

# Racewhoop25 HD FPV Racing Drone **Manual**





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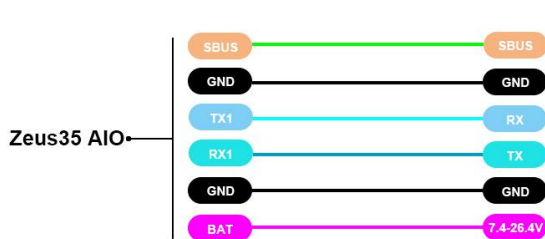
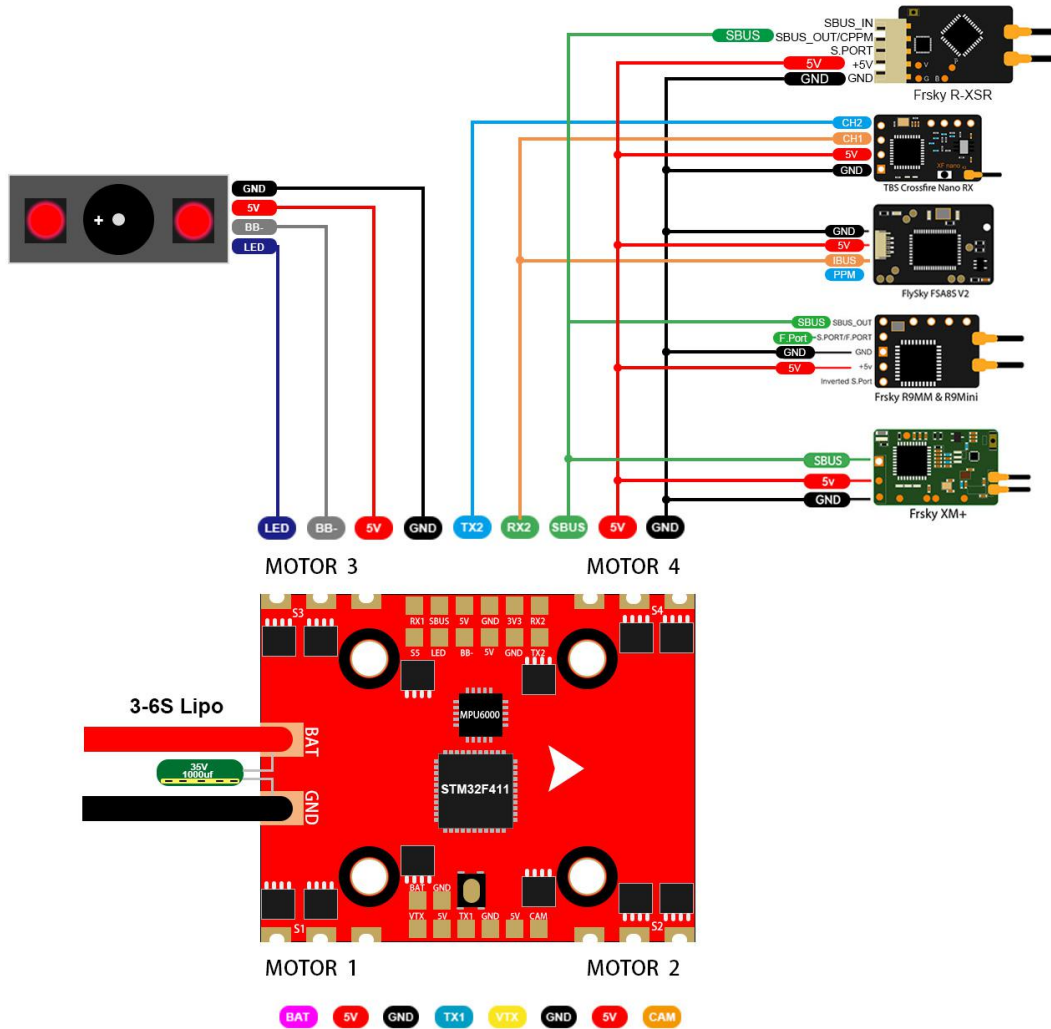
## Package Included

Racwhoop25 HD FPV Racing Drone *1	Accessory Package*1
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# 1. Product Specifications

