Petrel 120X FPV Racing Drone

Manual

Contents

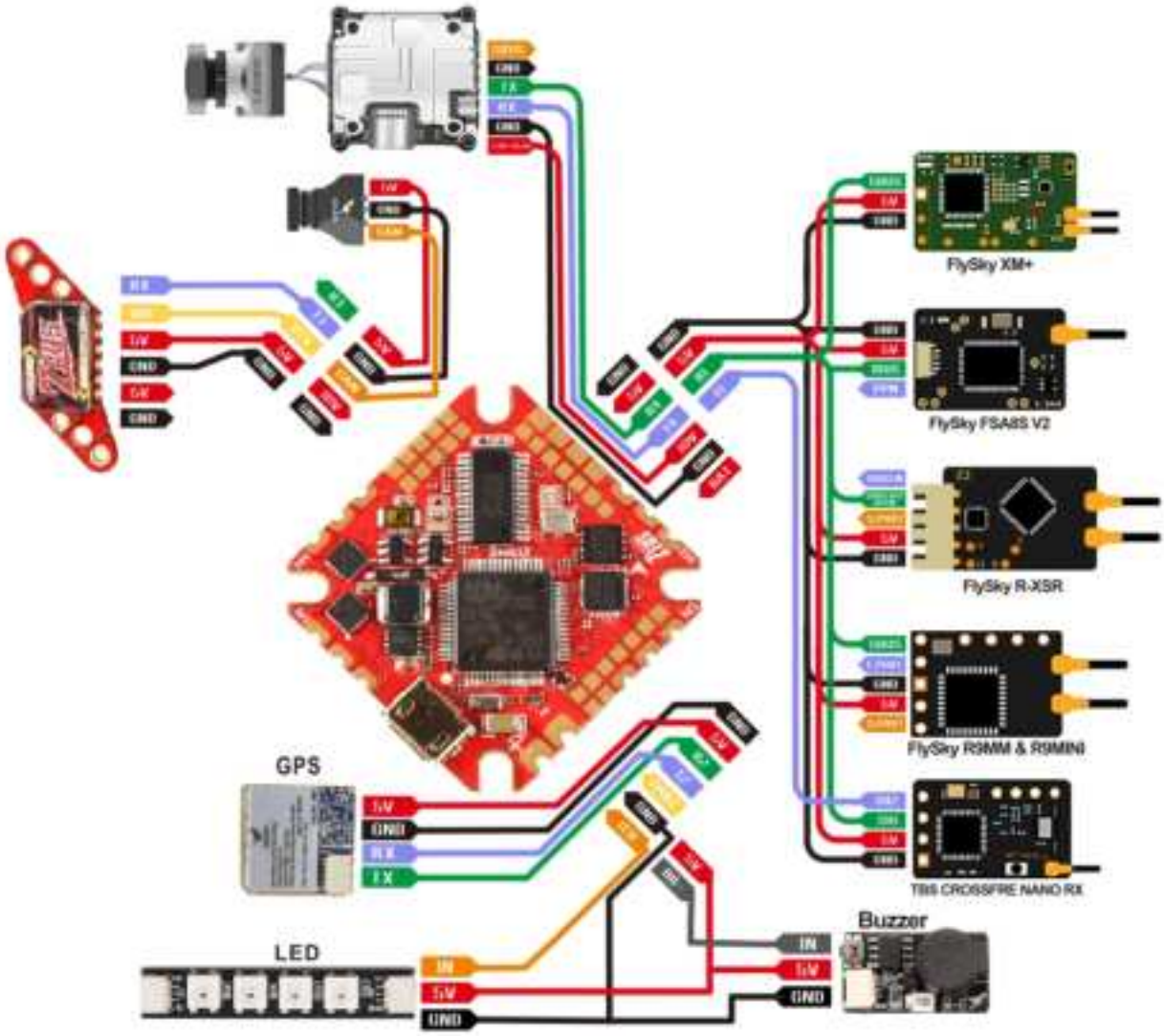
Package Included

HGLRC Petrel 120X FPV Racing Drone *1	Accessory Bag*1

1.Product Specifications

Product parameters	
Model	Petrel 120X FPV Racing Drone
Frame Kit	Petrel 120X Freestyle Frame Kit
Flight Controller	Zeus13 AIO Flight Controller
VTX	Zeus nano 350mW
Motor	1202.5 Motor 3S KV5600 4S KV4500 6S KV2500
Support receiver	SBUS .DSMX.i.BUS
Input Voltage	3-6S Lipo
Weight	70.6g

