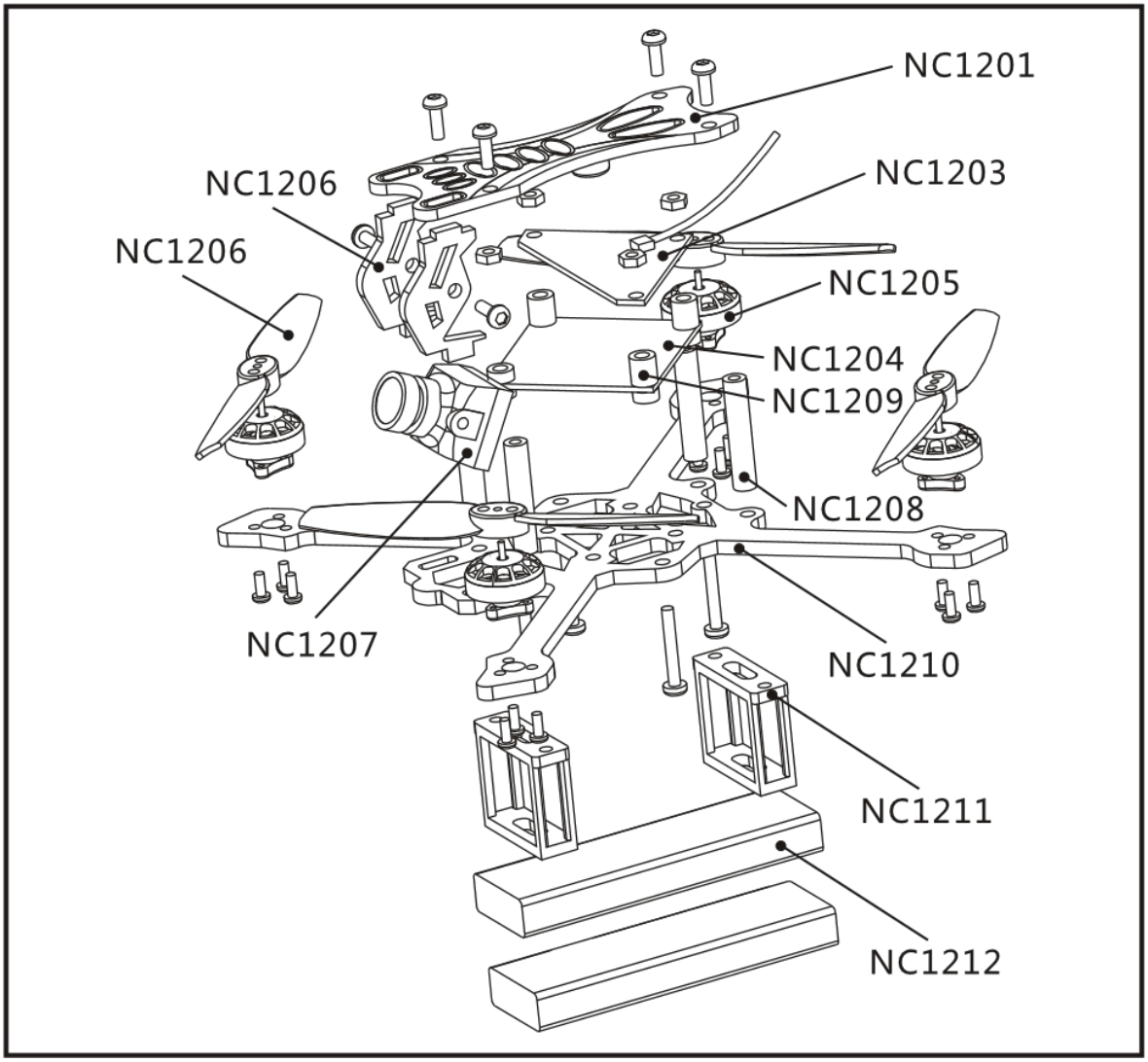
Eachine Novice-II 1-2S Toothpick RTF Micro Drone User Manual



Item	Part No.	RTF	FLY More
120mm toothpick frame	NC1210	1	1
Nano X F4 flight controller	NC1204	1	1
Eachine NC1103 KV8500	NC1205	4	4
HQPROPT65 bi-blade propeller	NC1206	2	2
Caddx EOS2 v2 version 4:3	NC1207	1	1
VTX: 5.8g 25mw~200mw switchable Whoop VTX	NC1203	1	1

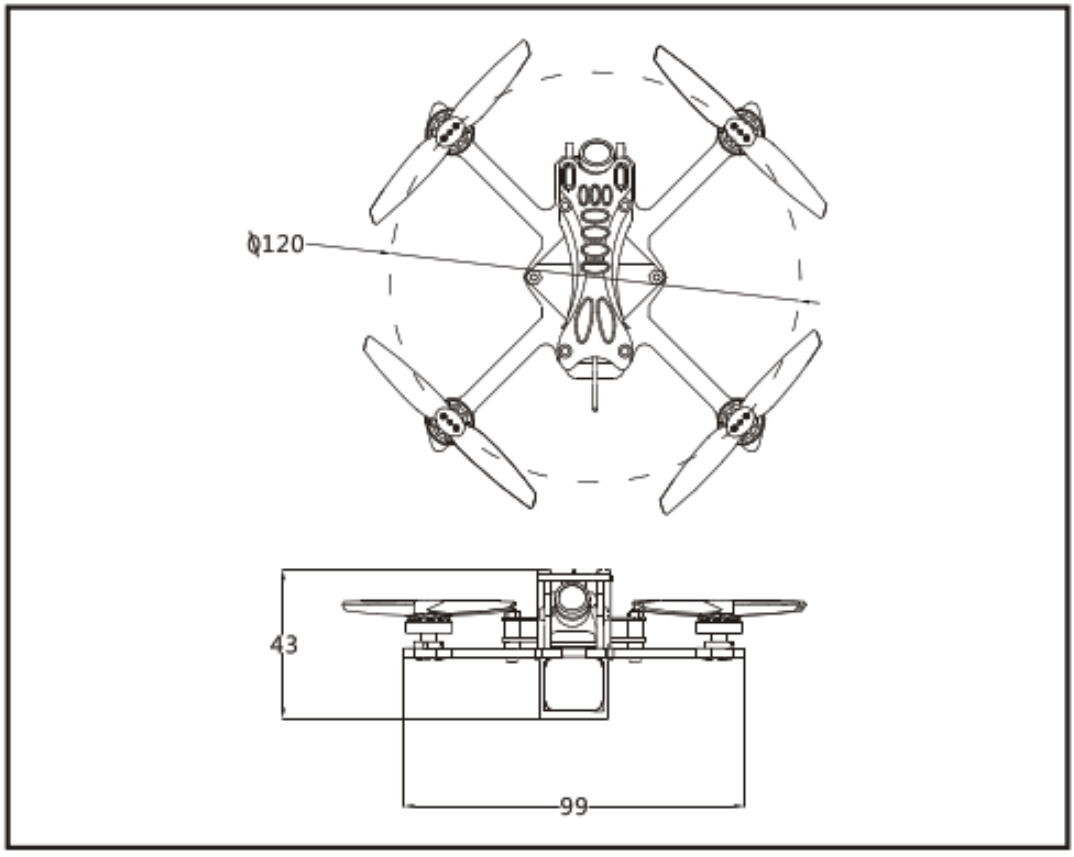
3.8v460mah battery	NC1212	2	10
6inl 6-way LIPO/LIHV Charger		1	1
Eachine WT8 2.4G radio transmitter		1	1
Eachine VR009 5.8G 40CH goggles		1	1
Propeller disassemble tool		1	1
Screwdriver		1	1
LED&Buzzer PCB top board	NC1201	1	1
M2*D3.5*L20 Aluminum Alloy column	NC1208	4	4
Damping ball	NC1209	4	4
Battery mounted tray	NC1211	2	2

