Rekon3 FPV Racing Drone
Manual

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Contents

Package Included

HGLRC Rekon3 FPV Racing Drone*1	Accessory Package*1

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1.Product Specifications

Product parameters	
Model	Rekon3 VTX FPV Racing Drone
Frame Kit	Rekon3 Frame Kit
Flight Controller	Zeus5 AIO Flight Controller
VTX	Zeus nano 350mW
Motor	1202.5 Motor 1S KV11600
Support Neceiver	SBUS .DSMX.CRSF
Input Voltage	1S Lipo
Weight	62.5g

2.Interface Description

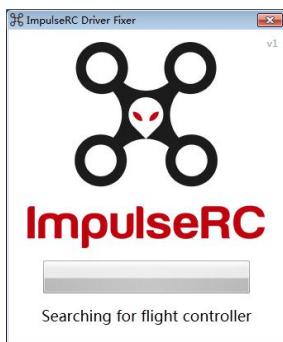Rekonfpv.com
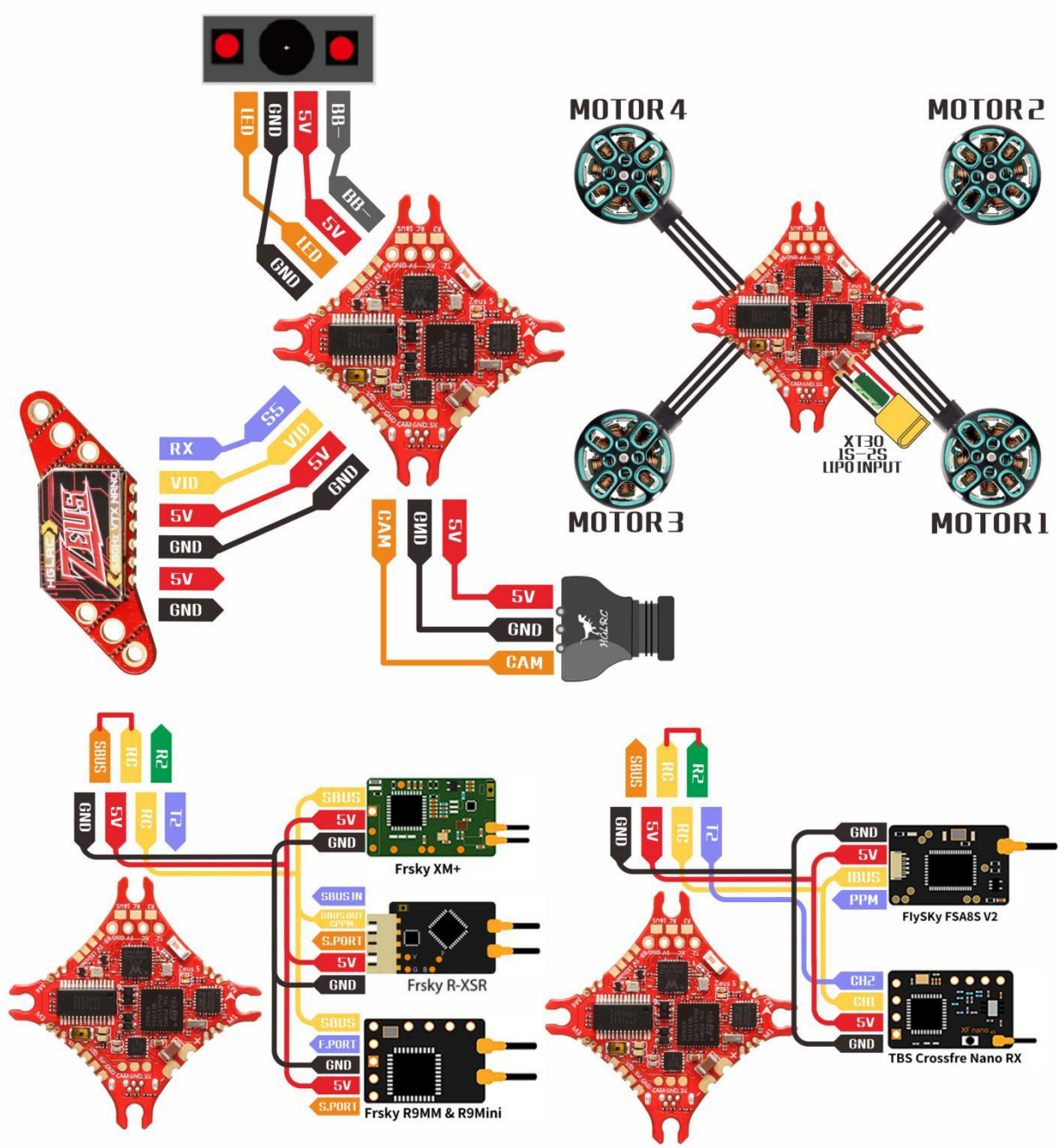
3.Check the flight control drive

