# HEXPLORER LR 4 Manual

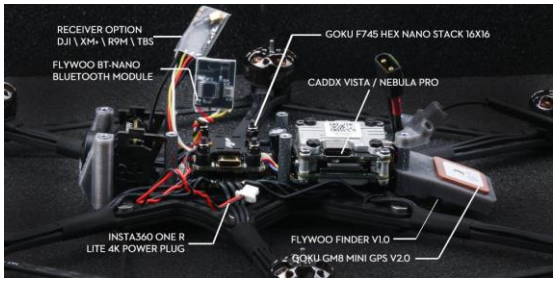
## Analog Version





# 1/ drone introduction

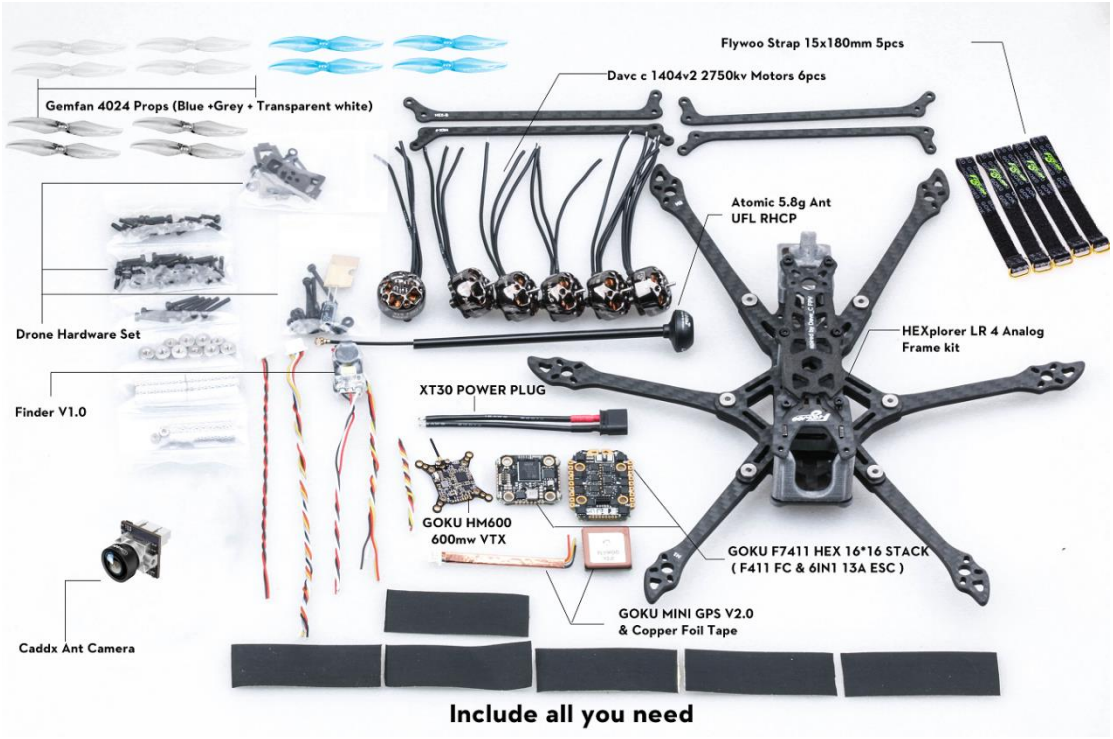
As we said before, we will explore more fun with Dave_C in the new field of #micro long range. We did it! After the success of Explorer LR 4, everyone has many new needs. For example: I hope it can carry a full-size gopro! I hope it is perfect for freestyle and cruising! I hope it has Bluetooth function!
We are proud to announce that Hexplorer Hexa-copter is finally here
Continue to develop new products to meet the needs of more users.


The Flywoo Explorer made a new class of quads mainstream: Micro Long Range! These quads are a compact, sub 250g 4" platform that will still allow you an impressive range and flight times of over 30 minutes on Lithium-Ion packs. Next to these 4" platforms we do see more and more light 5" quads geared towards long flight times. They are usually over 250g but overall faster and capable of carrying heavy loads like full GoPros - Something I wouldn't recommend on 4" where a naked GoPro is a much better choice. Instead of moving up to a bigger prop size for these increased payloads, Flywoo applied some really cool out of the box thinking and created the HEXplorer! Six 4" props have indeed almost the exact same disc area a 5" quad has. Disc load and therefore the overall noise level gets reduces a lot compared to the Explorer when you carry a heavy 4S Li-Ion and a GoPro, while power and freestyle capabilities are increased on lighter packs.

So to summarize things: If you want super long flight times and range while staying sub 250g - Get the Explorer! If you want the smallest and quietest platform to able to carry a full GoPro while still having good flight times and performance - Get the Hex! “
------Dave_C