1. **Specification**

Brand Name: Eachine
Item Name: NOVICE-111-2S Toothpick RTF & Fly more
Wheelbase: 120mm
Size: 100mm*100mm*40mm
Weight: 50g(without battery)

2. **Features**

Nano X F4 pro flight controller
Powerful and smoothly
Led Strip ready
Built-in Buzzer
New design 1103 KV8500 motors
Camera Angle adjustable
VTX power switchable 25mw~200mw
Smartaudio ready, change VTX bands, powers, channels via OSD
Ready to fly
Compatible both for 1s-2s Lipo/LIHV

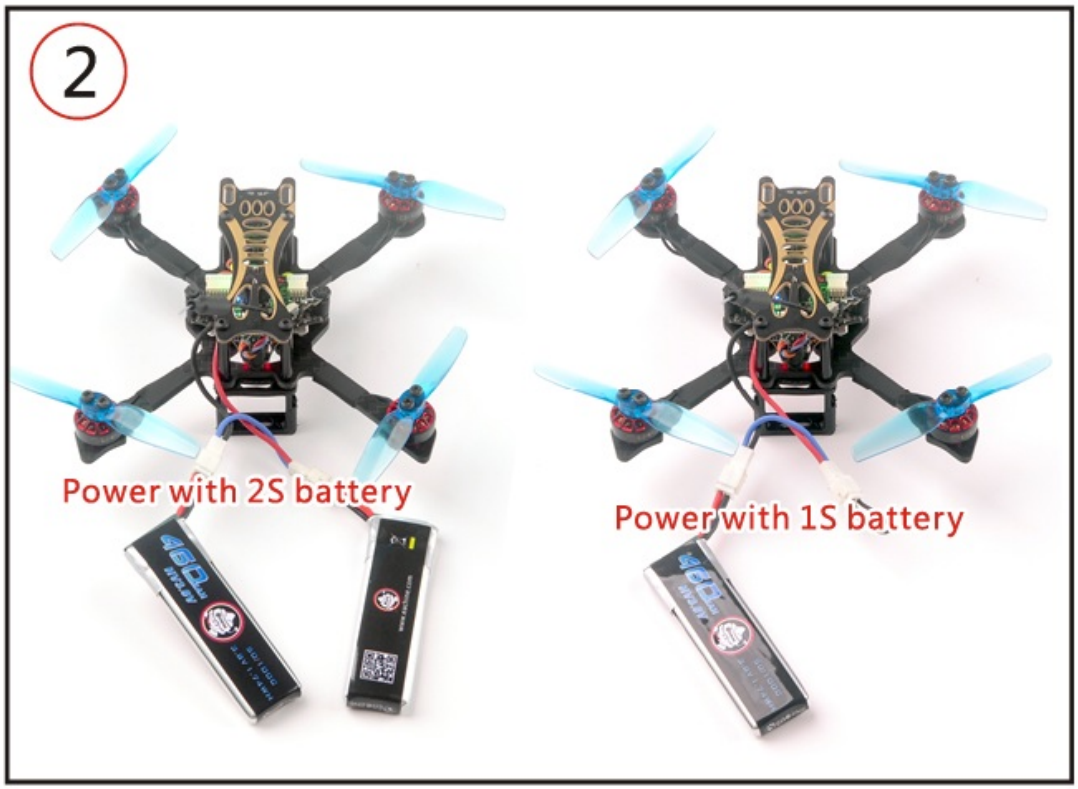


3. **Start FPV Flight**

Start by powering on your Radio and Goggles. NOVICE-II comes already bound to your radio and on the right

video channel matched with your goggles. Power on NOVICE-II by sliding the battery into the battery tray and plugging it in. Once the battery is plugged in, set NOVICE-II on a stable surface so it can calibrate. Calibration takes a few seconds then NOVICE-II is ready to fly.

Install 4x AAA 1.5v battery to the radio and Short press the power switch to turn on the radio. If the throttle stick was not at the bottom position the radioter will alarm.



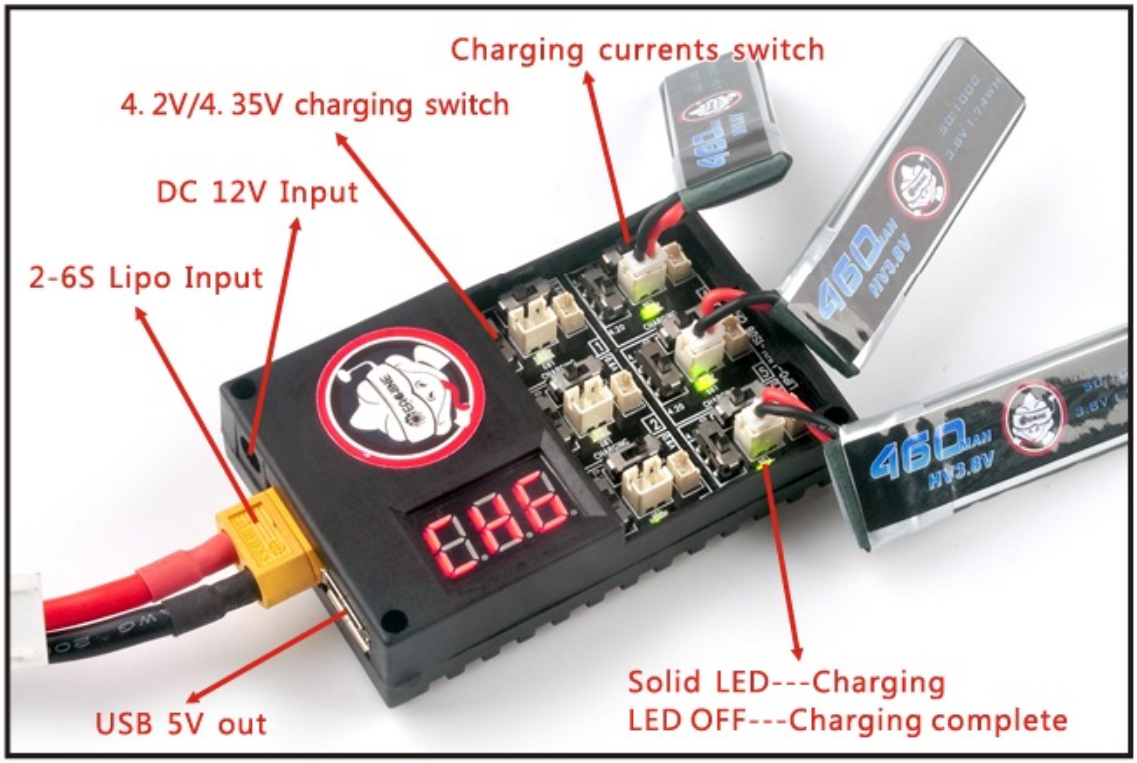
Connect the battery for the NOVICE-II

.Turn on the Vr009 goggles and check the Video

Press AUX1 (CH5) switch to arm the NOVICE-II, you will find “ARMED” notice in the screen of the Goggles. Recommend press AUX2(CH6) to choose Stable mode for the beginner. Happy flight and keep it safe.