Product parameters	
Model	Racwhoop25 HD FPV Racing Drone
Frame Kit	Racewhoop25 Frame Kit
Flight Controller	Zeus35 AIO
ESC	35A 4in1
VTX	CADDX Nebula Nano
Motor	2004 Motor 4S KV3000 6S KV1800
Support receiver	SBUS .DSMX.i.BUS
Input Voltage	3-6S Lipo

# 2. Interface Description



## 3. Check the flight control drive

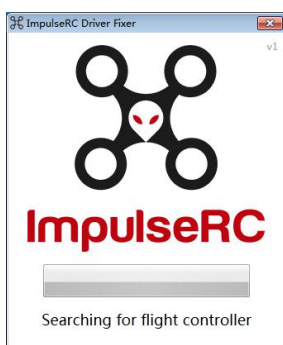
1. Long Press BOOT buttons.connect USB.The system automatically install the driver



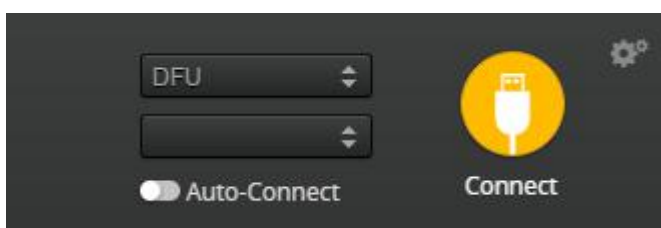
2.Driver cannot be installed, please download ImpulseRC\_Driver\_Fixer



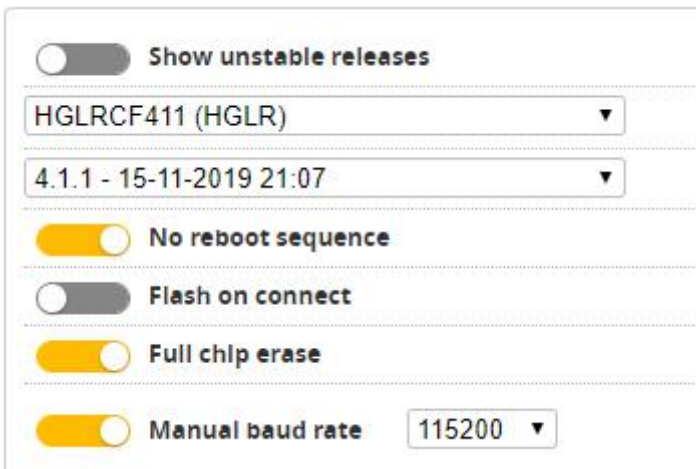
3.Double-click on the run(Plug in the flight controller to automatically install the driver)








4.open betafight configurator , enter DFU mode



5. Click  Select firmware version



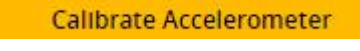
6. Click  Load firmware.  Waiting for completion  It will be prompted upon completion. 

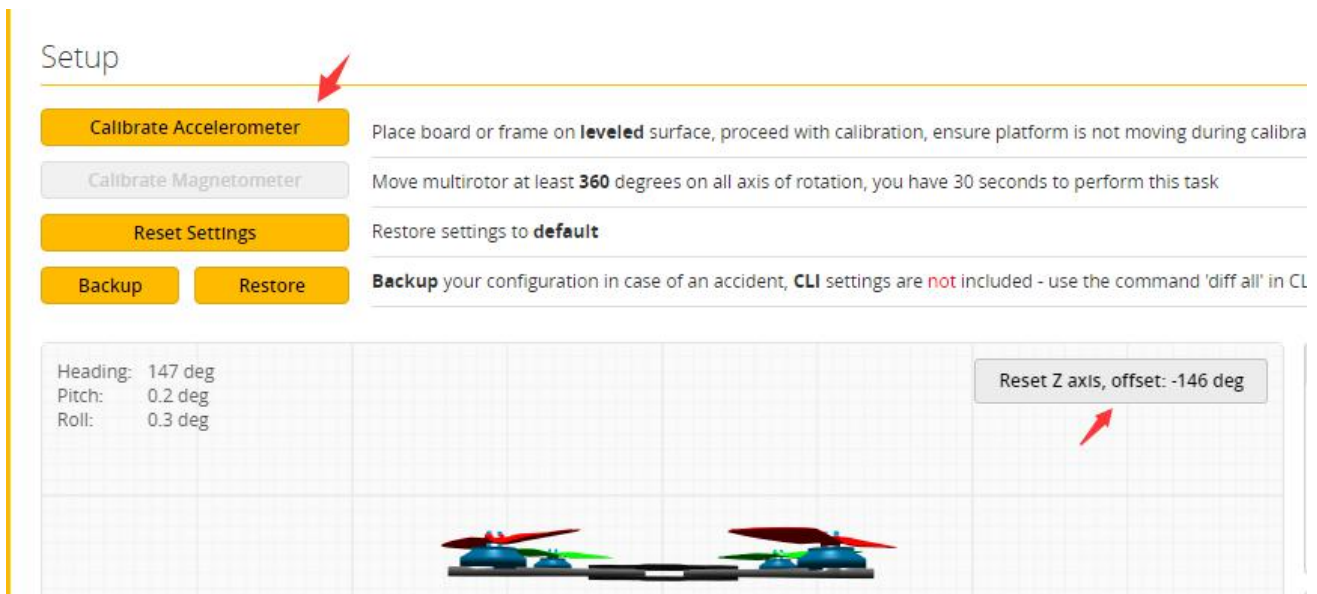
7. open betaflyght configurator  . Controller plugged into the computer. Betaflight Automatically assigned port, click “Connect”  
Enter setup interface ( Different computer COM )