2.Interface Description



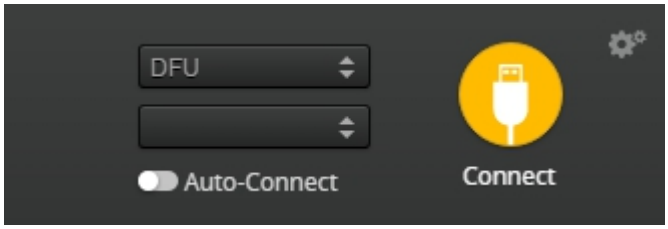
3.Check the flight control drive

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

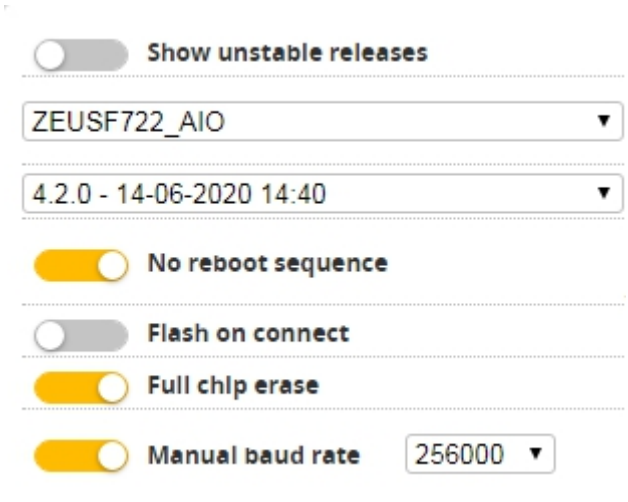
2.Driver cannot be installed, please download ImpulseRC_Driver_Fixer

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

4.open betaflight configurator , enter DFU mode

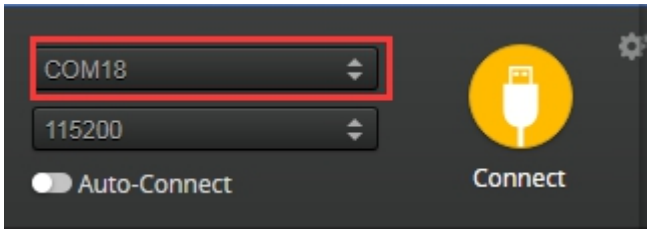


5. Click Firmware Flasher Select firmware version



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 。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 Calibrate Accelerometer