Press AUX2 switch(ch6) to select flight mode (Default is Aero mode)

4. **Charger the Lipo Battery**

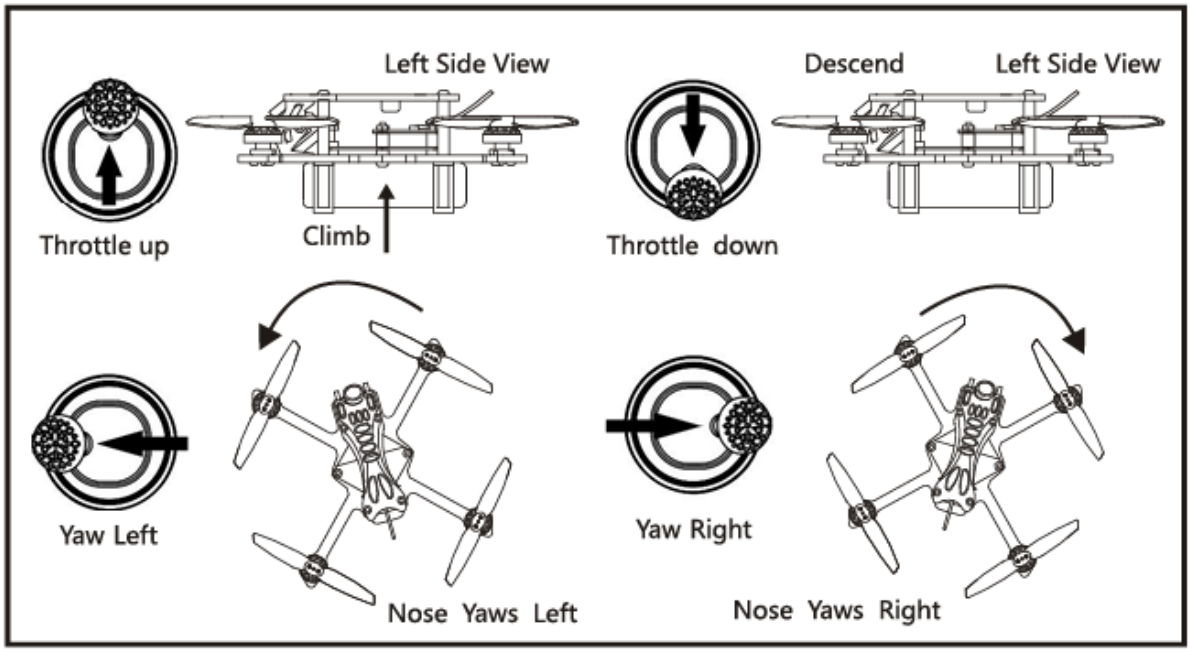


⚠ Ports are numbered 1-6. Do not put more than one battery on a single port. For example: do not insert one battery on the Picoblade 1.25 plug and another on the same port with the PH 2.0 plug.

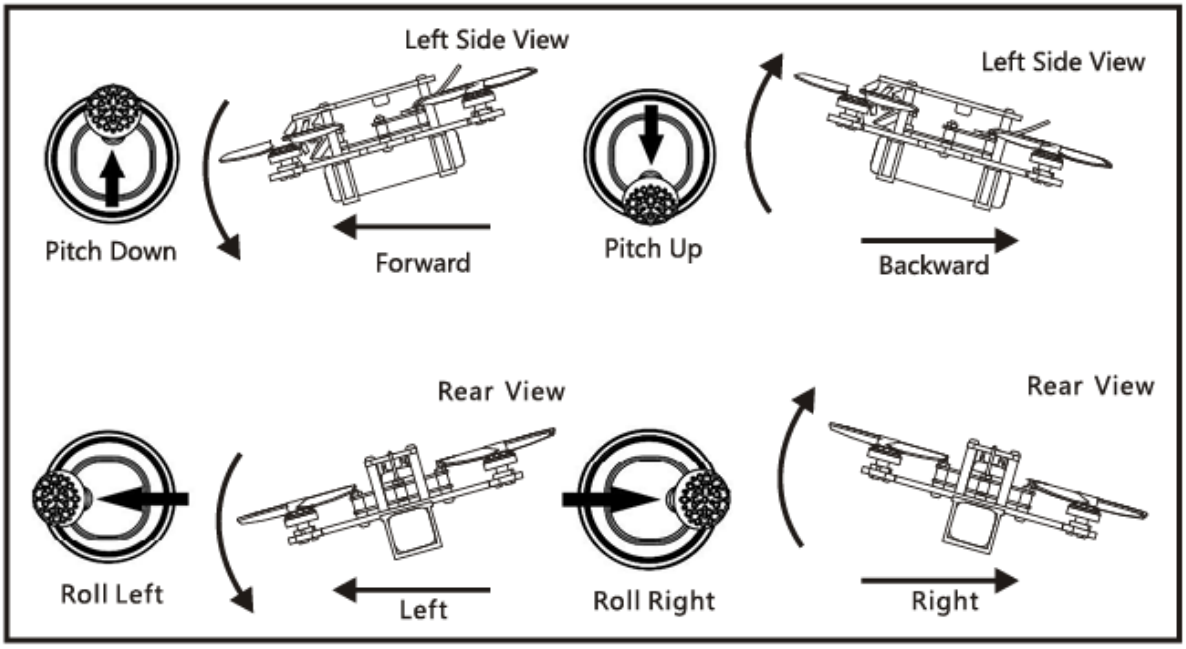
5. **Flight and Radio Stick Controls**

Always use caution when flying and operate in an open and controllable area. Please learn the flight controls first before powering on the aircraft to fly. The left stick controls throttle and yaw direction of NOVICE-II. The right stick controls pitch and roll of the aircraft.