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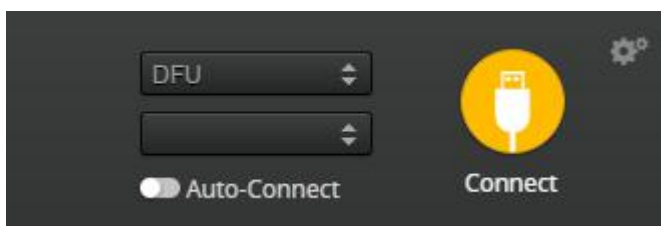

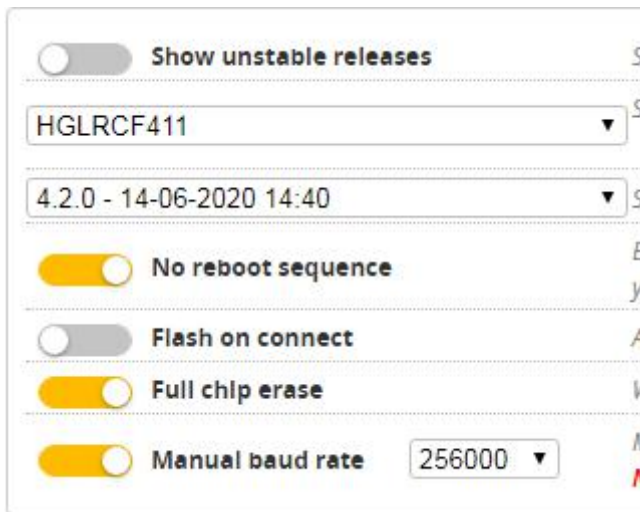2.Driver cannot be installed, please download ImpulseRC_Driver_Fixer

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

4.open betaflight configurator , enter DFU mode

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5.Click **Firmware Flasher**   Select firmware version