5.UART serial port use

1.UART1 uses the receiver

2.UART2 uses GPS

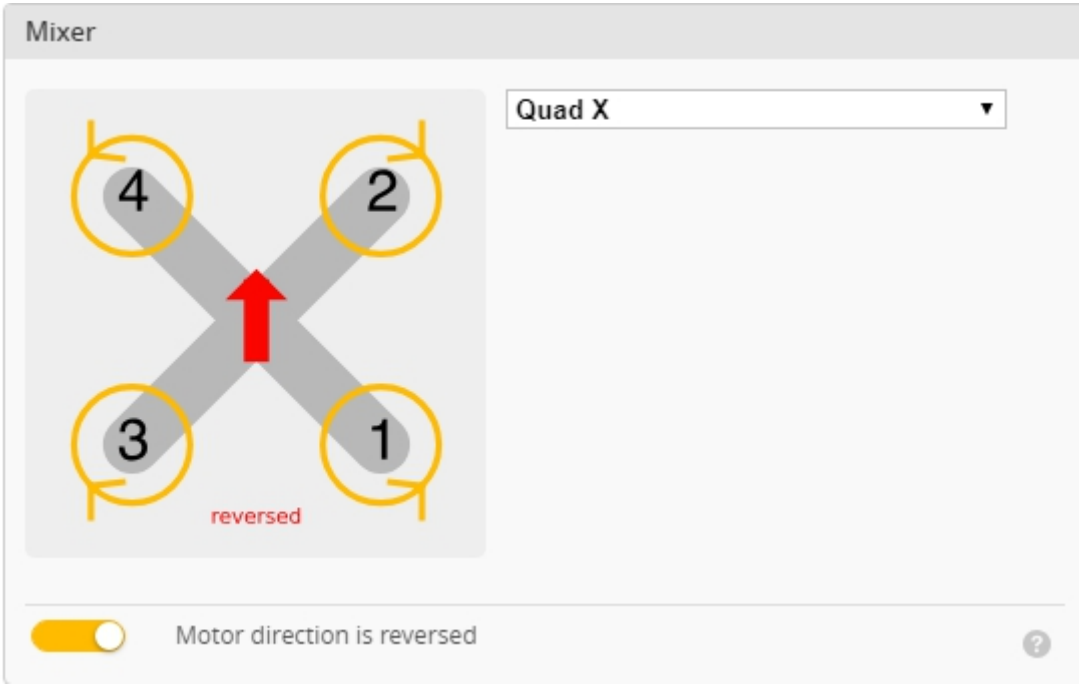
3.UART3 uses VTX/DJI

4.UART4 uses WiFi module

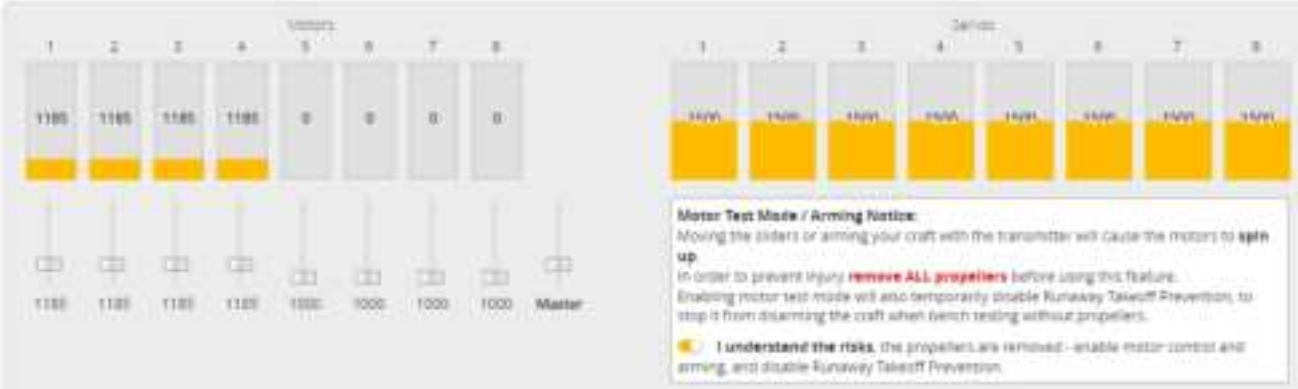
5.UART6 uses ESC telemetry

6.Select aircraft model

1.Click Configuration Select model

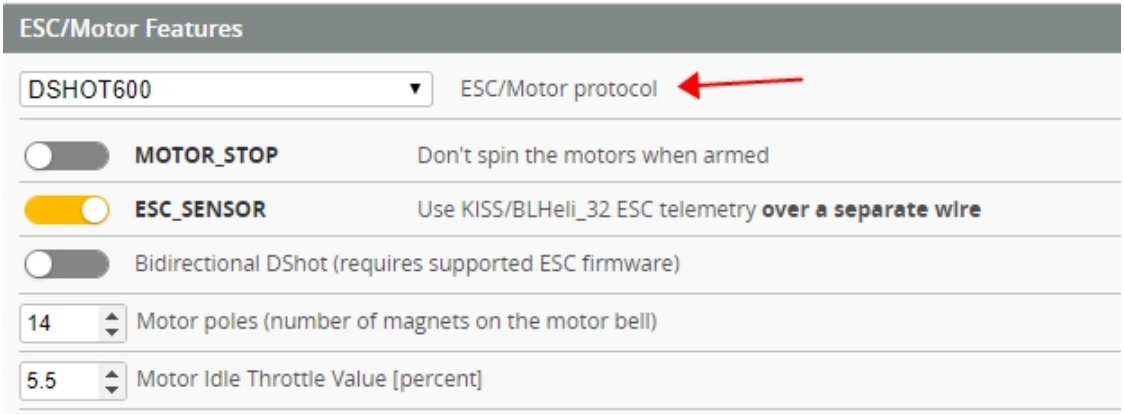


2.Click Motors Click “I understand the risks” Push Master to check motor steering “Master” Steering can be changed at BLHeliSuite