Left Stick Diagram



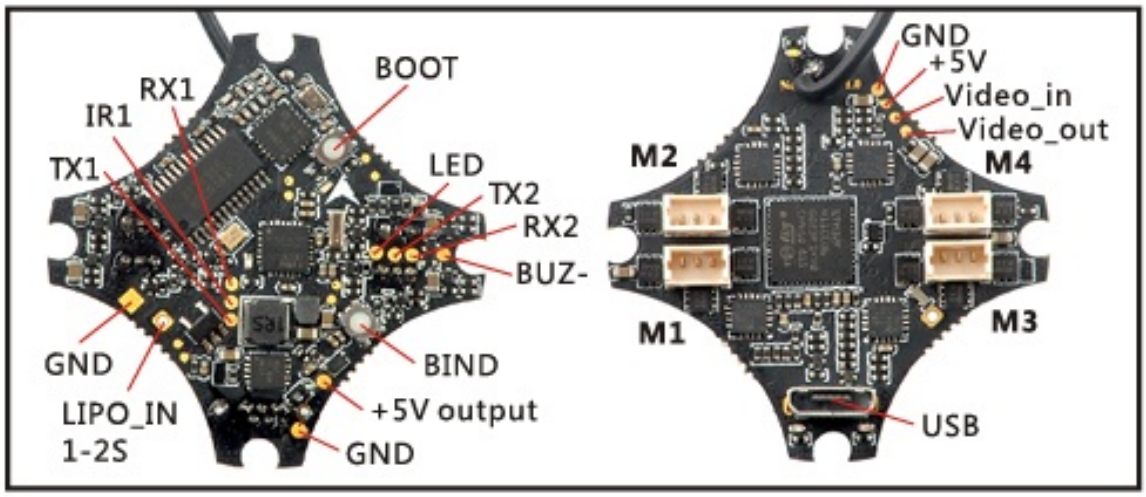
Right Stick Diagram

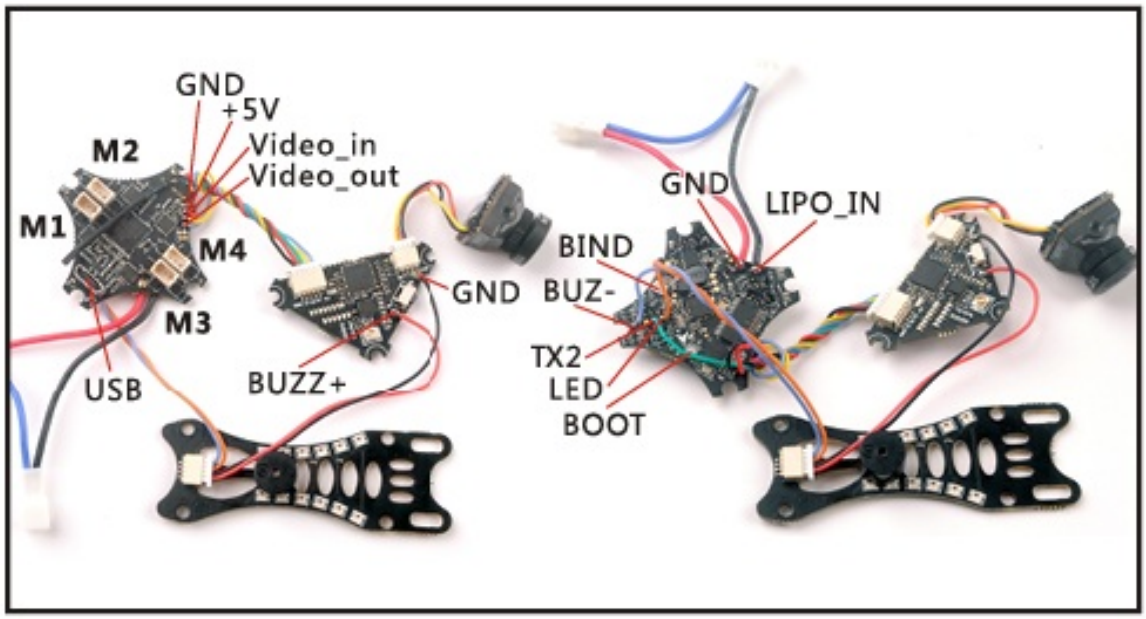


6. **Important notice:**

1. The belowing content are about advanced tutorial. The drone comes out already finished all the settings and bound with the radio.

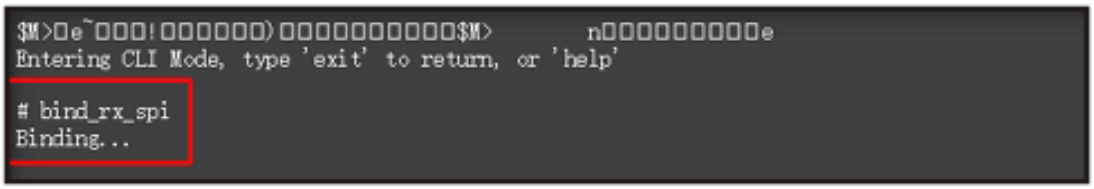
2. Don’t mod to XT30 Plug, it will burnt the flight controller if mod to xt30 and use high discharge rating battery.



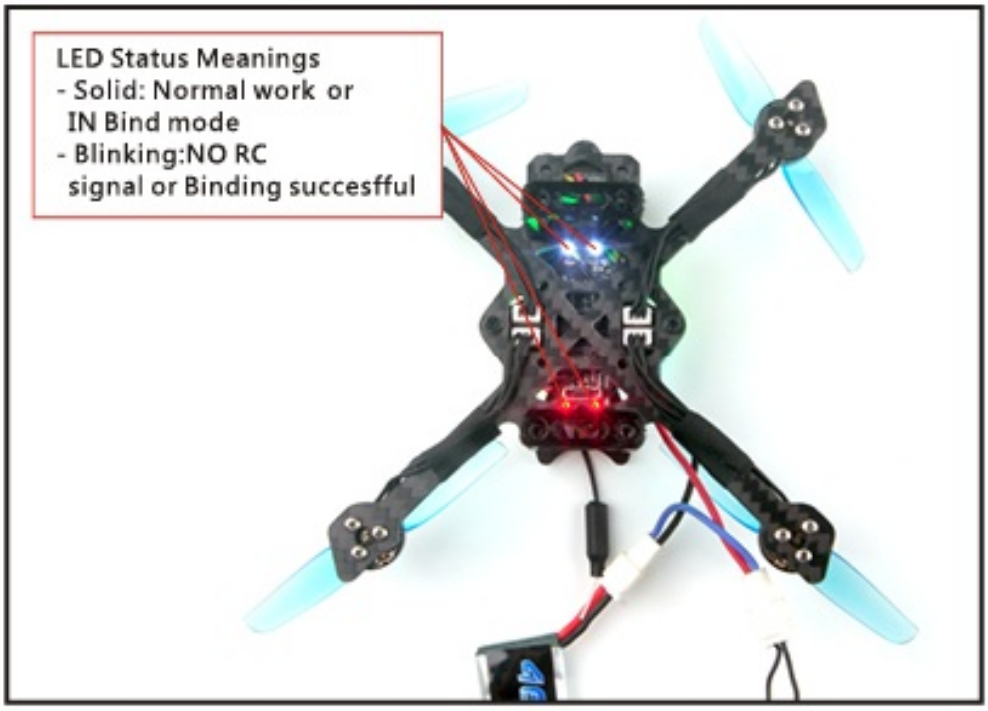


7. **Binding procedure**

   l.Plug the USB and go to the CLI command tab in the beta flight configurator, then type “bind_rx_spi” ,the receiver will getting into bind mode, and then



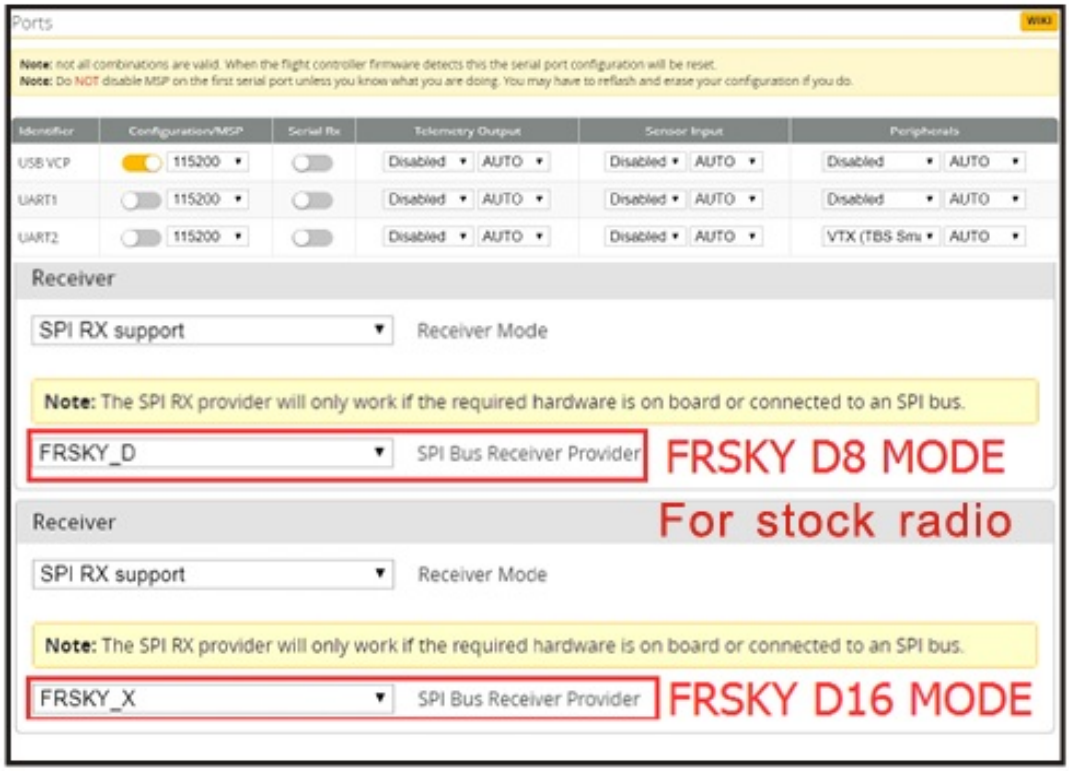
   2.Turn on the Radio. Press and hold the bind button for 3 seconds then the radio will beep one time, release the bind button, then the Blue LED will starting to blinking fast, it means the radio is in bind mode. If the LED combo (2pcs red LED and 2pcs white LED) starting to blinking slowly , it means bind successful. Now short press the bind button to exist bind mode.