Show unstable releases

HGLRCF411

4.2.0 - 14-06-2020 14:40

No reboot sequence

Flash on connect

Full chip erase

Manual baud rate   256000

6.Click **Load Firmware [Online]** Load firmware. **Flash Firmware** Waiting for

completion **Erasing …** It will be prompted upon

completion. **Programming: SUCCESSFUL**

7. open betaflight configurator **BETAFLIGHT** .Controller plugged into the

computer. Betaflight Automatically assigned port，click "Connect" Enter

setup interface（Different computer COM）

COM18

115200

Auto-Connect   Connect

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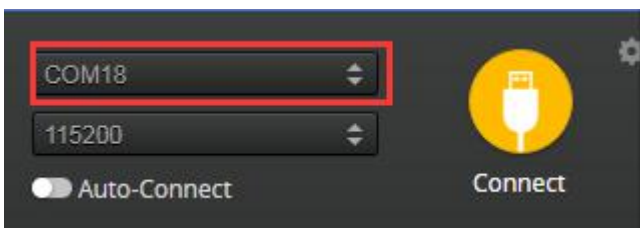
4. Calibration accelerometer
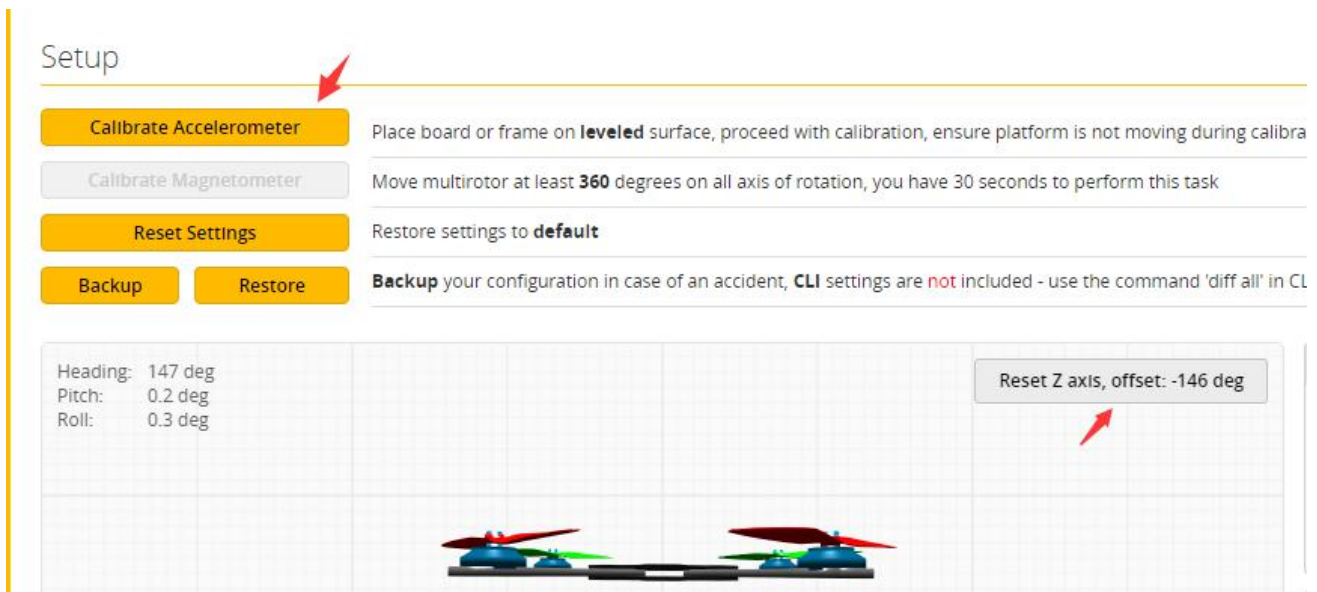
1. Put the aircraft horizontal and click "Reset Z axis"

Click again Calibrate Accelerometer

5.UART serial port use

1.UART1 uses WIFI

Open WIFI CLI command:

    "resource PINIO 1 B10

     serial 0 1 115200 57600 0 115200
     set pinio_config = 129,1,1,1
     set pinio_box = 0,255,255,255
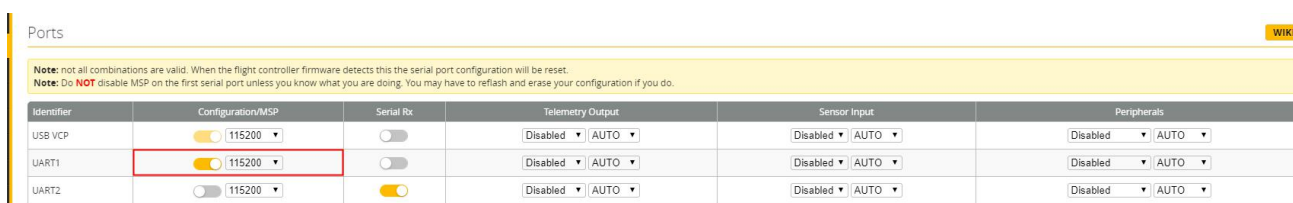
        SAVE"

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2. UART2 uses receiver

S5 is a soft serial port, dedicated to video transmission (VTX) FM

CLI command of soft serial port:

''resource MOTOR 5 none

resource SERIAL_TX 11 B03

SAVE''

6.WIFI function instruciton

1.Click Select Ports

2.Install Speedy Bee on your mobile phone. Connect to WIFI name
Started with HermesXXXX.


3.Then click connect to adjust the parameters normally.

4.If the WIFI module light is solid, it means the WIFI is connected to the
mobile phone.。

5.If the WIFI module light is solid, but conection is abnormal. Please
check your wifi / Speedy Bee settings.