# 2/ Configuration and wiring diagram description




**HEXplorer LR 4 Vista / Nebula pro BNF Specification :**

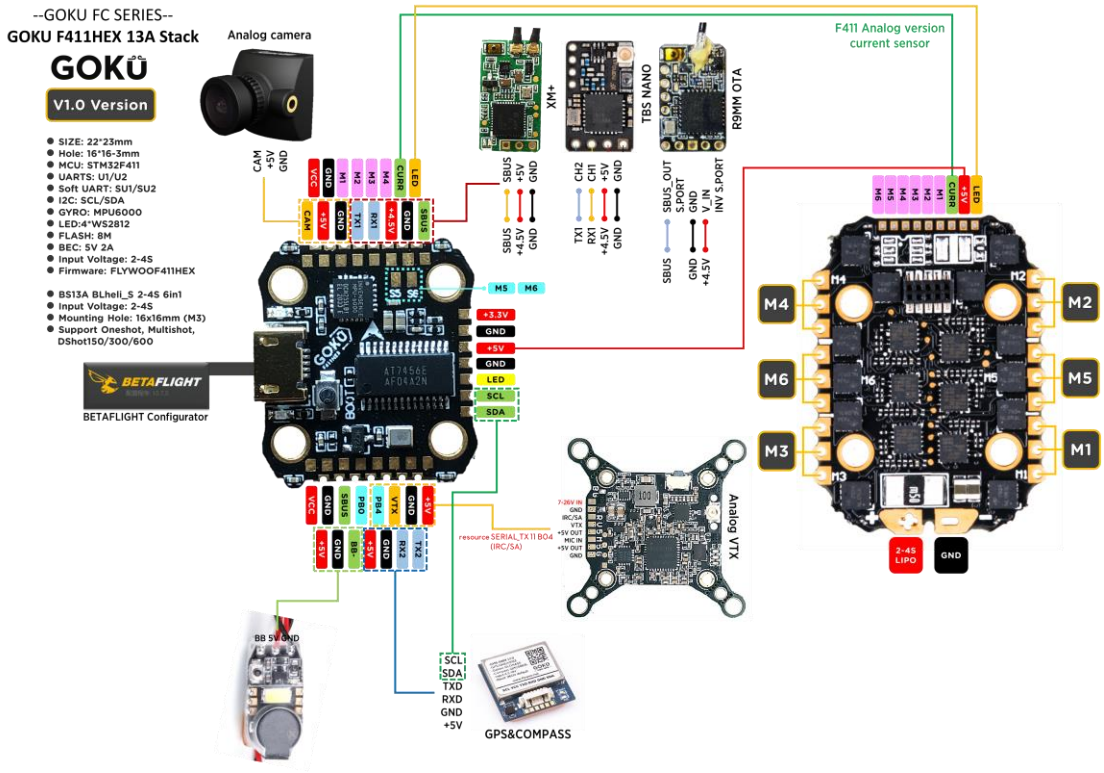
Goku F411 hex nano stack 16x16
Dave_C & Nin 1404 V2 2750kv motors
Goku M8N mini gps v2.0
Flywoo Finder v1.0
Flywoo Bt-nano Bluetooth module
Gemfan 4024 props
Atomic 5.8 G antenna RHCP
Camera: CADDX ANT
VTX: FLYWOO HM600

**Recommend Battery :**

Naked Gopro & SMO 4K & Insta360 go ---Explorer 18650
Gopro 5/6/7/8 & Insta360 One R ---- Tattu 1050 4s mah or 850 4s mah

**Highlights & Specification :**

Equipped with GOKU HEX F411 16X16 NANO STACK, and NIN 1404 v2-2750kv, support 4s battery. Use powerful STM32F411 chip,5V/2A BEC, black box, WS2812LED, support 2 complete hardware, 1 serial ports, I2C and other functions are all open ! Enough to meet all FPV needs.



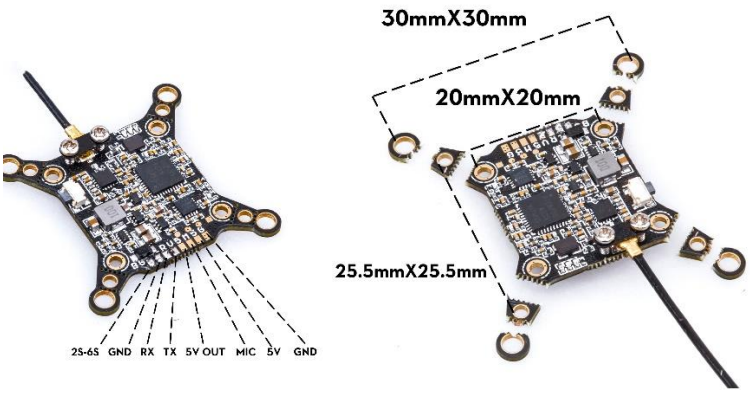

| Identifier | Configuration/MSP | Serial Rx | Telemetry Output | Sensor Input | Peripherals | |
|---|---|---|---|---|---|---|
| USB VCP | 115200 | | Disabled AUTO | Disabled AUTO | Disabled AUTO | |
| UART1 | 115200 | | Disabled AUTO | Disabled AUTO | Disabled AUTO | RX IN (SBUS/CRSF) |
| UART2 | 115200 | | Disabled AUTO | GPS 9600 | Disabled AUTO | GPS Serial Port |
| SOFTSERIAL1 | 115200 | | Disabled AUTO | Disabled AUTO | VTX (IRC Tran AUTO | VTX IRC/SA |

SOFTSERIAL1 TX is mapped to PIN B04
CLI: RESOURCE SERIAL_TX 11 B04

UART1: TBS/R9M/XM+/DSMX/SBUS receiver

UART2: GPS module, the default baud rate is 9600

SOFTSERIAL1: VTX IRC/SA Control




## Frequency table：

| FR/CH | CH1 | CH2 | CH3 | CH4 | CH5 | CH6 | CH7 | CH8 |
|---|---|---|---|---|---|---|---|---|
| A | 5865 | 5845 | 5825 | 5805 | 5785 | 5765 | 5745 | 5725 |
| b | 5733 | 5752 | 5771 | 5790 | 5809 | 5828 | 5847 | 5866 |
| E | 5705 | 5685 | 5665 | 5645 | 5885 | 5905 | 5925 | 5945 |
| F | 5740 | 5760 | 5780 | 5800 | 5820 | 5840 | 5860 | 5880 |
| r | 5658 | 5695 | 5732 | 5769 | 5806 | 5843 | 5880 | 5917 |

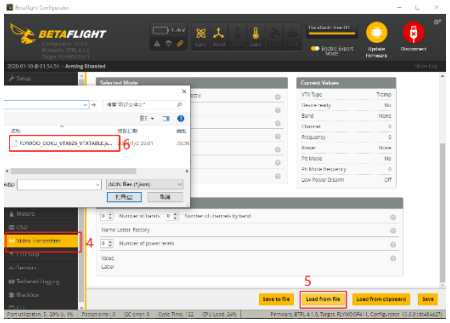
- The selections in XXXX requires HAM license to operate .legally. XXXX Selections are only available on special request.