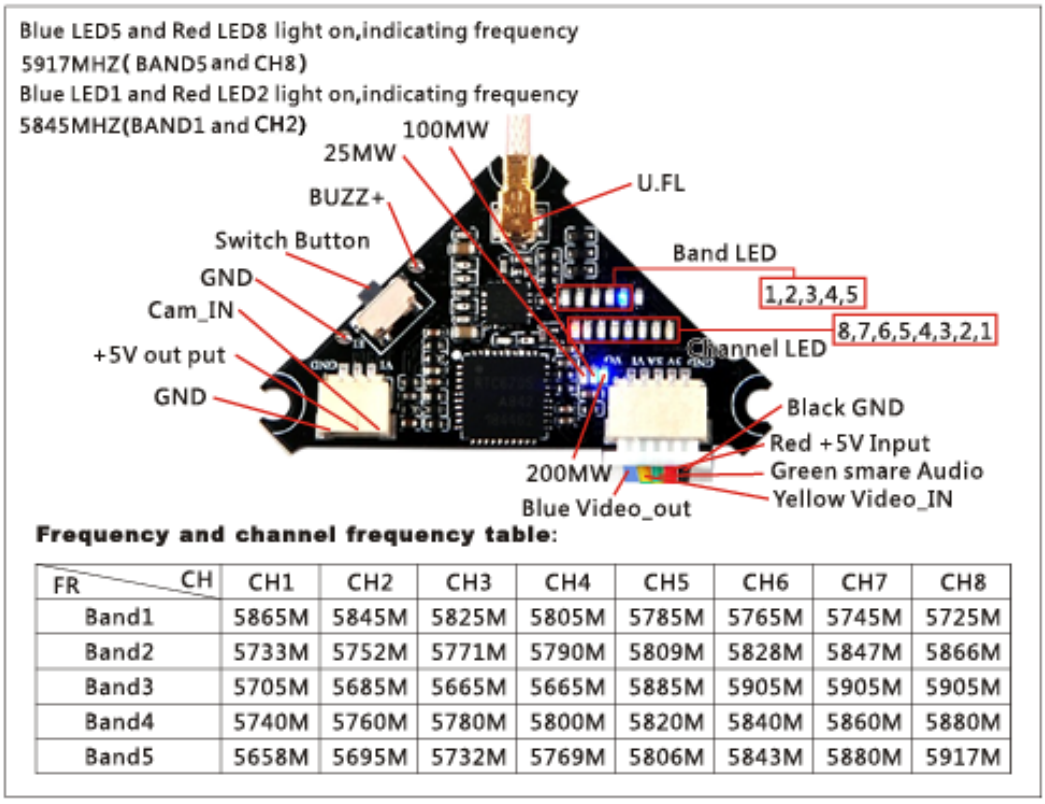
3. If you want to use other Frsky radio. Please choose receiver mode D16 or D8 according to your betaflight receiver configuration(Frsky_X = D16 mode, Frsky_D = D8 mode), we recommend use D8 mode.

8. **Receiver configuration**

   Please set Receiver mode to be SPI RX from the Configuration tab of the Betaflight Configurator, then select Frsky_D for the stock Radio. If you use other radio which support D16 , then you can select Frsky_X.



9. **VTX Bands and Channels setup**



Frequency and channel frequency table:

FR \ CH	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Band1	5865M	5845M	5825M	5805M	5785M	5765M	5745M	5725M
Band2	5733M	5752M	5771M	5790M	5809M	5828M	5847M	5866M
Band3	5705M	5685M	5665M	5665M	5885M	5905M	5905M	5905M
Band4	5740M	5760M	5780M	5800M	5820M	5840M	5860M	5880M
Band5	5658M	5695M	5732M	5769M	5806M	5843M	5880M	5917M

Notes:

Default VTX setting is 200mw but the VTX power LED indicate will always show 25mw when the quad was disarmed, because we have “set vtx_low_power_disarm=on”

There are 3 ways to switch the VTX channels:

I.Short press to choose the VTX channel, press and holding the button to Choose the VTX Band (Can’t save, it will lost the channel while power off)

2. Go to Betaflight CLI .type the command:

Setvtx_band=3

Setvtx_channel=l

Set vtx_freq=5705

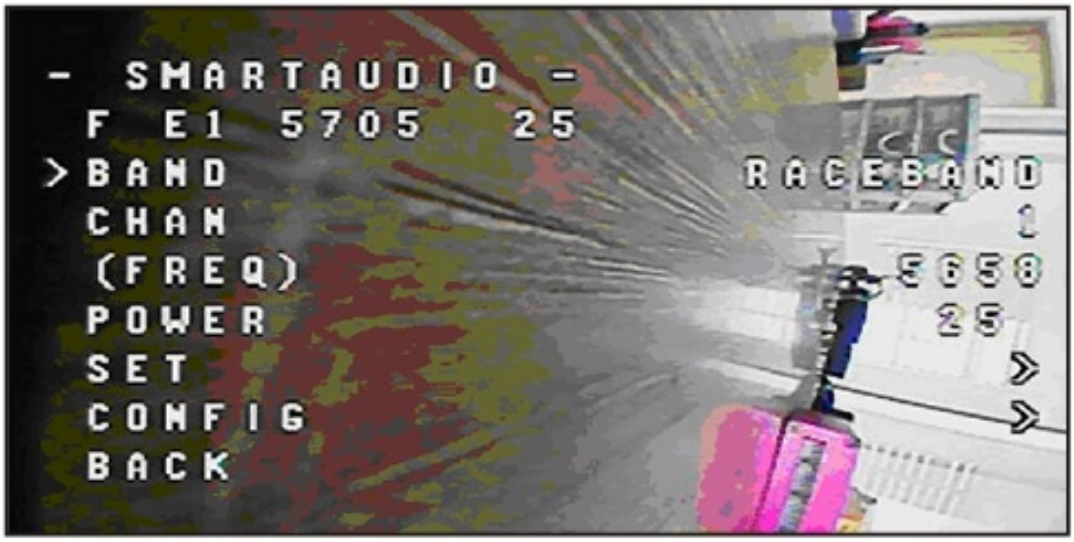
save

Notes:

The vtx_freq should match the vtx_band and vtx_channle as the VTX Channel list shows.

