

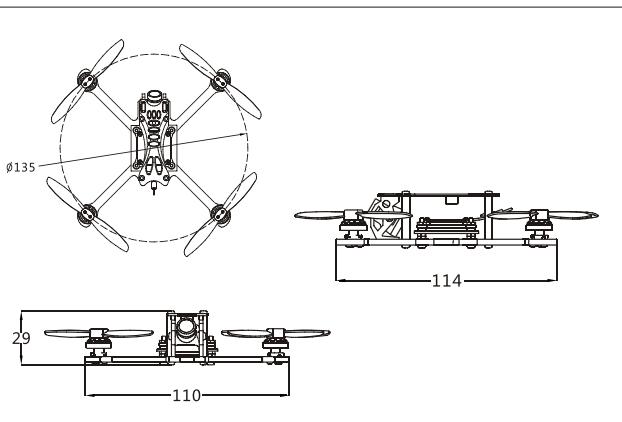
Item	Part No.	RTF	FLY More
135mm NOVICE-III Frame board	NC1301	1	1
toothpick F4 flight controller	NC1302	1	1
Eachine NC1203 KV5500 motor	NC1303	4	4
HQPROP T3*2 bi-blade propeller	NC1304	2	2
Caddx EOS2 new version 4:3	NC1305	1	1
Eachine Pegasus VTX: 5.8g 25mw~400mw switchable built-in 720p DVR	NC1306	1	1
LED&Buzzer Pcb Top board	NC1307	1	1
VTX mounted bracket	NC1308	1	1
Camera mounted bracket	NC1309	1	1
M2*D3.5*L22 Aluminum alloy Column	NC1310	1	1
Tattu 11.1v 450mah 75C battery		2	6
2-4S balance charger		1	1
Eachine EV800 Goggles		1	1
Eachine ER8 2.4G transmitter		1	1
Propeller disassemble tool		1	1
Screwdriver		1	1

### 1. Specification

Brand Name: Eachine  
Item Name: Novice-III 2-3S Toothpick RTF & Fly more  
Wheelbase: 135mm  
Size: 115mm\*110mm\*40mm  
Weight: 62g(without battery)

### 2. Features

New toothpick F4 flight controller  
Internal SPI Frsky D8/D16 receiver (Dual antenna and with PA)  
Powerful and smoothly and long flight time  
Led Strip ready  
Built-in Buzzer ready  
New design 1203 KV5500 motors  
Camera Angle adjustable  
VTX power switchable 25mw~400mw  
Smartaudio ready , change VTX bands, powers, channels via OSD  
720P DVR ready (Analog 1280\*720)  
Real Ready to fly  
Compatible both for 2s-3s Lipo/LIHV



### 3. Start FPV Flight

Start by powering on your Radio and Goggles. NOVICE-III comes already bound to your radio and on the right video channel matched with your goggles. Power the battery is plugged in, set NOVICE-III on a stable surface so it can calibrate.Calibration takes a few seconds then NOVICE-III is ready to fly. Please fly in open areas and away from the crowd.



1. Install the battery to the radio(shows on picture A), and turn on the "power switch", short press ext button if any alarm(shows on picture B) appear on the screen



2. Connect the battery to the NOVICE-III Drone, and make sure to fixed the battery properly with the Lipo strap.



3. Turn on the EV800 Goggles, check the video an the status of the OSD info .



4. Keep the throttle stick lowest point and then toggle the SWA Switch to Arm the NOVICE-III drone , you will find "ARMED" notice on the screen of the goggles. Happy flight and keep it safe .



5.Toggle the SWC switch to change the flight mode (Default is Acro mode). We highly recommend to use stable mode for the beginners . The motors will auto-spin when armed if you selected the Air mode.