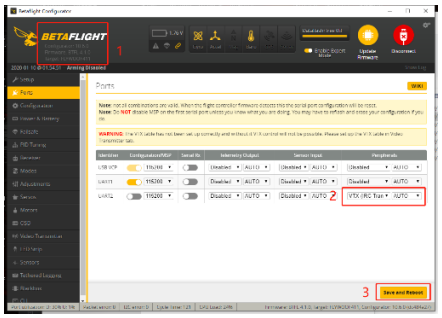
- **Button function**
- FR (blue light), short press the button, the blue light flashing times represent CH1-CH8
- CH (yellow light), long press the button 2S until the yellow light flashes, and then press the button shortly, the number of flashes of the yellow light represents A-r
- PW (power), long press the button 6S until the red light flashes, and then press the button shortly, the number of flashes of the red light represents 5 levels of power

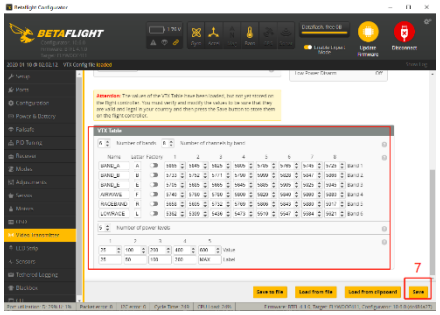
- **Betaflight osd IRC function**

FLYWOO_GOKU_HM600_VTXTABLE.json

https://flywoo.net/pages/manual



# 3/ Receiver binding

**TBS NANO 915:**

When the USB is connected, the green light of the receiver flashes, and then bind according to the picture operation.

https://www.youtube.com/watch?v=-iNkVcOLITM&ab_channel=Danimal3D




**R9MM FCC ACCESS OTA：**

Make sure your remote control supports ACCESS protocol, then follow the link to register and bind

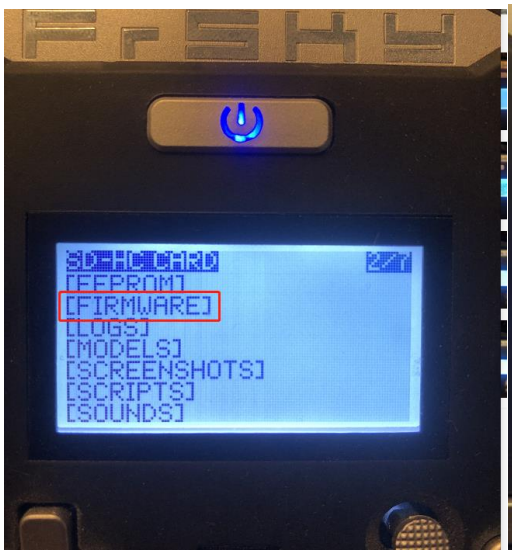
https://www.youtube.com/watch?v=az5hDdNBcjg&t=9s&ab_channel=FrSkyRC

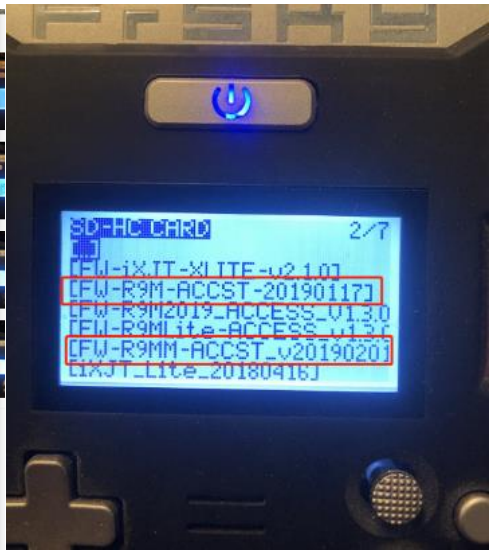
***If the remote control is ACCST protocol, please bind as follows:***

1/ Put these two files into the firmware directory of the SD card of the remote control.

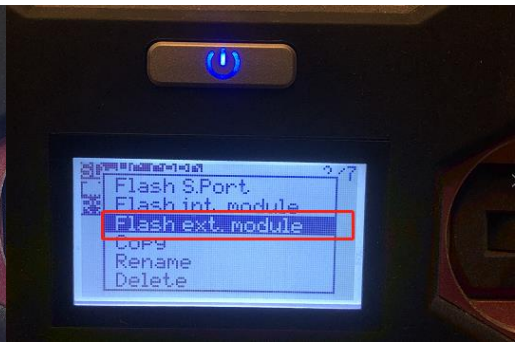
R9MM firmware: FW-R9MM-ACCST_v20190201

R9M TX module: FW-R9M-ACCST-20190117

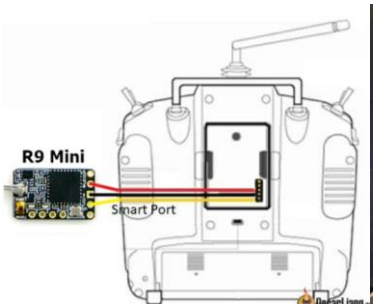


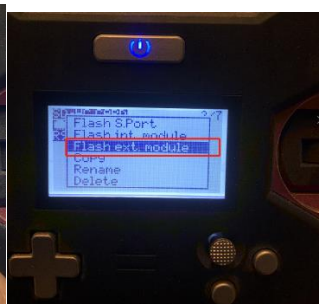

2/ Insert the R9M TX module and write the firmware you need

3/ To write the firmware of the R9MM receiver, you need to remove the R9MM receiver, and then write the firmware by connecting to the S.PORT port.