# 4. Calibration accelerometer

1. Put the aircraft horizontal and click “Reset Z axis”

Click again 




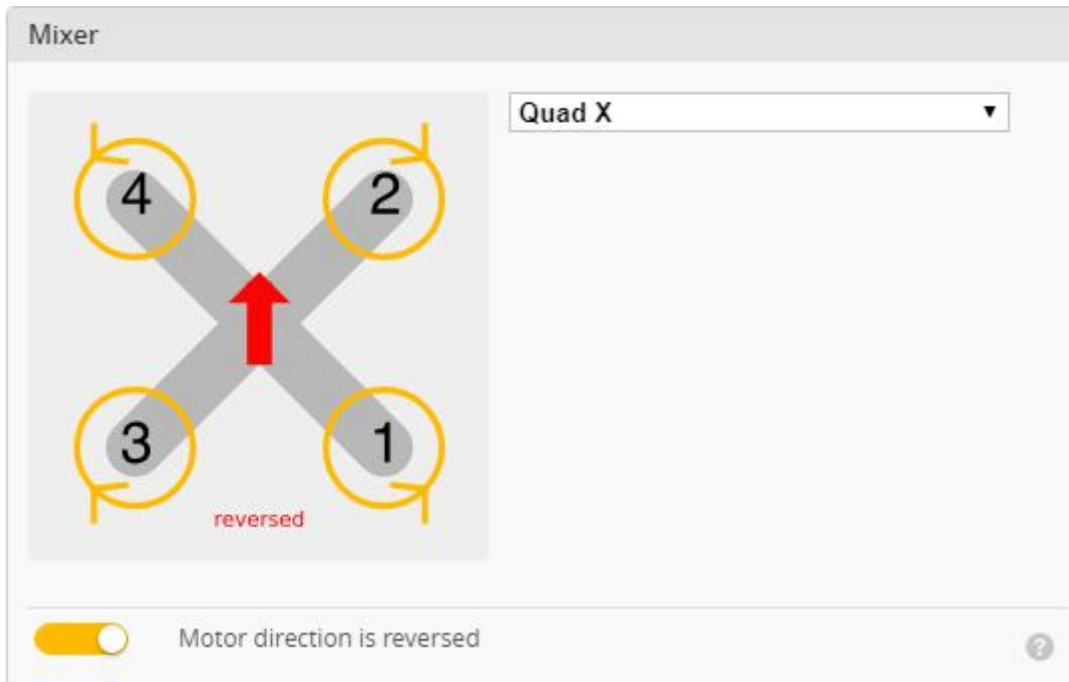
# 5. UART serial port use


UART1 uses VTX image transmission

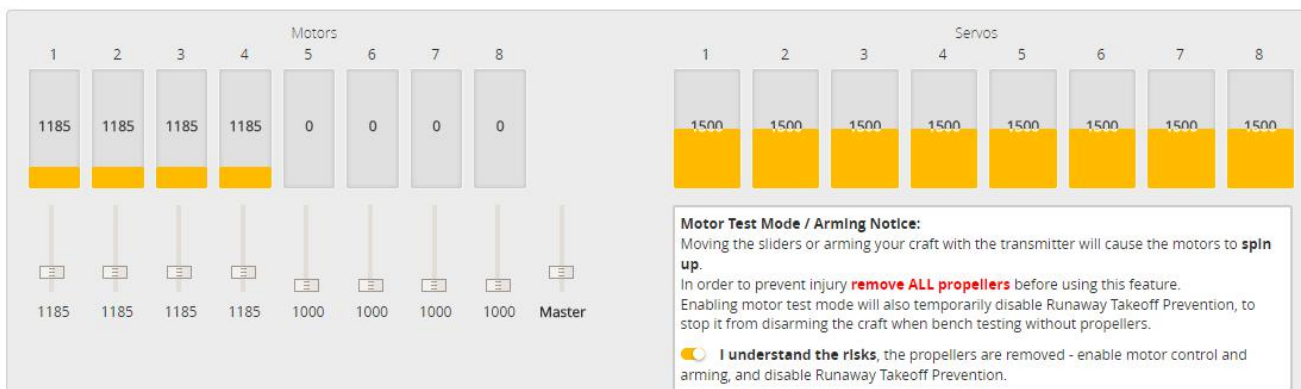
UART2 uses receiver telemetry

# 6. Select aircraft model

1. Click  Configuration Select model



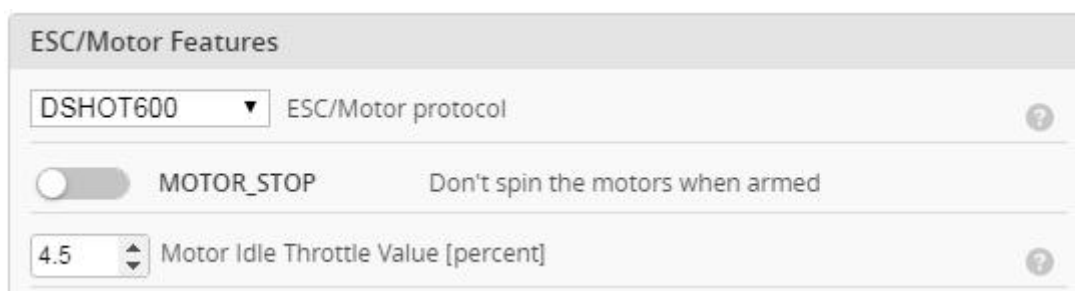
2. Click  Motors Click “**I understand the risks**” Push Master to check motor steering “**Master**” Steering can be changed at [BLHeliSuite](#)