For example, if you set vtx_freq=5732, you should setvtx_band=5 and VTX_channel=3

3 .Enable Smartaudio for UART2, then move the stick of the transmitter (THR MID+ YAW LEFT+ PITCH UP) to enter OSD Menu, Enter to Features, then enter to VTX SA to set VTX Band and channel



10. **Goggles and VTX Receiver channel setting.**

D escription:

Key 1: Short press for MENU mode; Long press (More than 3 sec) for Power ON/OFF.

Key 2: Short press for Auto-Searching (Automatic selection of the strongest channel).

Key 3: Short press for Band+ (Change bands A-B-E-F-R circularly).

Key 4: Short press for Channel* (Change channels 1-2-3-4-5-6-7-8 circularly).

Micro-USB Charging port: Supports DC5V only.

Antenna port B: RP-SMA male.

Charging indicator: Red light when charging light; full power, the indicator goes off.

Antenna port A RP-SMA male.

AV Jack: In RF receiving mode can output AV signal; In AV mode can enter the video signal.

Menu O peration Instructions:

In normal mode, press Key 1 to enter the MENU mode.

In MENU mode:

Key 1: Select the option bar.

Key 2: Return to normal mode.

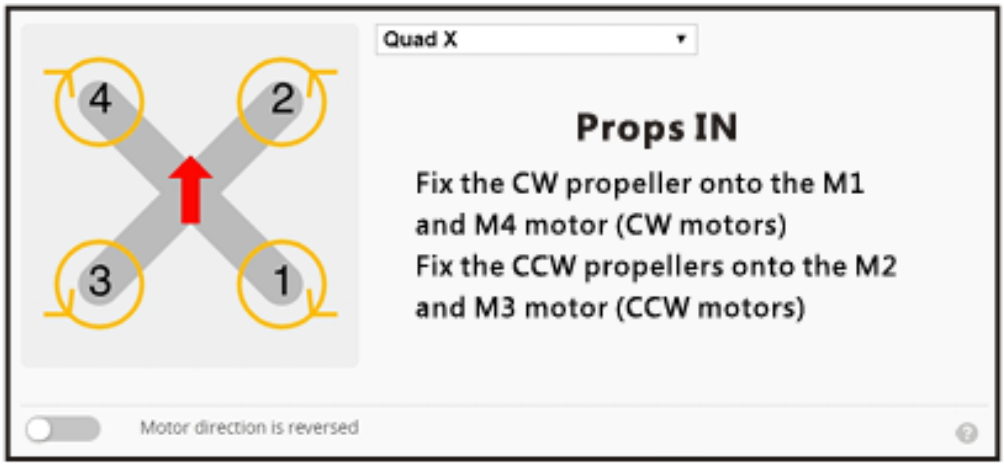
K e y 3: V alue-.

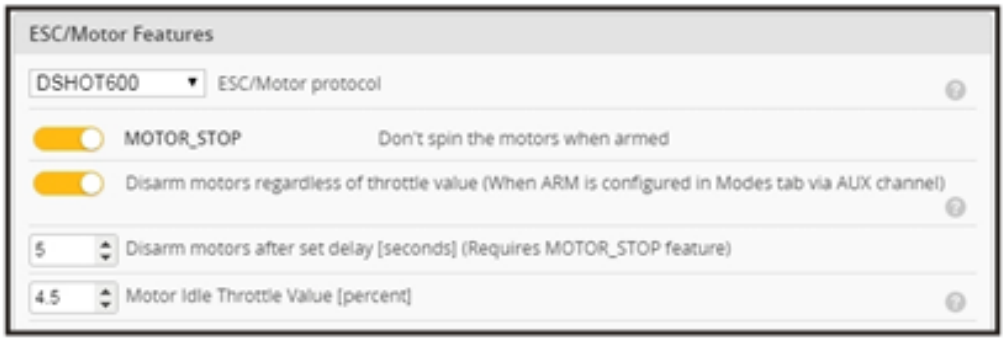
Key 4: Value +.

Frequency (5.8GHz):

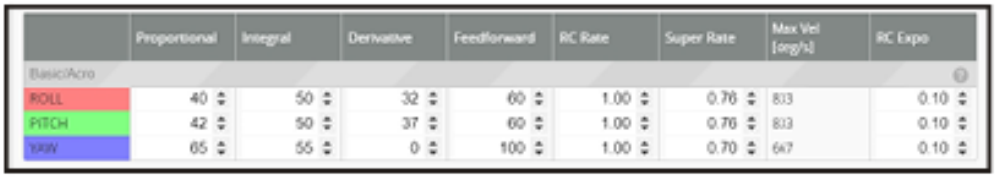
Band	CHI	CH2	CH3	CH4	CH5	CH6	CH7	CH8
A	5865	5845	5825	5805	5785	5765	5745	5725
B	5733	5752	5771	5790	5809	5828	5847	5866
E	5705	5685	5665	5645	5885	5905	5925	5945
F	5740	5760	5780	5800	5820	5840	5860	5880
R	5658	5695	5732	5769	5806	5843	5880	5917