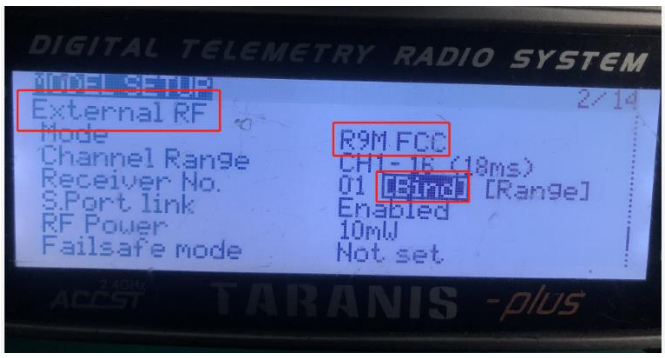

4/ After both R9M TX and R9MM RX are written into the ACCST firmware.

Binding method:

1/ Press and hold the button of RX, power on, the red and green lights are always on.

2/ Then after R9MM selects binding, RX red light flashes, and then exit

3/ RX is powered on again, and only a green light is displayed, indicating that the binding is successful.

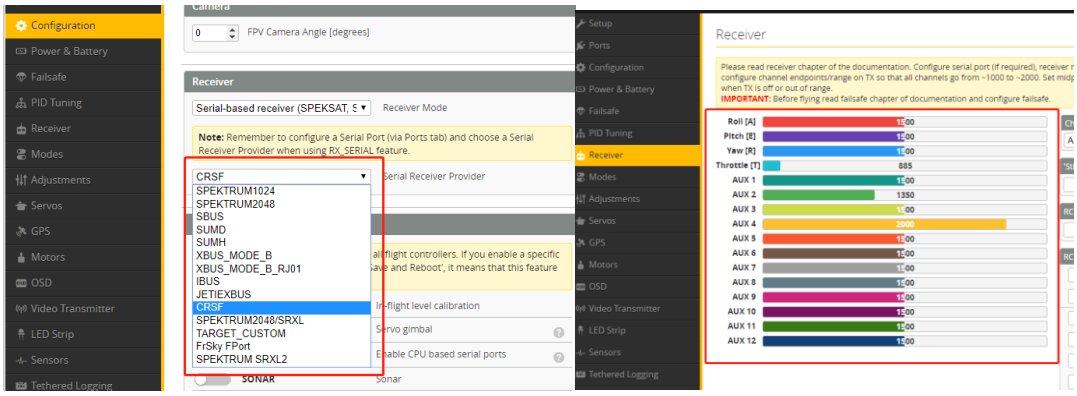



**XM+ receiver:**

1/ Press the XM+ receiver button, USB power supply, the red and green lights are always on

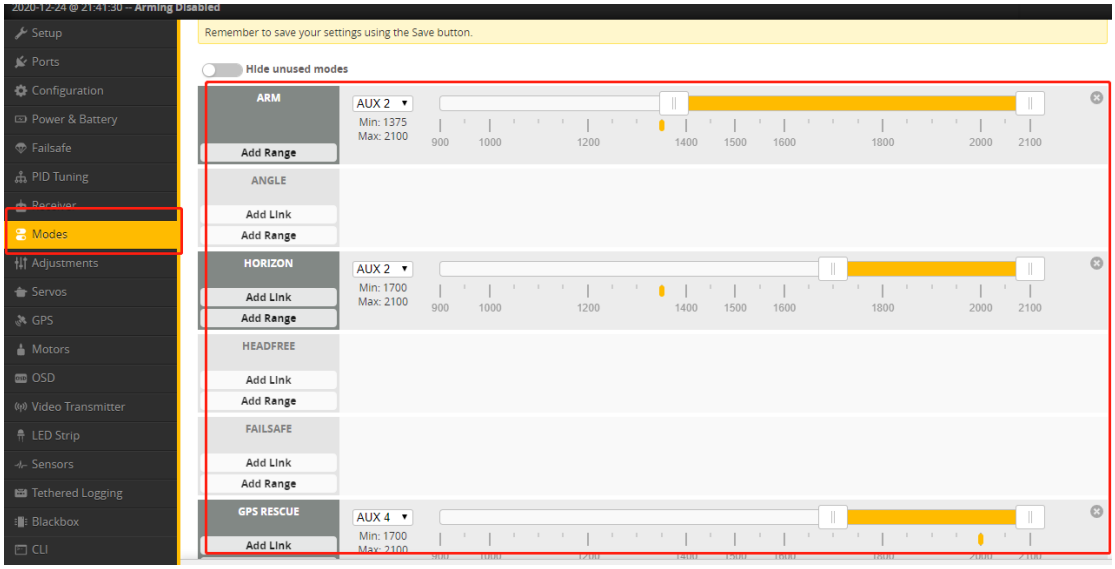
2/ The remote control turns on the binding mode, the green light flashes to indicate successful binding, turn off and restart

3-1/ Then set the corresponding serial port and receiver protocol to ensure the normal output of each channel of the receiver.