Note: Flight Controller must be powered by battery to connect to WIFI

7.Select aircraft model

1.Click ⚙ Configuration Select model

Mixer

Quad X ▼

Motor direction is reversed
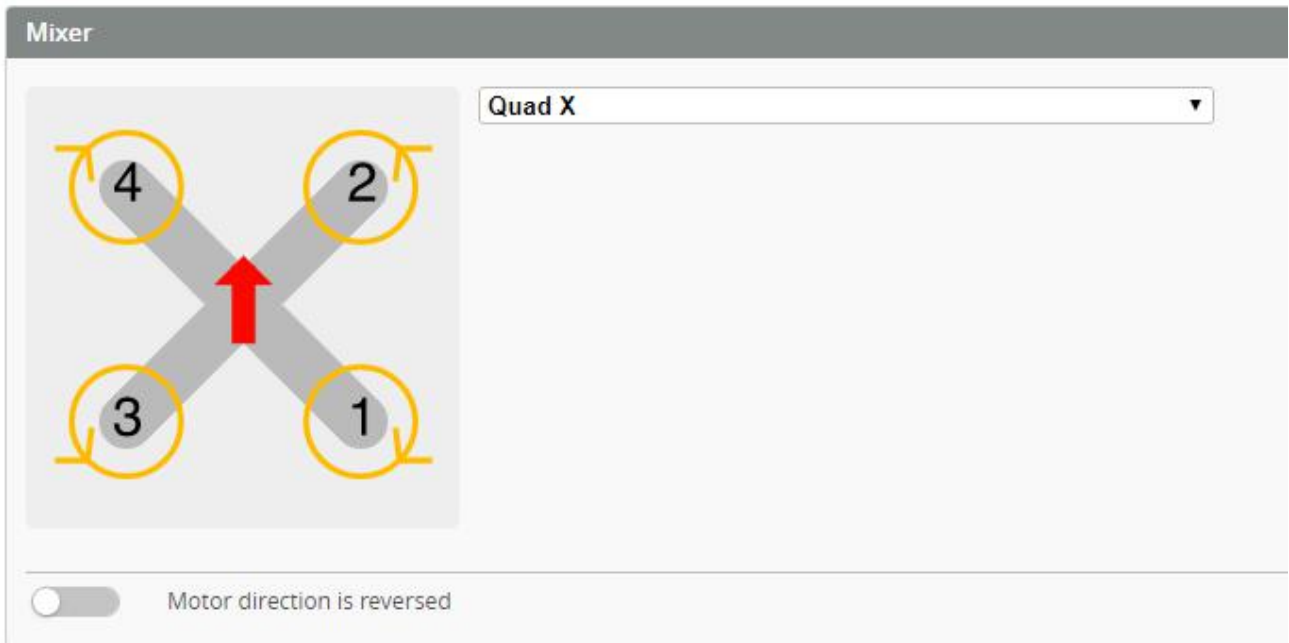
2.Click 👍 Motors Click "I understand the risks" Push Master to check motor steering "Master" Steering can be changed at BLHeliSuite

Motors
1   2   3   4   5   6   7   8
1185 1185 1185 1185 0 0 0 0

1185 1185 1185 1185 1000 1000 1000 1000 Master

Servos
1   2   3   4   5   6   7   8
1500 1500 1500 1500 1500 1500 1500 1500

Motor Test Mode / Arming Notice:
Moving the sliders or arming your craft with the transmitter will cause the motors to **spin up**.
In order to prevent injury **remove ALL propellers** before using this feature.
Enabling motor test mode will also temporarily disable Runaway Takeoff Prevention, to stop it from disarming the craft when bench testing without propellers.

🔘 **I understand the risks**, the propellers are removed - enable motor control and arming, and disable Runaway Takeoff Prevention.

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8.Choose ESC protocol

9.Voltage and current parameters setting

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

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10.Setting up the receiver

1.Receiver connection diagram
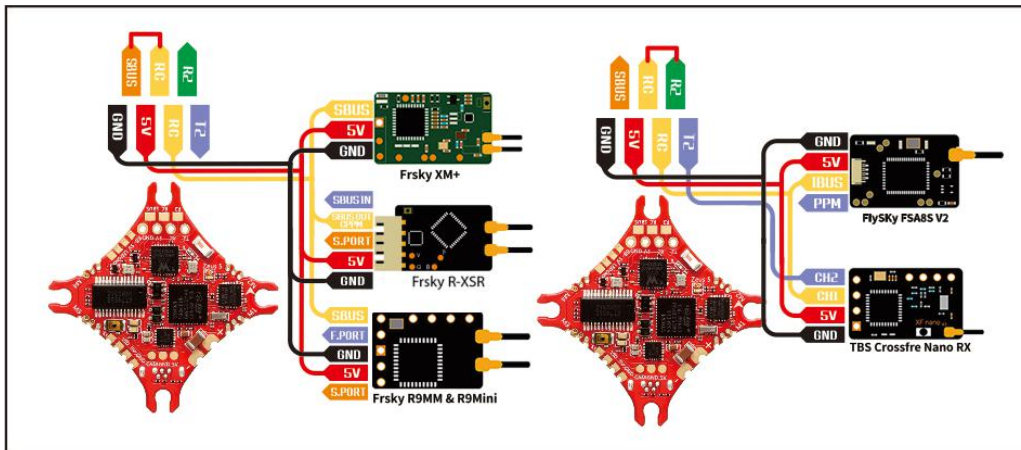
2.Click [Ports] .have found "UART2" Open the receiver serial port