# 7. Choose ESC protocol

1. Choose the right ESC protocol, the optional universal protocol DSHOT600.

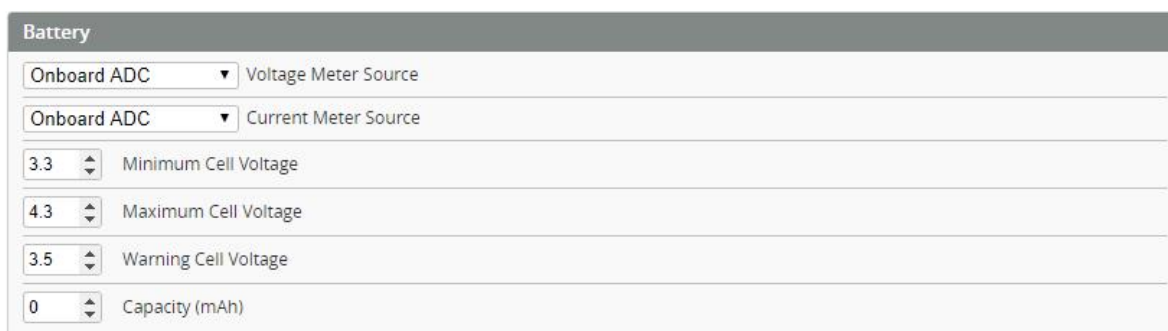


The screenshot shows the 'ESC/Motor Features' settings panel. It includes a dropdown menu for 'ESC/Motor protocol' set to 'DSHOT600', a toggle switch for 'MOTOR\_STOP' (currently off) with the description 'Don't spin the motors when armed', and a numeric input field for 'Motor Idle Throttle Value [percent]' set to '4.5'.