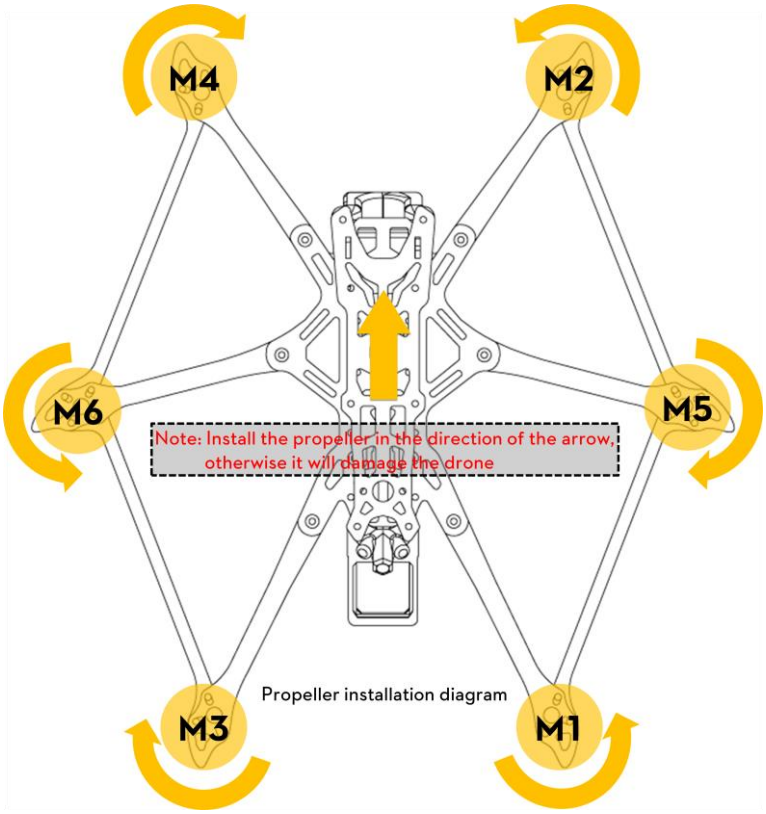

# 4/ Mode setting:

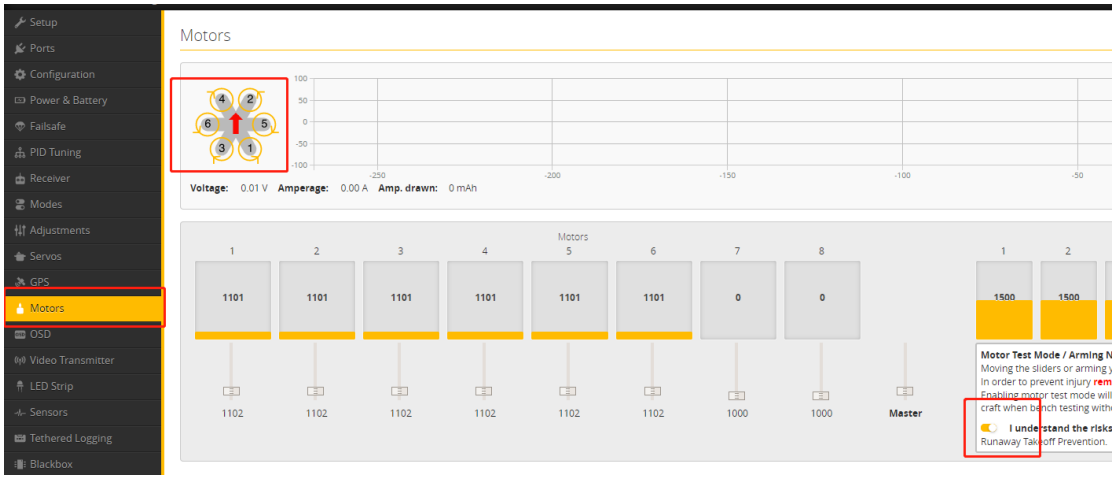
Set the ARM switch and flight mode switch, AUX* corresponds to the remote control switch, and the yellow area mark is turned on.



# 5/ Motor test:

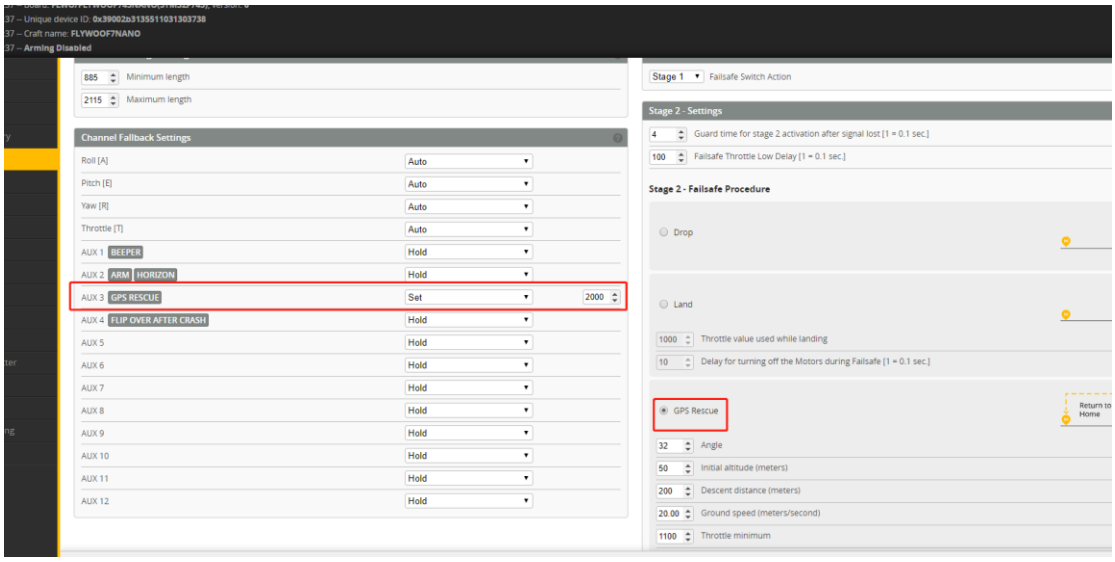
Unload the propeller, test the rotation direction of the motor, turn on the safety switch, and test the rotation of the motors one by one.



