ss ESC POSITION:13 HEX:#J_H_90#
#ss ESC POSITION:14 HEX:#J_H_70#
#ss ESC POSITION:15 HEX:#J_H_15#
#ss ESC POSITION:16 HEX:#G_L_30#
#ss ESC POSITION:17 HEX:#G_H_30#
#ss ESC POSITION:18 HEX:#F_H_40#
#ss ESC POSITION:19 HEX:#F_H_00#
#ss ESC POSITION:20 HEX:#C_H_40#
#ss ESC POSITION:21 HEX:#C_H_30#
#ss ESC POSITION:22 HEX:#C_H_25#
#ss ESC POSITION:23 HEX:#C_H_20#
#ss ESC POSITION:24 HEX:#C_H_15#
#ss ESC POSITION:25 HEX:#B_H_00#
#ss ESC POSITION:26 HEX:#A_H_70#
#ss ESC POSITION:27 HEX:#A_H_50#
#ss ESC POSITION:28 HEX:#A_H_30#
#ss ESC POSITION:29 HEX:#A_L_20#
#ss ESC POSITION:30 HEX:#A_L_15#
#ss ESC POSITION:31 HEX:#A_L_10#
#ss ESC POSITION:32 HEX:#A_L_00#
#ss ESC POSITION:33 HEX:#A_H_90#
#ss ESC POSITION:34 HEX:#A_H_70#
#ss ESC POSITION:35 HEX:#A_H_05#
#ss ESC POSITION:36 HEX:#A_H_50#
#ss ESC POSITION:37 HEX:#A_H_40#
#ss ESC POSITION:38 HEX:#A_H_30#
#ss ESC POSITION:39 HEX:#A_H_25#
#ss ESC POSITION:40 HEX:#A_H_20#
#ss ESC POSITION:41 HEX:#A_H_15#
```

### **Deadband**

Deadband helps removes the small twitches from the radio.  
To change Deadband go to the console  
Change these values until you like the deadband you want

```
set pitch_deadband=0.003  
set roll_deadband=0.003  
set yaw_deadband=0.003
```

### **Filters**

```
filter_mode0 = yaw smoothing  
filter_mode1 = ki handling 0 old 1 new  
filter_mode2 = press (0-6)
```

### **Motor Test Commands**

```
idle 0  
idle 1  
idle 2  
idle 3
```

idlestop = Stops all motors

### **CLI Commands**

```
dump  
resetconfig (Reset's all settings)  
resetdfu (Resets in to DFU mode)  
eraseallflash (Erases Log Flash)
```