# 8. Voltage parameters setting

1. Click **Power & Battery** Setting parameters

Power & Battery



The screenshot shows the 'Battery' settings section. It includes dropdown menus for 'Voltage Meter Source' and 'Current Meter Source', both set to 'Onboard ADC'. Below these are five numeric input fields: 'Minimum Cell Voltage' (3.3), 'Maximum Cell Voltage' (4.3), 'Warning Cell Voltage' (3.5), and 'Capacity (mAh)' (0).



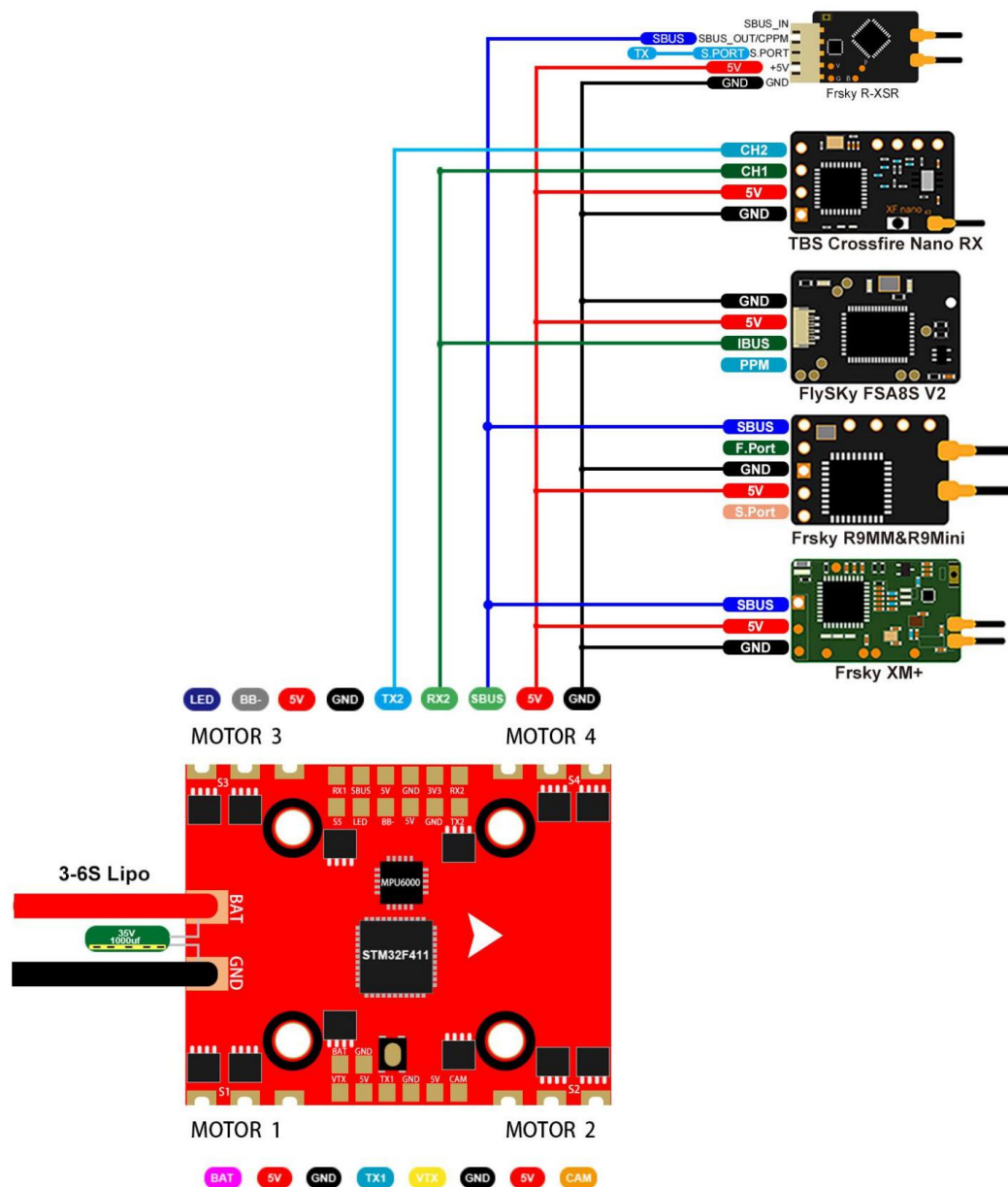
The screenshot shows the 'Voltage Meter' settings section. It displays 'Battery' with a value of '0 V'. To the right are three numeric input fields: 'Scale' (110), 'Divider Value' (10), and 'Multiplier Value' (1).