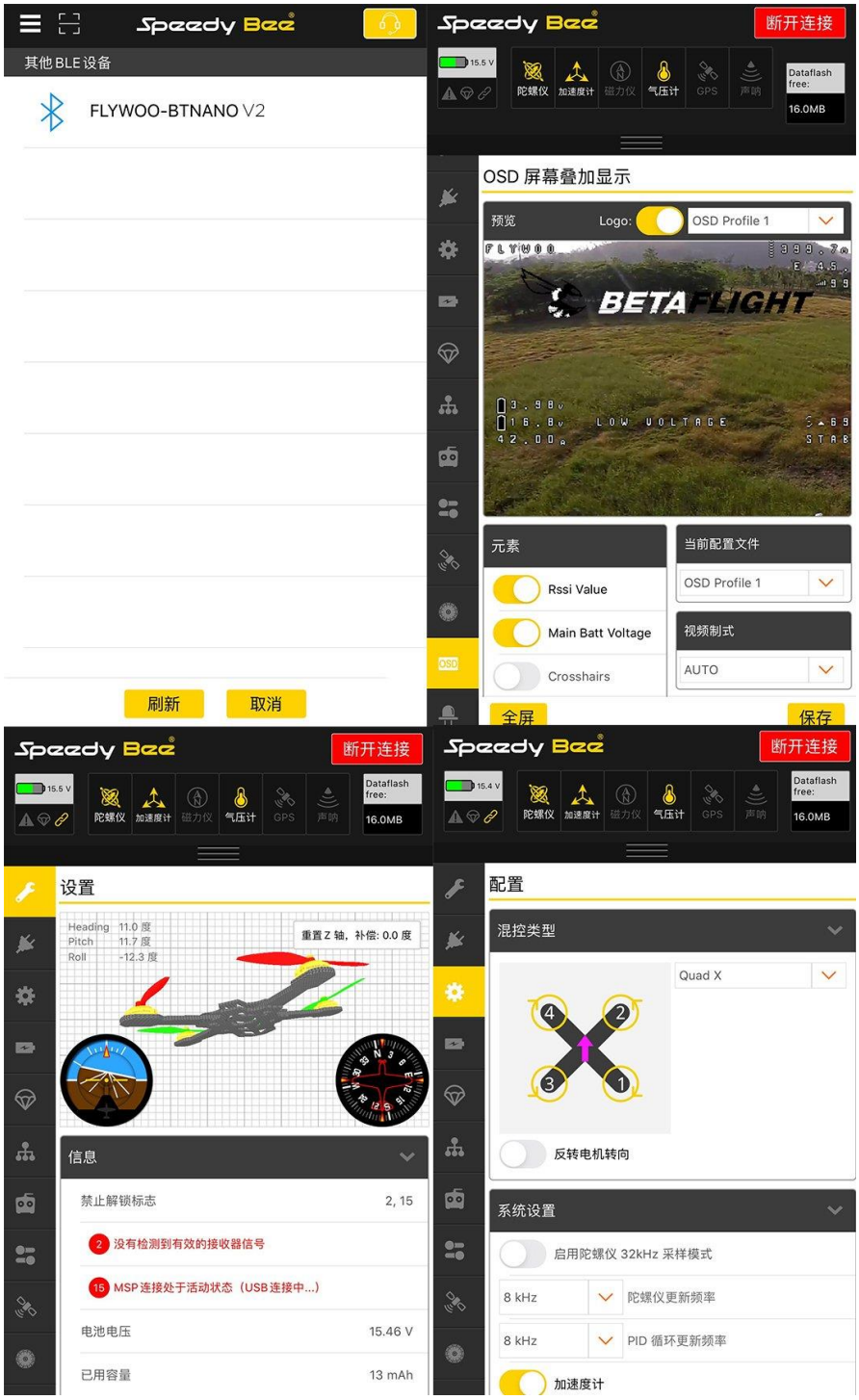
# 6/ GPS rescue mode

1/ When GPS finds 5 satellites and locks, it will display latitude/longitude/altitude/distance information.
2/ GPS rescue can only be turned on when the flight distance data exceeds 100 meters, otherwise it will fall directly.
3/ After the GPS rescue is turned on, DRONE will turn around and rise gradually and return to the home location.
4/ DRONE will not automatically land. When the control is restored, you need to control DRONE to land.