#### 4.Charger the Lipo Battery



Charging Function After insert adapters, chargers "drop" sound, the display shows ;

Insert the battery charger "drip - drip" twice to start charging. Display cycles through each section

total battery voltage and the battery voltage;

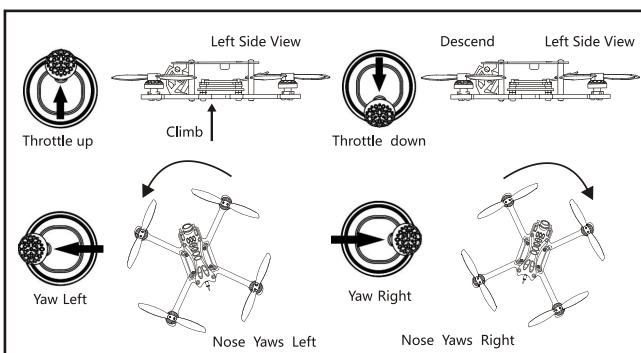
After the battery is fully charged, the charger automatically stops charging, the display shows "FULL" And flashing, buzzer once every five seconds.

Voltage Display Function Insert the battery (without connecting adapter),

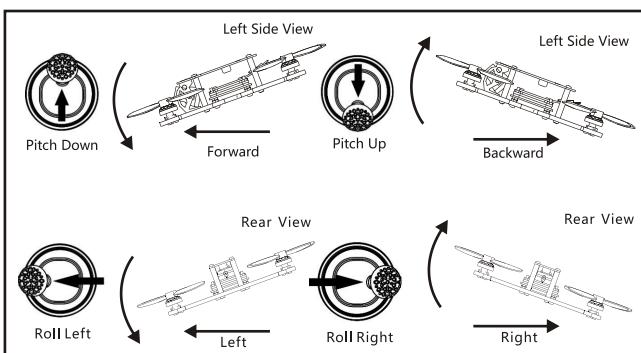
#### 5.Flight and Radio Stick Controls

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-III. The right stick controls pitch and roll of the aircraft.

##### Left Stick Diagram



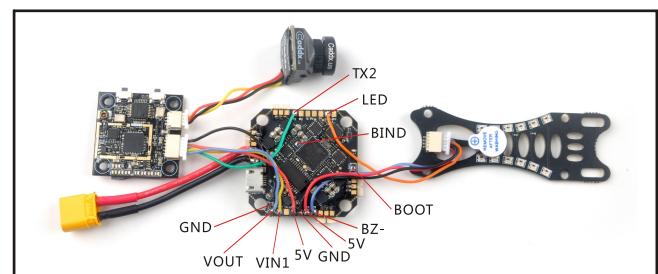
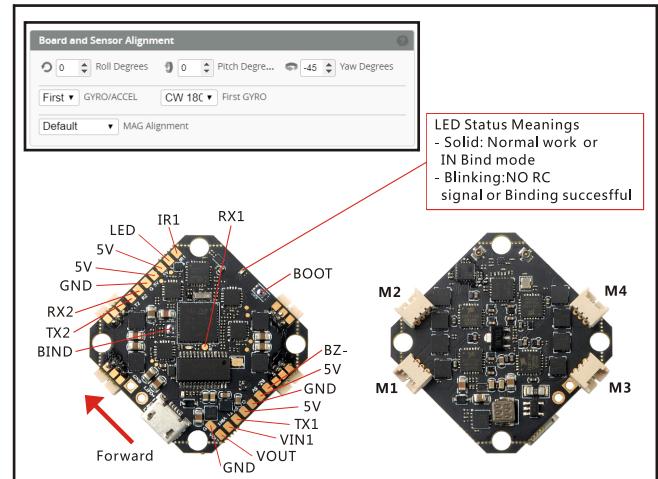
##### Right Stick Diagram