The screenshot shows the 'Amperage Meter' settings section. It displays 'Battery' with a value of '0'. To the right are two numeric input fields: 'Scale [1/10th mV/A]' (179) and 'Offset [mA]' (0).

# 9. Setting up the receiver

## 1. Receiver connection diagram



2. Click . We have found "UART2" Open (SBUS) the receiver serial port

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	VTX (IRC Tran   AUTO
UART2	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO

### 3. Open (i.BUS/DSMX) receiver serial port

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 ▼	VTX (IRC Tran ▼ AUTO ▼
UART2	<input type="checkbox"/> 115200 ▼	<input checked="" type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼

### 4. Set the SBUS receiver

Receiver

Serial-based receiver (SPEKSAT, 5 ▼) Receiver Mode

**Note:** Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX\_SERIAL feature.

SBUS ▼ Serial Receiver Provider

### 5. Set the i.BUS receiver

Receiver

Serial-based receiver (SPEKSAT, 5 ▼) Receiver Mode

**Note:** Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX\_SERIAL feature.

IBUS ▼ Serial Receiver Provider

### 6. Set the DSMX receiver

Receiver

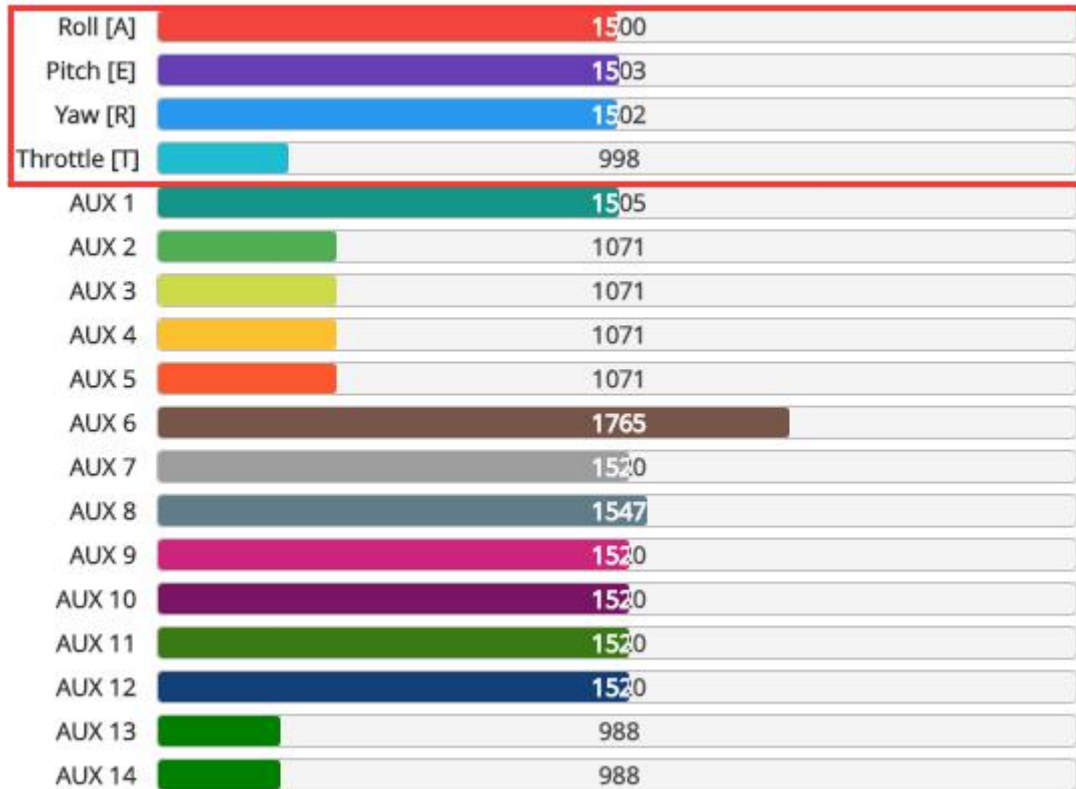
Serial-based receiver (SPEKSAT, 5 ▼) Receiver Mode