# 7/ Bluetooth function

Betaflight APP



# 8/ Finder BUZZER function

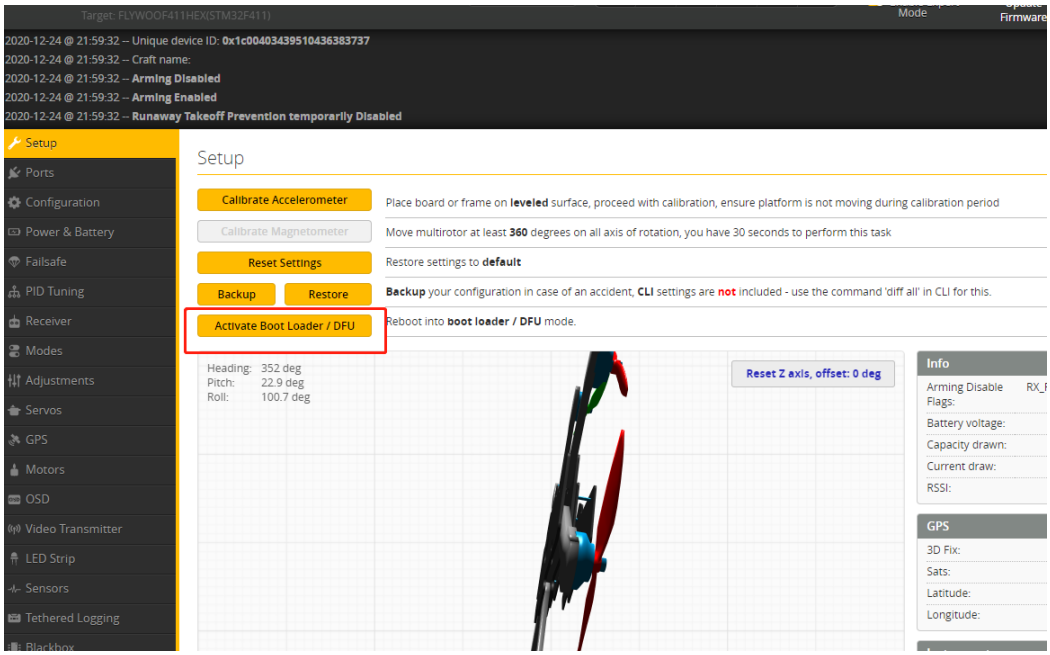

**The buzzer has two modes of operation:**

1. It is compatible with the functions of the traditional active buzzer and synchronized with the flight control.
2. When the flight control is normally connected, if the main battery in the flight is powered off, it can still automatically emit 100 dB of drip sound after 30 seconds of power failure, and the LED will emit white light.

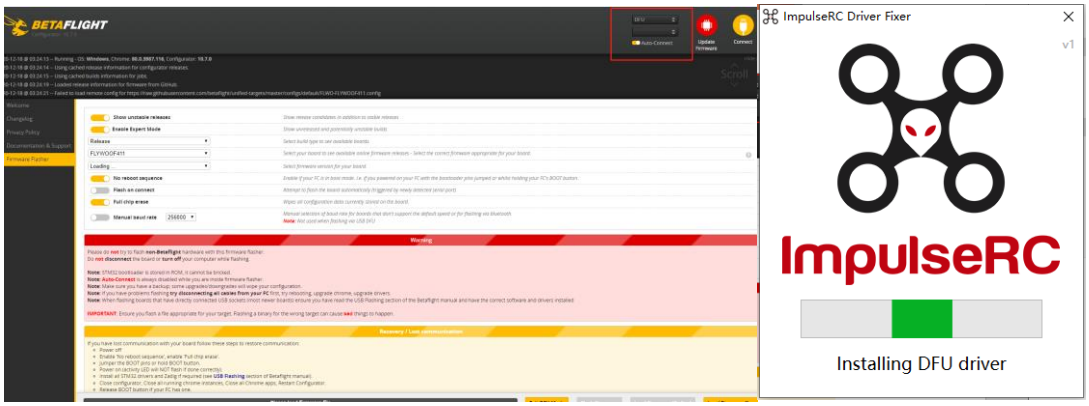
To turn off the buzzer: Press and hold the release button for more than 2 seconds, the Finder V1.0 turns off the sound.