#### Important notice:

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

#### 6.Flight controller connection diagram

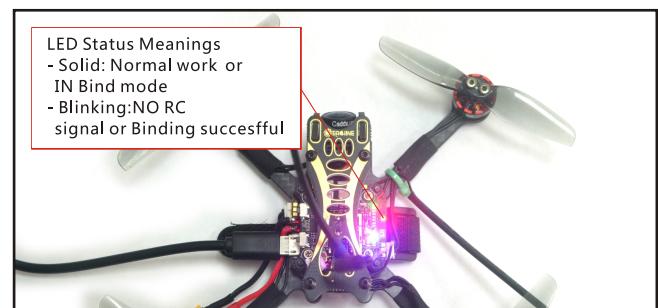


#### 7.Binding procedure

- Plug the usb and go to the CLI command tab in the betaflight configurator, then type "bind\_rx\_spi", the receiver will getting into bind mode , and then make your Frsky radio to bind mode.For Betaflight firmware 4.1.0 or latest , the bind code is "bind\_rx"

```
$M>Re~0000!000000000000$M> n0000000000e
Entering CLI Mode, type 'exit' to return, or 'help'
# bind_rx_spi
Bind... .
```

- Press and hold the EXT Button and Turn on the "Power switch" , then release the EXT button . The red LED under the Logo of the radio will start to blinking, this indicates the Radio is in binding mode with your NOVICE-III drone. If bind successfully the Red LED on the flight controller will blinking slowly. Then re-plug the usb and check the receiver tab in Betaflight configurator .



- 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.

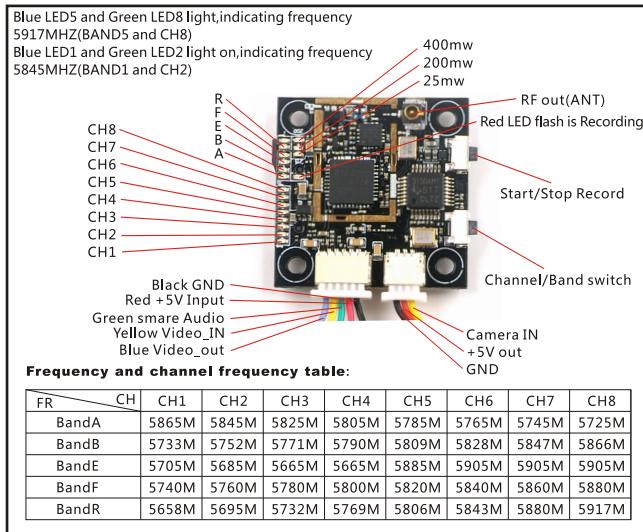
## 8. Receiver configuration

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.

**FRSKY D8 MODE For stock radio**

**FRSKY D16 MODE**

## 9.VTX Bands and Channels setup



There are 3 ways to switch the vtx channels:

1.Short press the Channel/Band switch 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:

Set vtx\_band=3

Set vtx\_channel=1

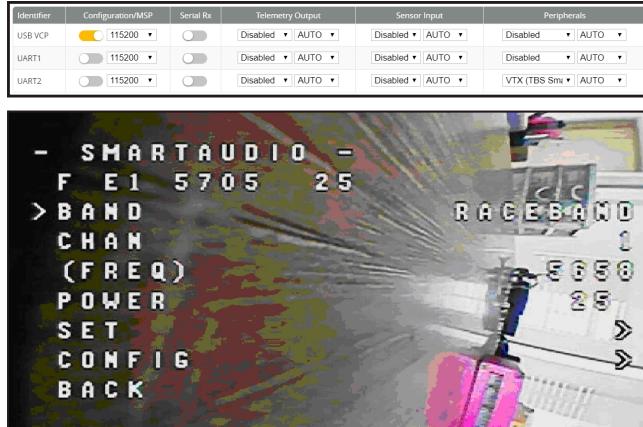
Set vtx\_freq=5705

save

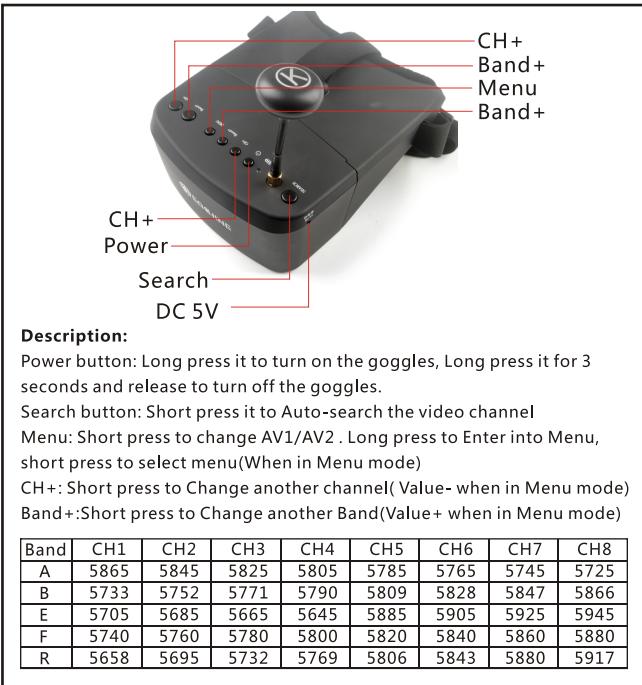
Notes: The vtx\_freq should match the vtx\_band and vtx\_channe as the VTX Channel list shows.

For example, if you set vtx\_freq=5732, you should set vtx\_band=5 and VTX\_channel=3

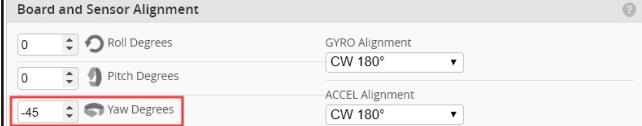
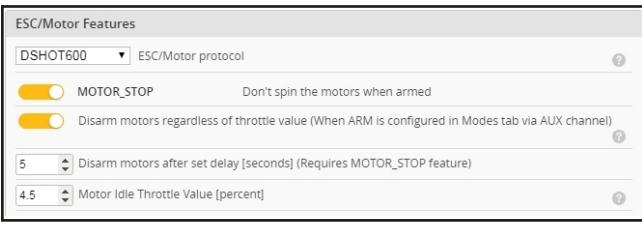
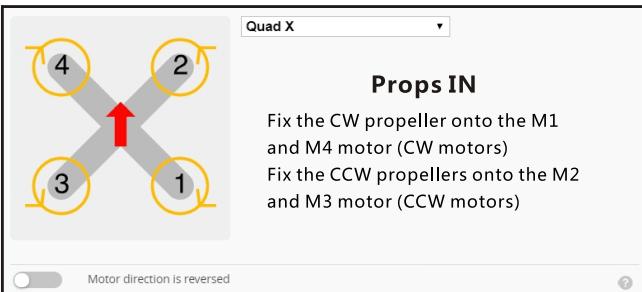
3.Enable Smartaudio for UART2, then move the stick of the transmitter (THR MID+ YAW LEFT+ PITCH UP) to enter OSD Menu, Enter to Features, then enter to VTX SA to set VTX Band and channel



## 10.Goggles and VTX Receiver channel setting

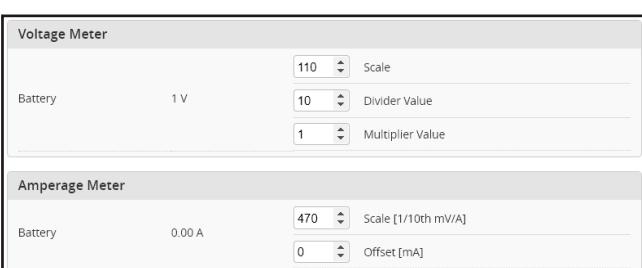
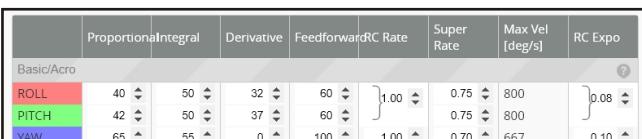