7.Choose ESC protocol

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

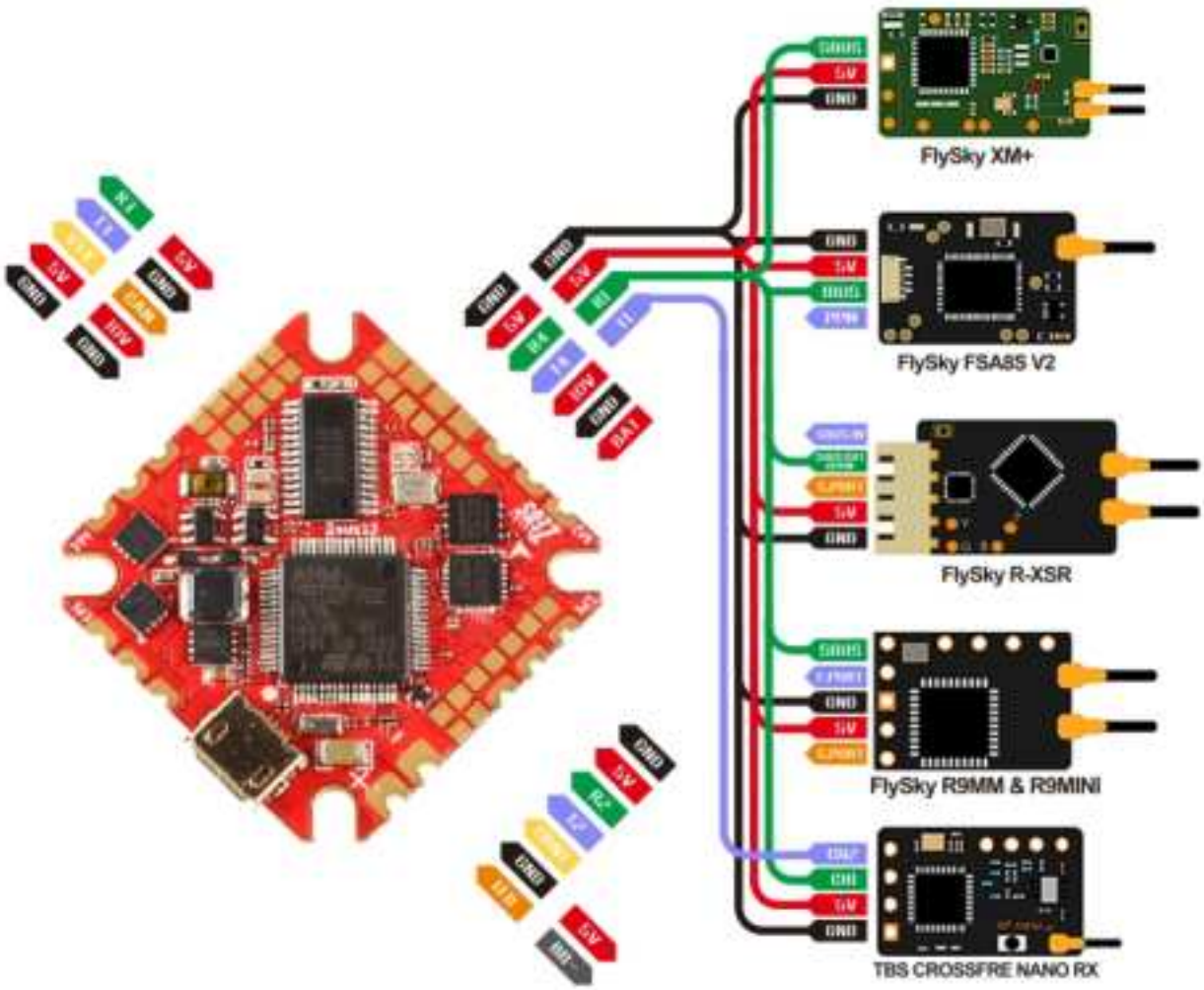


8. Voltage and current parameters setting

1.Click Power & Battery Setting parameters

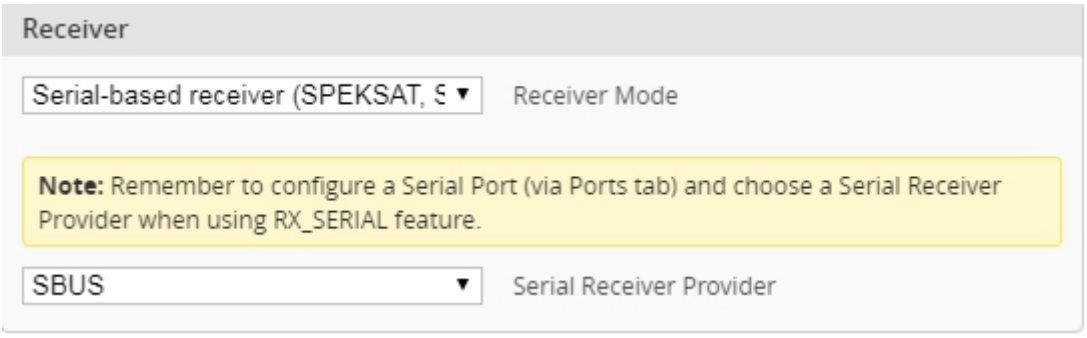
9.Setting up the receiver

1.Receiver connection diagram

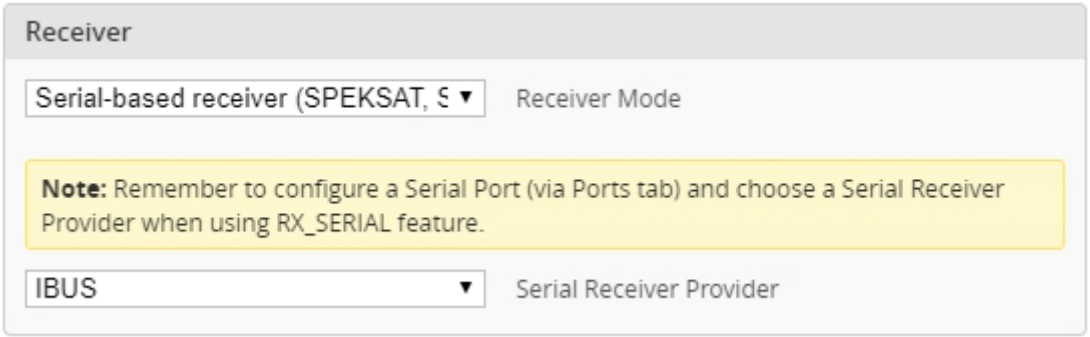