11. **Mixer type and ESC/motor protocol**

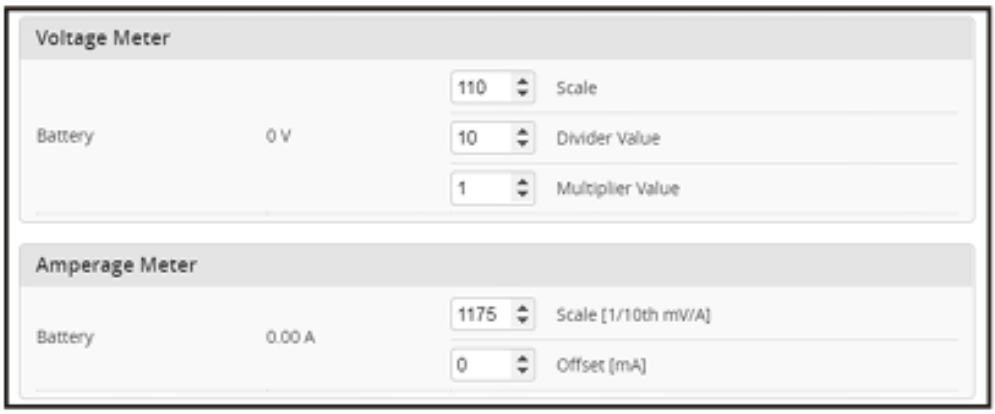




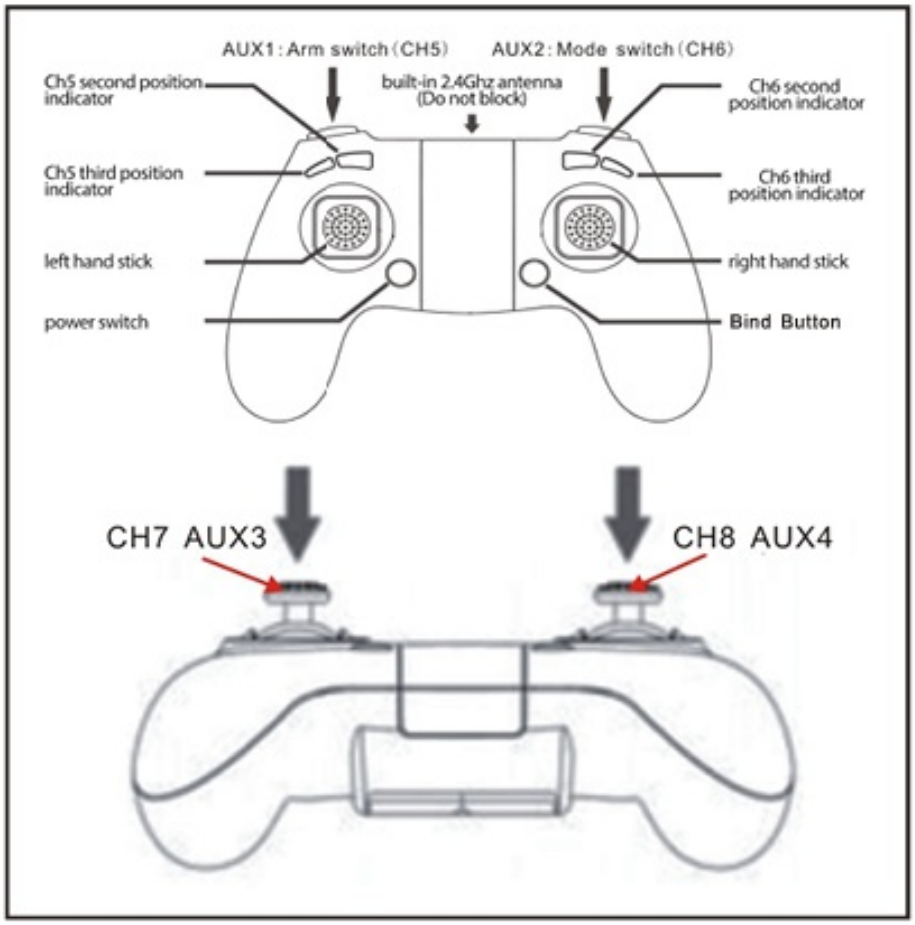
12. **efault PID setting and currents setting**

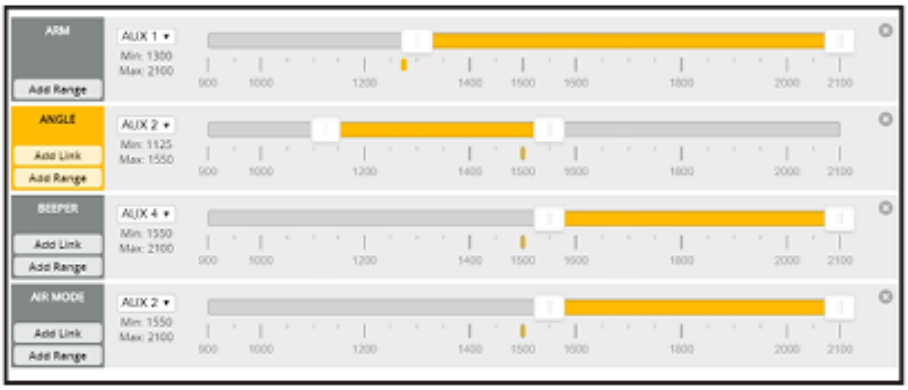


	Proportional	Integral	Derivative	Feedforward	RC Rate	Super Rate	Max Vel [deg/s]	RC Expo
Basic/Acro								
ROLL	40	50	32	60	1.00	0.70	833	0.10
PITCH	42	50	37	60	1.00	0.70	833	0.10
YAW	65	55	0	100	1.00	0.70	647	0.10



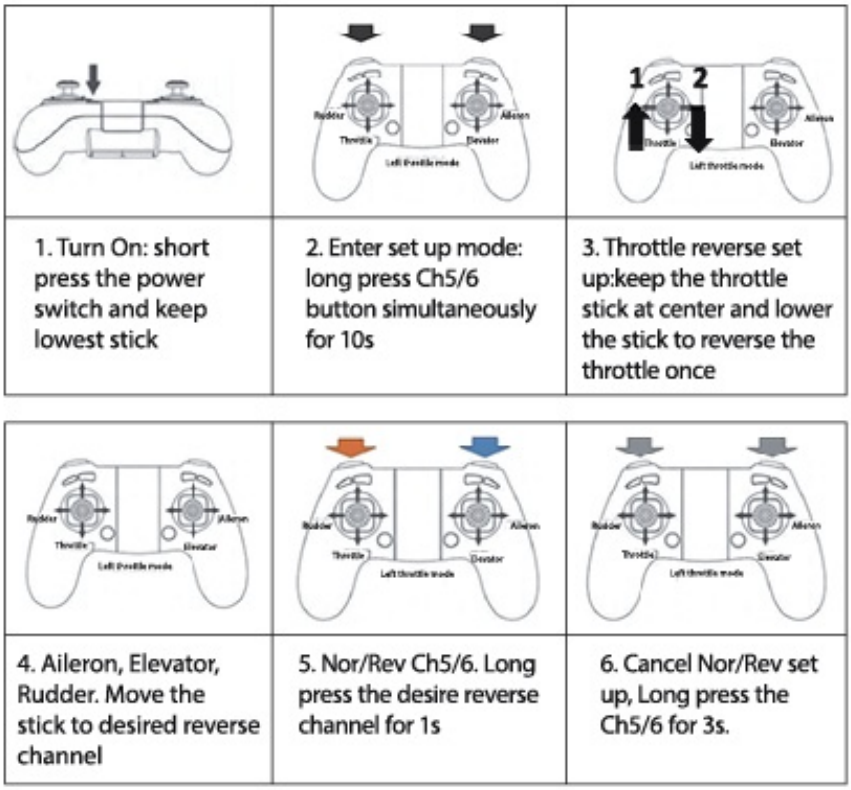
13. **Radio channels/Switch and Betaflig mode setting**





14. **Nor/Rev setup for the radio**

    Remarks: every channel Nor/Rev will be sound and LED indicated. Set up Steps:



15. **Other features of the radio**

    Turning the Radio on and off

    Short press 3 seconds to turn on,Long press 3 seconds to turn off.

    Radio will turn off automatically when idle 20s no moving. The radio will recover to normal mode when any action input is made **Low Voltage alert on Radio**

    4.6V second grade alert Beep-Beep-Beep.

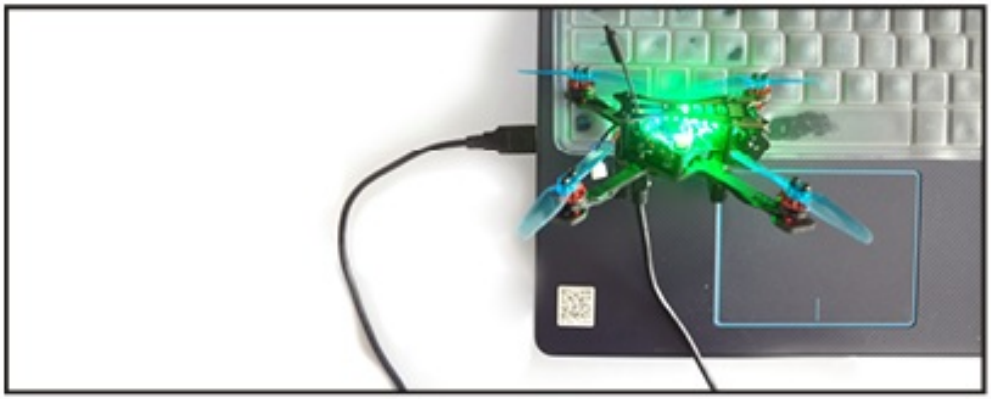
    4.2V first grade alert Beep-Beep-Beep-Beep.