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	⬤ 115200 ▼	◯	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART1	⬤ 115200 ▼	◯	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART2	◯ 115200 ▼	⬤	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
SOFTSERIAL1	◯ 115200 ▼	◯	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	VTX (IRC Tran ▼ AUTO ▼

3.Set the SBUS receiver

Receiver

Serial-based receiver (SPEKSAT, S ▼) 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
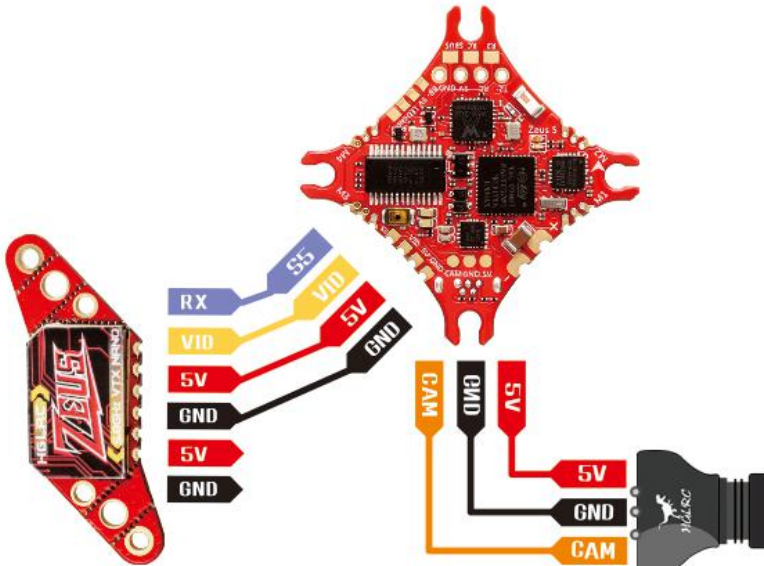
4.Set the CRSF receiver

Receiver

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

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

CRSF ▼ Serial Receiver Provider

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11.VTX serial port use wiring

1. 5.8G VTX connection

2. 5.8G 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	🟠 115200 ▼	⚪	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART1	🟠 115200 ▼	⚪	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART2	⚪ 115200 ▼	🟠	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
SOFTSERIAL1	⚪ 115200 ▼	⚪	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	VTX (IRC Tran ▼ AUTO ▼

3.Use OSD to adjust VTX

which displays information like battery voltage and mAh consumed while you fly. In addition, the Betaflight OSD can be used to configure the quadcopter, making in-field adjustments and tuning more convenient.