**Note:** Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX\_SERIAL feature.

SPEKTRUM2048 ▼ Serial Receiver Provider

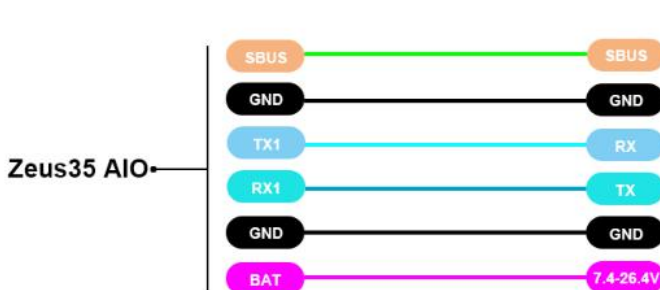
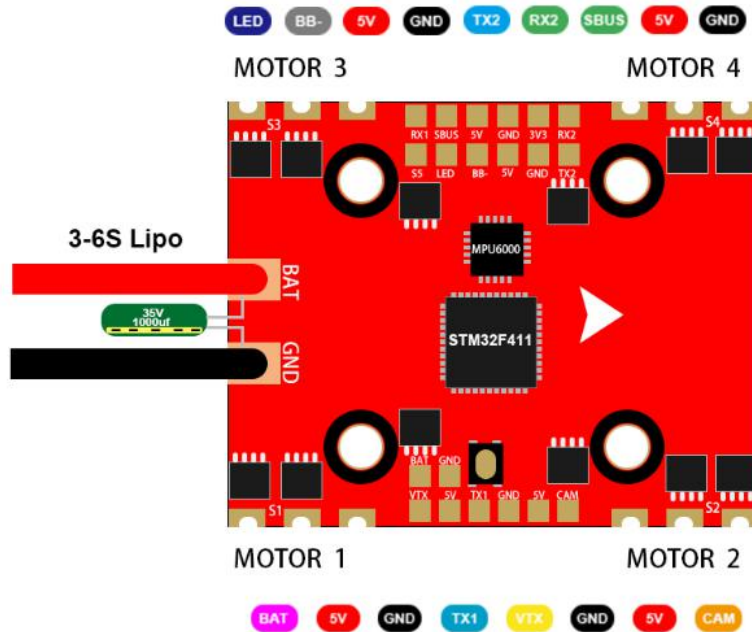
# 10. Check receiver signal

1. Click  Receiver Check the remote control output signal



# 11.VTX serial port use. VTX uses OSD smart audio


## 1.VTX connection diagram



2.VTX serial port opens. The protocol is selected according to its own VTX protocol.

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 checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART2	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO

# 12.Select flight mode startup mode

1. Click  Modes set up the function of remote control switch across the channel (below are for reference only)

Modes WIKI

Use ranges to define the switches on your transmitter and corresponding mode assignments. A receiver channel that gives a reading between a range min/max will activate the mode. Remember to save your settings using the Save button.