16. **ESC Check and Flash firmware**

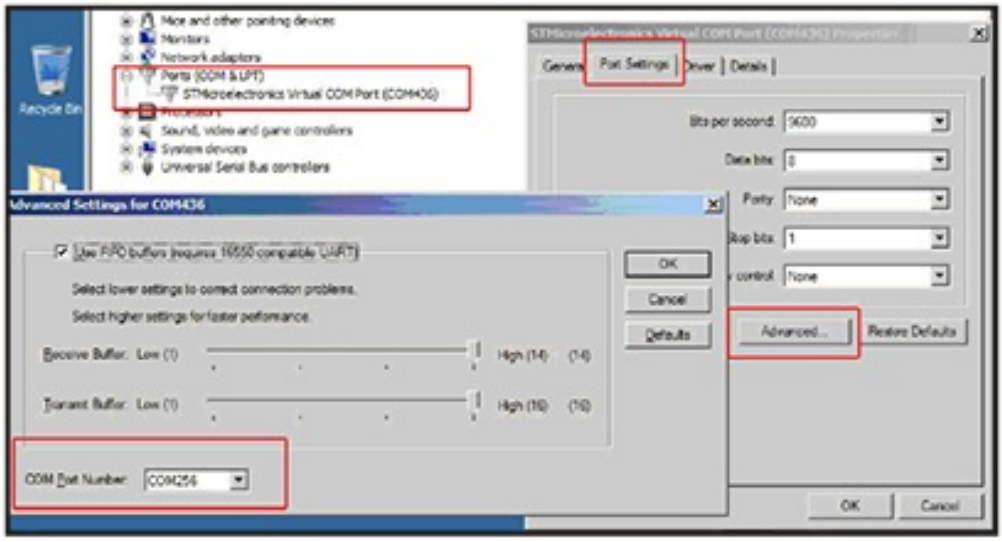
    1 .Download New release Blhelisuite from:

    https://www.mediafire.com/folder/dx6kfaasyo24l/BLHeliSuite

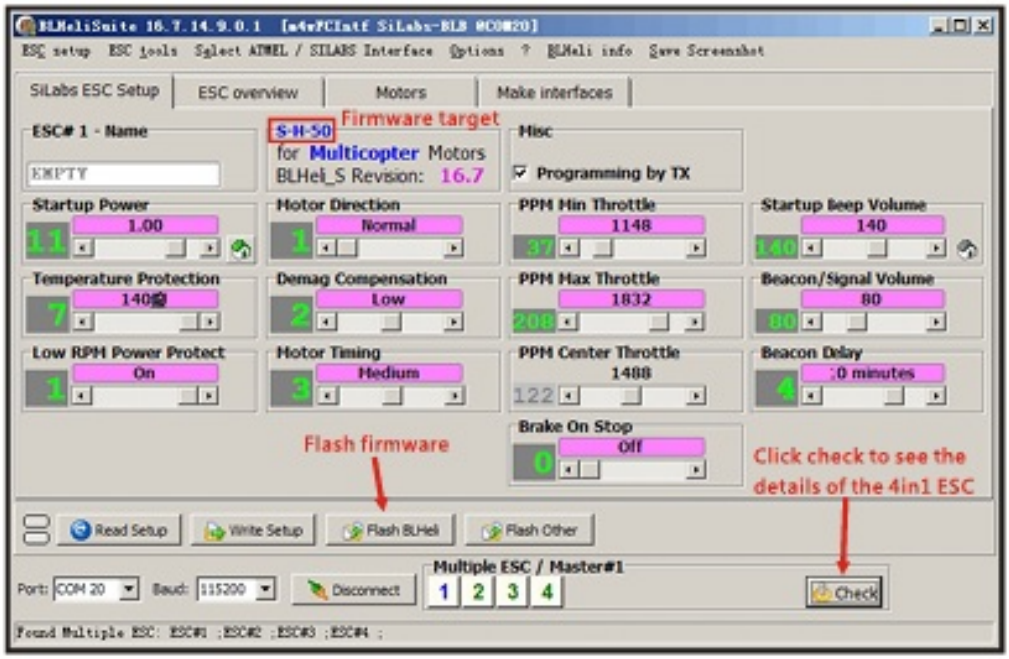
    2 .Connect the NOVICE-II flight controller to computer



    3 .0pen the Device Manager of your computer, find the Ports, please make sure the Com port Serial Number is under 255, otherwise it will can't connect to the BLHELISUITE. You can change the port serial number like the bellowing step :



4.0pen the BLHELISUITE, Select SILABS BLHeli Bootloader (Cleanflight) from the third tab on the top side. Then Select the right Serial com port and Click connect. You can also Flash the new release BLHeli_s firmware via the BLHEILISUITE, the firmware Target is “S-H-50”



17. Flight controller firmware update

I. Install latest STM32 Virtual COM Port Driver

http://www.st.com/web/en/catalog/tools/PF257938

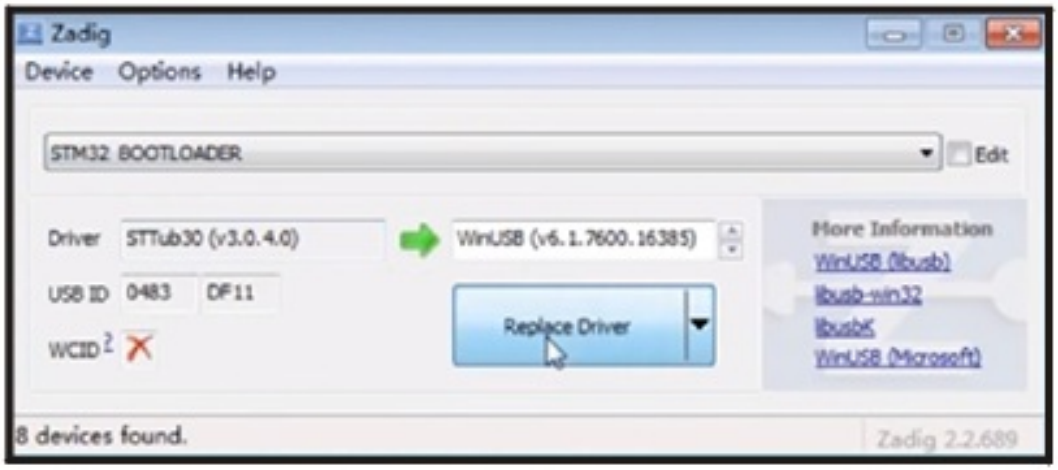
2. Install STM BOOTLOAD Driver (STM Device in DFU MODE)

3 .0pen Betaflight configurator and choose firmware target “CrazyBeeF4FR” , then select the firmware version.

4. There are 2 ways to get in DFU Mode: 1). Press_and_hold_the_boot_button^then plug USB to computer 2).loading betaflight firmware and hit “flash” , then it will getting into DFU Mode automatically.

5 .0pen Zadig tools to replace the drivers from STM32 Bootloader to WINUSB Driver.

6 .Reconnect the flight controller to the computer after replace driver done, and open Betaflight Configurator, loading firmware and flash.



Eachine Novice-II 1-2S Toothpick RTF Micro Drone User Manual – **Download [optimized]**
Eachine Novice-II 1-2S Toothpick RTF Micro Drone User Manual – **Download**