2.Click Ports .have found “UART1” Open the receiver serial port

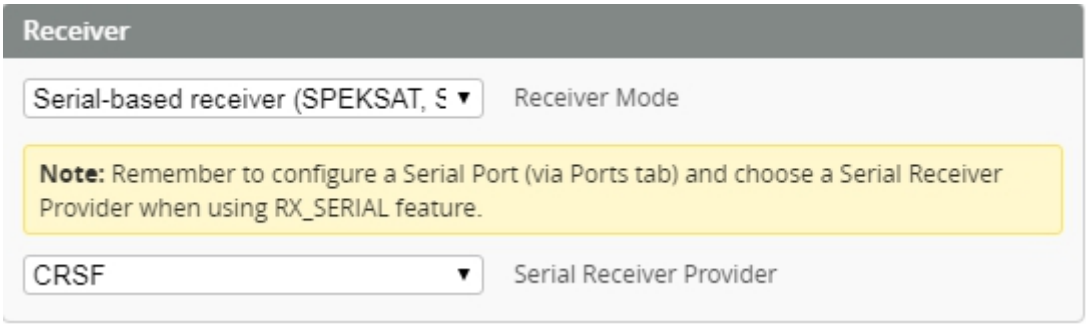
3.Set the SBUS receiver



4.Set the i.BUS receiver



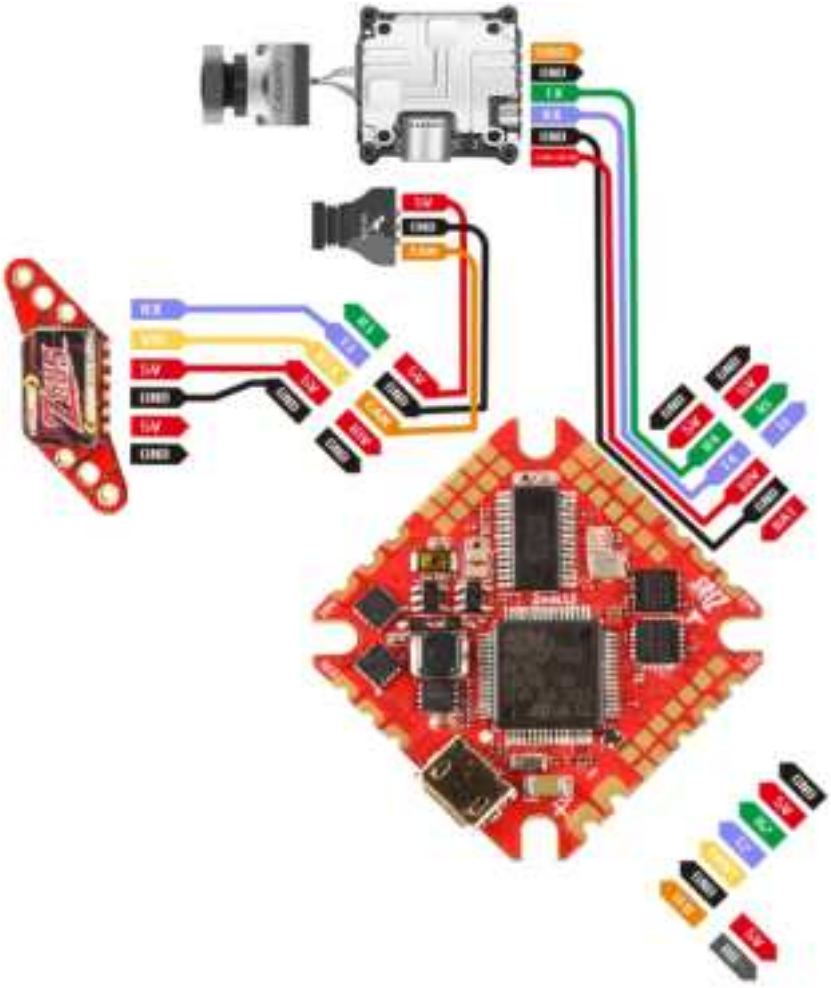
5.Set the CRSF receiver



10.VTX serial port use wiring .

DJI serial port use wiring

1. VTX connection



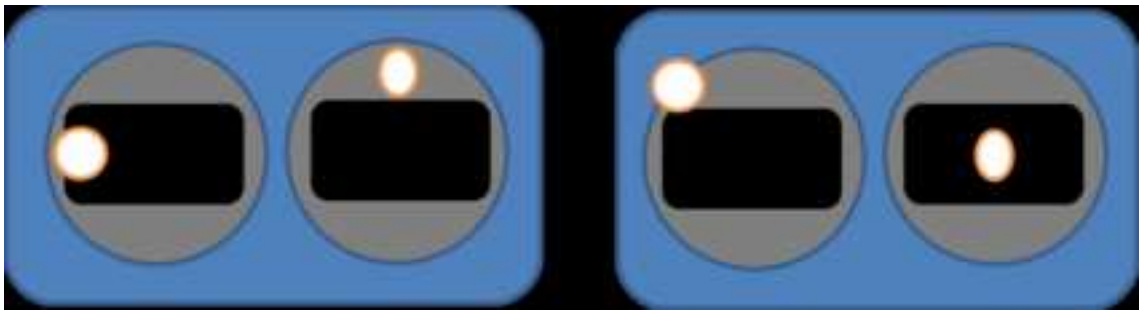
2. DJI FPV Air Unit wiring

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

4.Use OSD to adjust VTX

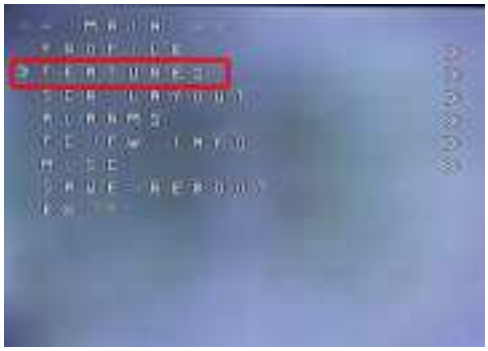
which displays information like battery voltage and mAh consumed while you fly. In addition, the Betaflight OSD can be used to configure the quadcopter, making in-field adjustments and tuning more convenient.