Show/hide unused modes

**ARM** ✕

AUX 1 ✕

Min: 1300 Max: 2100

900 1000 1200 1400 1500 1600 1800 2000 2100


**ANGLE** ✕

AUX 1 ✕

Min: 1300 Max: 2100

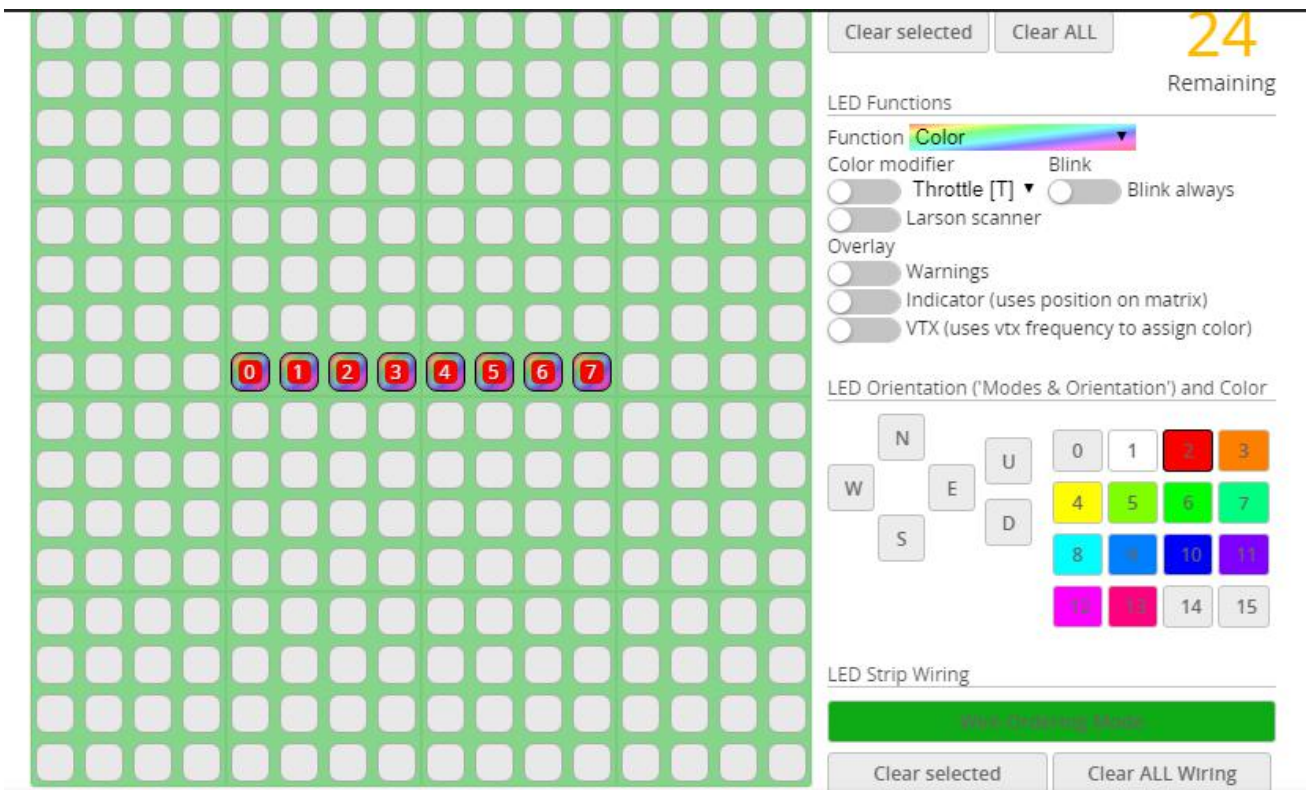
900 1000 1200 1400 1500 1600 1800 2000 2100

# 13.LED settings

1. Click  Configuration Turn on LED support



2. Click  LED Strip .Click  set according to need



Clear selected Clear ALL **24** Remaining

LED Functions  
Function **Color**  
Color modifier  Blink  
 Throttle [T]  Blink always  
 Larson scanner

Overlay  
 Warnings  
 Indicator (uses position on matrix)  
 VTX (uses vtx frequency to assign color)

LED Orientation ('Modes & Orientation') and Color

N	U	0	1	2	3
W	E	4	5	6	7
S	D	8	9	10	11
		12	13	14	15

LED Strip Wiring

**Wire Ordering Mode**

Clear selected Clear ALL Wiring

# 14. Troubleshooting

## Warning:

Please read the cautions as follows, otherwise stability of your flight controller cannot be ensured, your flight controller will even get damaged.

- Keep focus on the polarity. Check carefully before power supply.
- Cut off the power when you connect, plug and pull anything.
- The refresh rate of PID and Gyroscope is up to 8K/8K.

## after sales question:

1. After receiving the goods, it is found that the product can not be used normally. If the return to the factory is a quality problem, the repair service will be provided free of charge.
2. If the product is damaged due to improper operation, the repair service may be provided under the condition that the inspection can be repaired.
3. For domestic customers, please contact the after-sales service personnel. For overseas customers, please contact the official website for after-sales service.



## Product daily problems

### 1.OSD garbled:

If you find garbled characters, please open Betaflight, click “OSD” .and click “Font Manager” clicks on “Upload Font” to update

1. When plugged in the battery, the aircraft does not pass the self-test without "BBB" sound. There is only one sound.

Please check if the ESC agreement is correct

### 3.The spin of the aircraft keeps spinning

1. Please check if the propeller is correct
2. Please check if the motor direction is correct