# 9/ Flight firmware upgrade and write default CLI

1/ Activate DFU mode

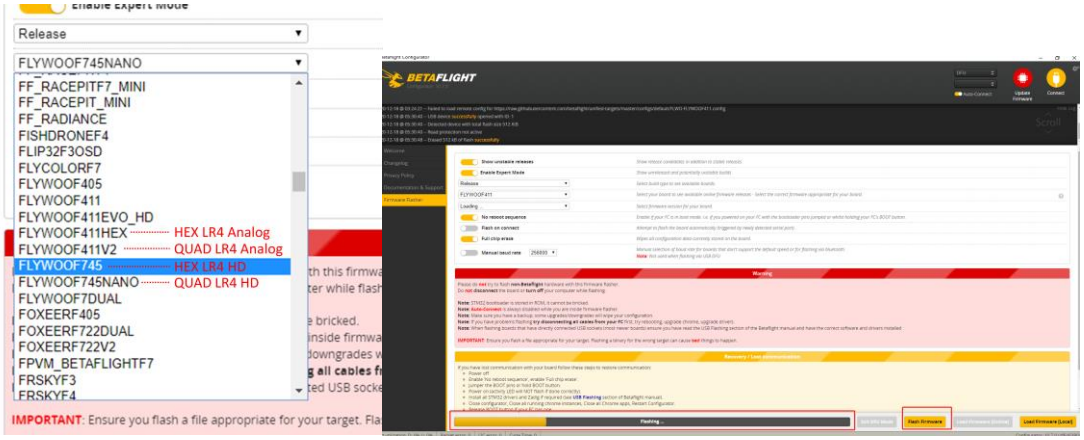


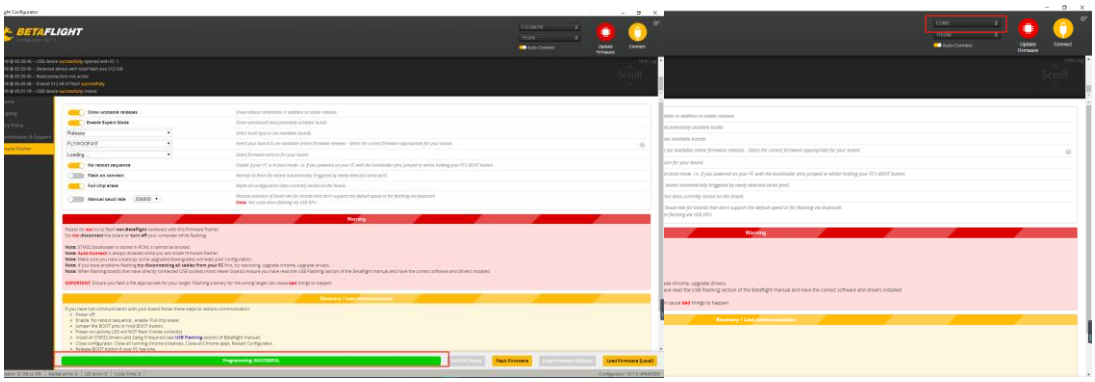
2/ BF Configurator will display to enter DFU mode. If it does not enter DFU mode, it may be that the driver is not installed. The driver can be installed using IMPULSE RC software



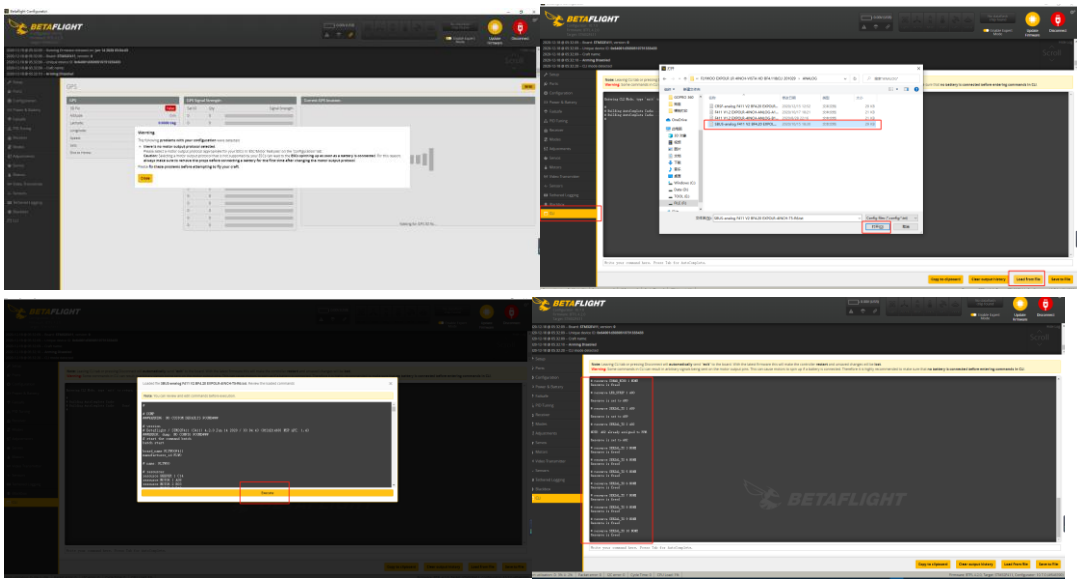

Driver software:
https://impulserc.blob.core.windows.net/utilities/ImpulseRC_Driver_Fixer.exe

3/ Then load the local HEX firmware and wait for the flashing to complete. A green progress bar is displayed to indicate completion, and DFU will become a COM port

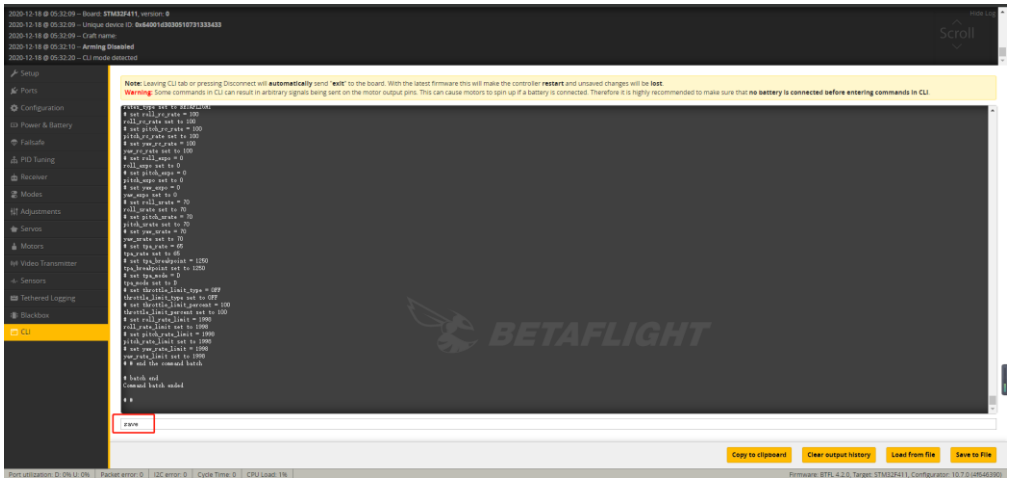


4/ After the connection is entered, it is a blank interface, you need to write CLI commands, Factory CLI LINK: https://flywoo.net/pages/manual



5/ If the command is not restarted after writing the command, please write SAVE and press Enter to save, and the FC will restart



6/ Then all functions of FC return to normal.