MODE2 MODE1

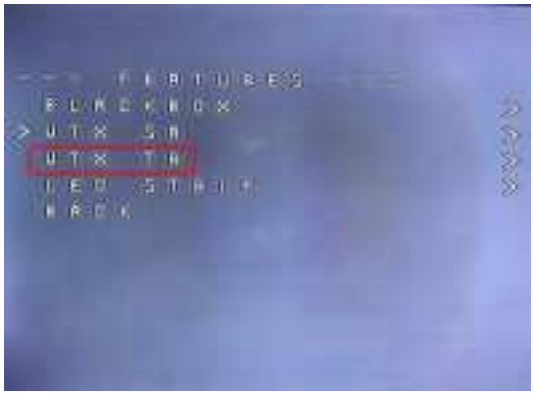


The graphics above show the stick command to bring up the OSD menu. The stick command is: throttle centered, yaw left, pitch forward. The exact stick command therefore depends on which mode your transmitter sticks are in.

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.

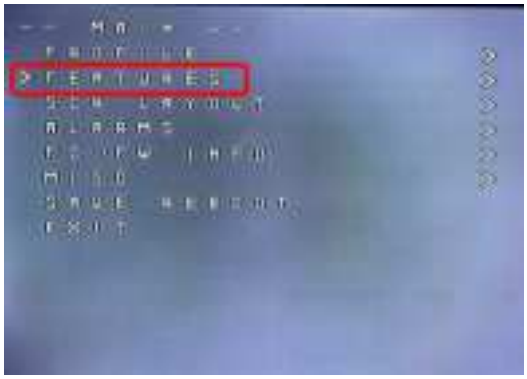


If you are using a video transmitter that supports remote configuration, enter the “Features” menu to configure the vTX. From there, enter either “VTX SA” if you are using SmartAudio (TBS Unify) or “VTX TR” if you are using IRC Tramp Telemetry.



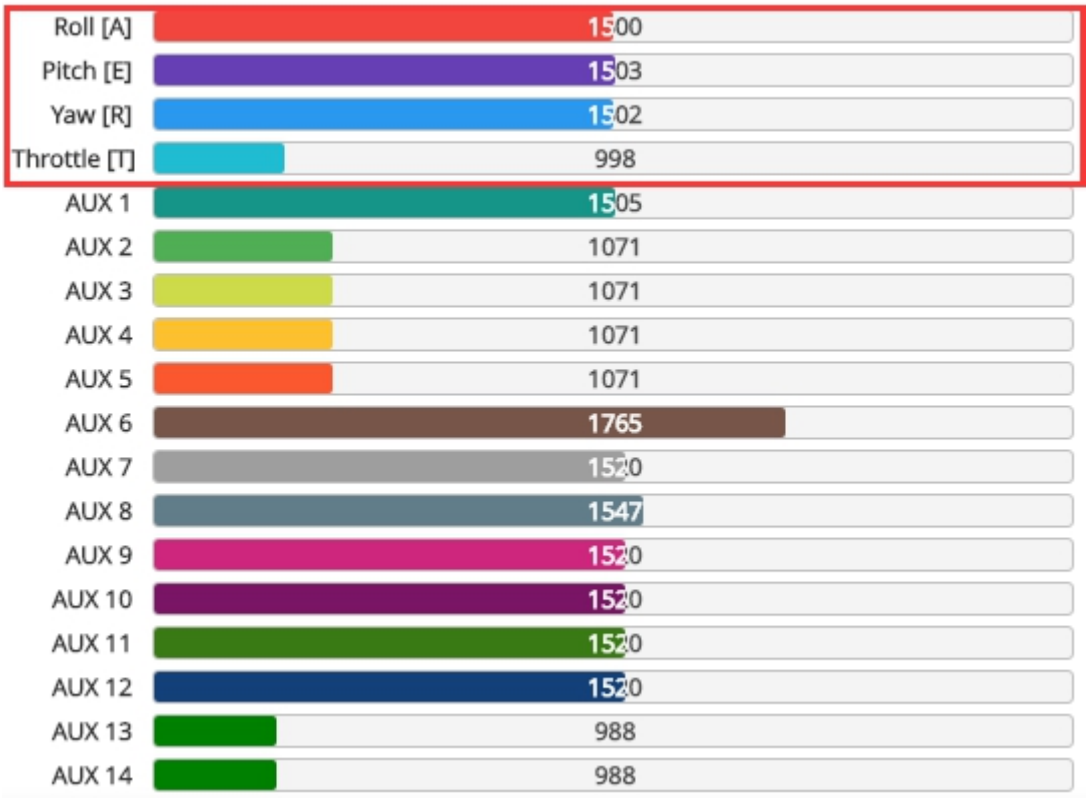
To adjust PIDs, rates, and other tuning-related parameters, enter the “Profile” sub-menu.
In the “Scr Layout” sub-menu, you can move the OSD elements (like battery voltage, mAh, and so forth) around on the screen.