MODE2   MODE1

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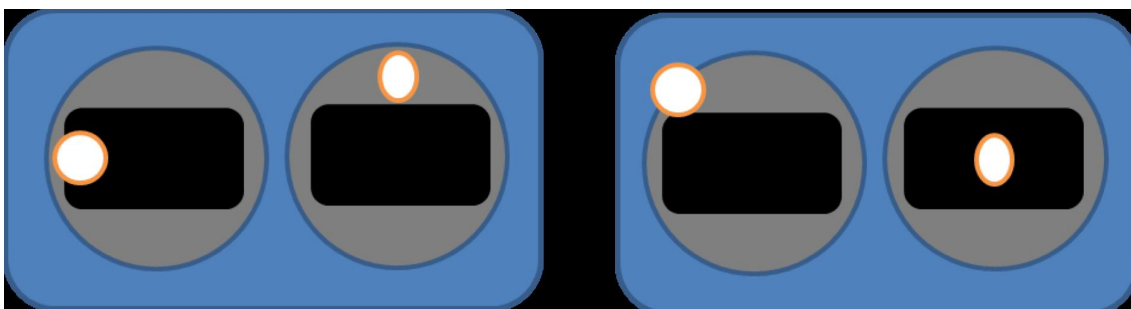
The graphics above show the stick command to bring up the OSD menu. The stick command is: throttle centered, yaw left, pitch forward. The exact stick command therefore depends on which mode your transmitter sticks are in.
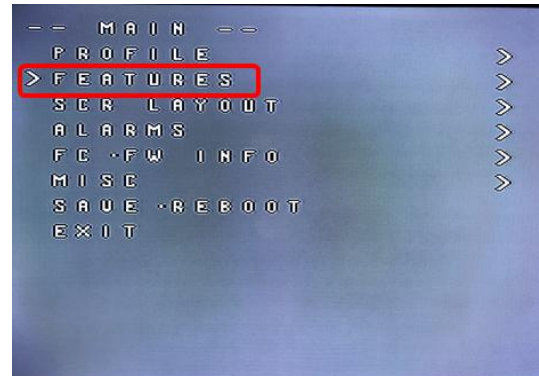
In the OSD menu, use pitch up/down to move the cursor between menu items. When a menu option has a > symbol to the right of it, this indicates that it contains a sub-menu. Roll-right will enter the sub-menu. For example, in the screen to the right, moving the cursor to "Features" and then moving the roll stick to the right will enter the "Features" sub-menu.

If you are using a video transmitter that supports remote configuration, enter the "Features" menu to configure the vTX. From there, enter either "VTX SA" if you are using SmartAudio (TBS Unify) or "VTX TR" if you are using IRC Tramp Telemetry.

To adjust PIDs, rates, and other tuning-related parameters, enter the "Profile" sub-menu.
In the "Scr Layout" sub-menu, you can move the OSD elements (like battery voltage, mAh, and so forth) around on the screen.
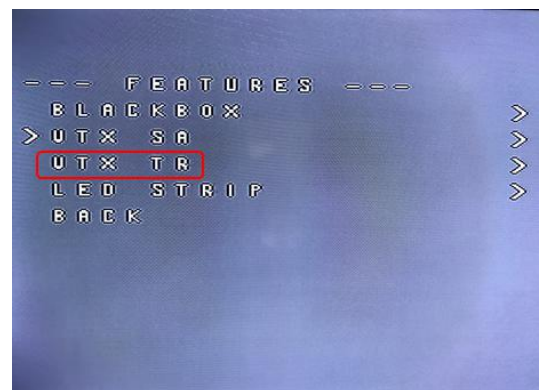
The "Alarms" sub-menu lets you control when the OSD will try to alert you that battery voltage is too low or mAh consumed is too high.

When a parameter can be modified, the parameter's current value will be shown on the right-hand side of the screen. In this case, roll left/right will adjust the parameter up and down.
The screen to the right shows the current vTX settings. From here, you can change the frequency band, channel, and power level of the video transmitter. After making the changes, move the cursor to "Set" and press roll-right to confirm the settings.
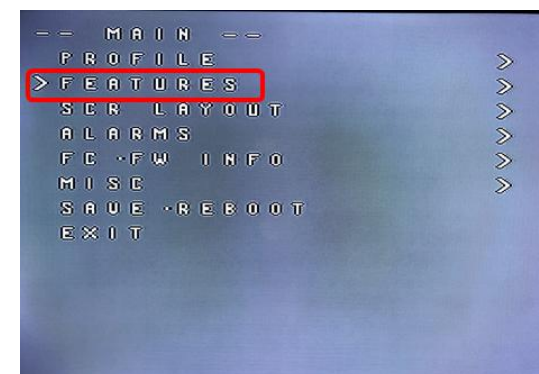
12.Check receiver signal