## 11.Mixer type,ESC/MOTOR protocol and Sensor alignment



\*Notes: Because the installation direction of the flight controller , the yaw degree should set to be "-45"

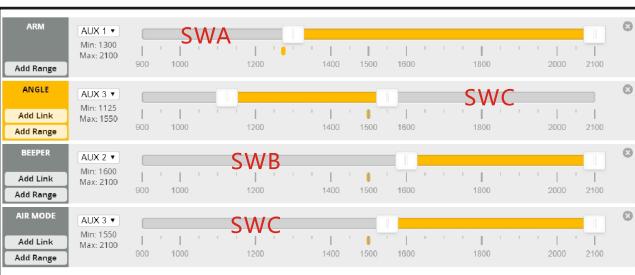
## 12.Default PID setting and currents setting



### 13. Radio channels/Switch and Betaflight mode setting



1. Support 7v-12v Lipo battery, the original Tattu 3s 11.1v battery would compatible
2. Toggle the "Power switch" to right to turn on the Radio
3. Connect the USB and then the Lipo will be charging(Green LED under the Eachine logo will blinking, The Green Led will turning off once Charging done)
4. Long press the "EXT" button and turn on the transmitter ,then release the "EXT" button to getting into the bind mode



### 14. Menu Introduce

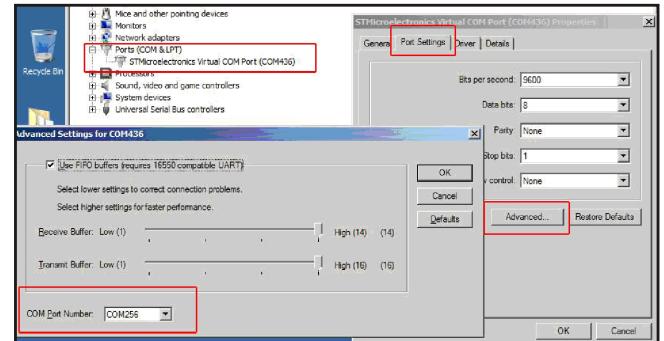


### 16. ESC Check and Flash firmware

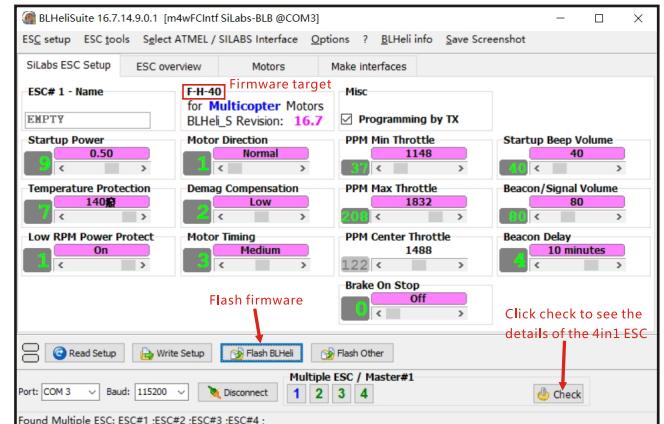
- 1.Download New release Blhelisuite from:  
<https://www.mediafire.com/folder/dx6kfaasyo24l/BLHeliSuite>
- 2.Connect the NOVICE-III flight controller to computer



- 3.Open 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 BLHELI SUITE. You can change the port serial number like the bellowing step :



- 4.Open the BLHELI SUITE, 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 BLHELI SUITE, the firmware Target is "F-H-40"



### 17. Flight controller firmware update

- 1.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.Open Betaflight configurator and choose firmware target "MATEKF411RX" , 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.Open 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.