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.



11.Check receiver signal

1.Click Receiver Check the remote control output signal



12.Select flight mode startup mode

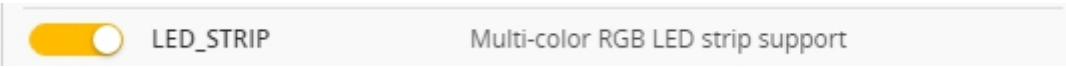
1. Click Modes set up the function of remote control switch across the channel (below are for reference only)

13.OSD settings

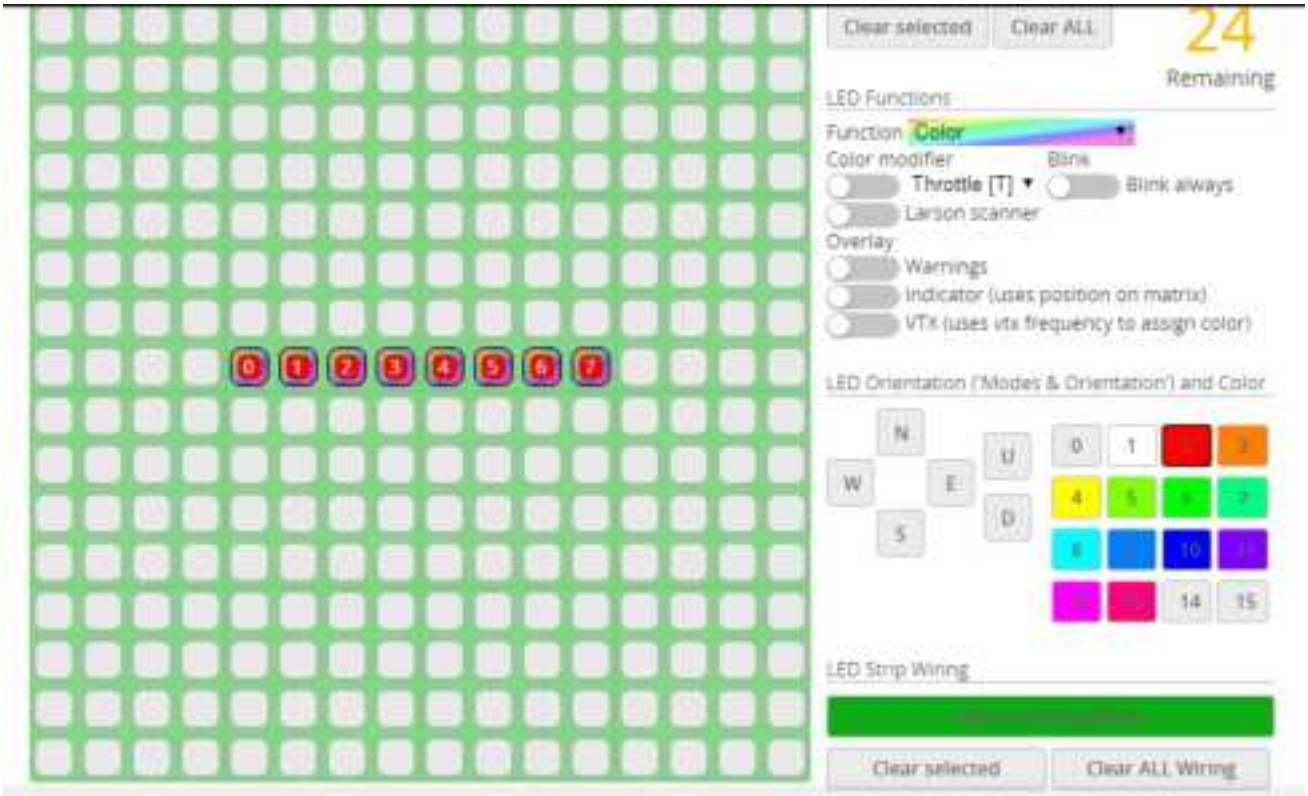
1. Click OSD the OSD Settings, according to the need to choose, drag the OSD schematic diagram of the parameters can be adjusted.

14.LED settings

1. Click Configuration Turn on LED support



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



15.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 4K/4K.

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