1.Click Receiver Check the remote control output signal

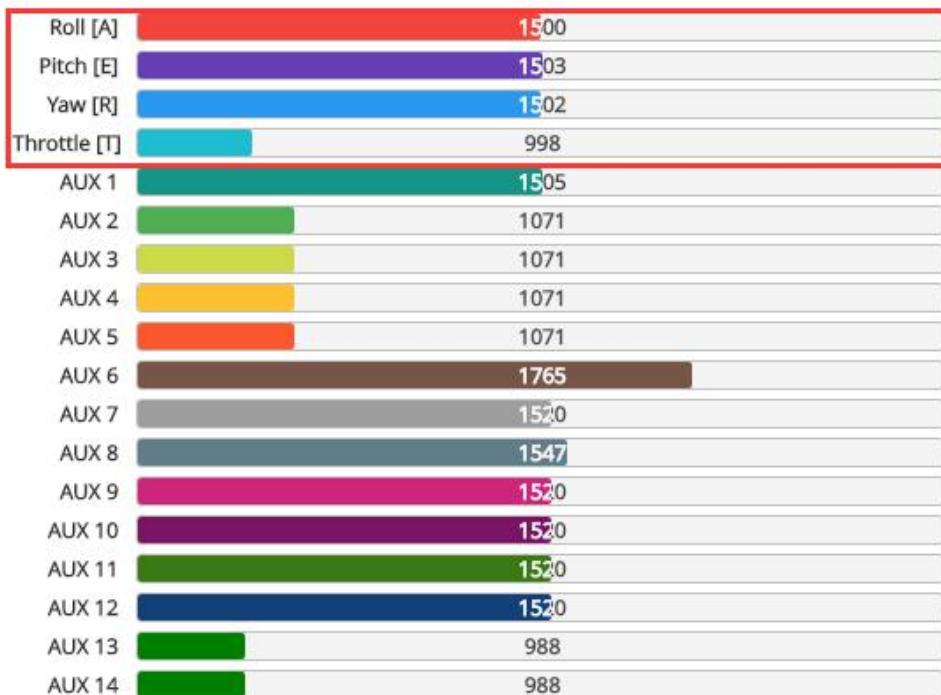|	
Roll [A]	1500
Pitch [E]	1503
Yaw [R]	1502
Throttle [T]	998
AUX 1	1505
AUX 2	1071
AUX 3	1071
AUX 4	1071
AUX 5	1071
AUX 6	1765
AUX 7	1520
AUX 8	1547
AUX 9	1520
AUX 10	1520
AUX 11	1520
AUX 12	1520
AUX 13	988
AUX 14	988

13.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 ▼		
Add Range	Min: 1300 Max: 2100	900 1000 1200 1400 1500 1600 1800 2000 2100	

ANGLE	AUX 1 ▼		
Add Range	Min: 1300 Max: 2100	900 1000 1200 1400 1500 1600 1800 2000 2100	

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14.OSD settings

1. Click [OSD] the OSD Settings, according to the need to choose, drag the OSD schematic diagram of the parameters can be adjusted.
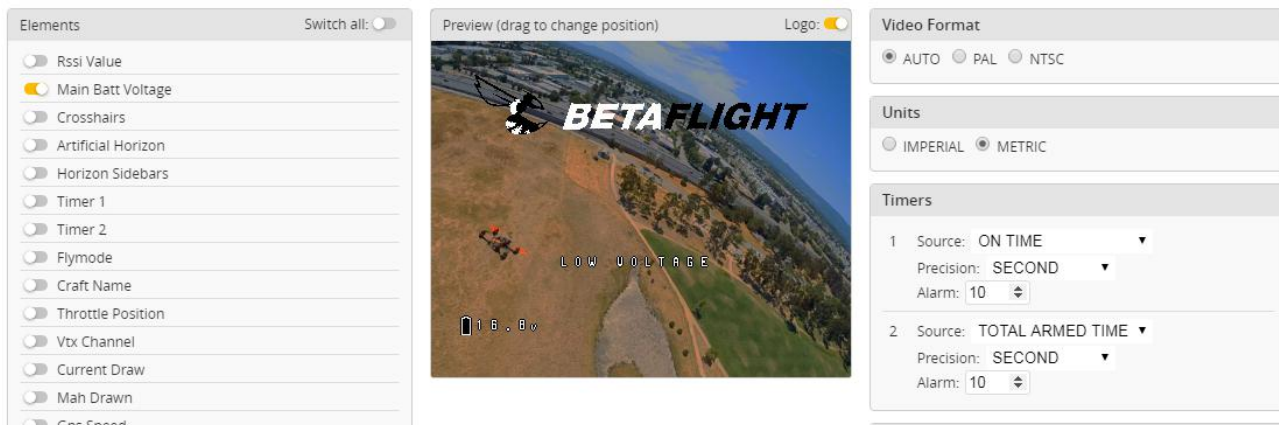
15.LED settings

1.Click [Configuration] Turn on LED support

2.Click [LED Strip].Click [Wire Ordering Mode] set according to need

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16.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.

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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

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