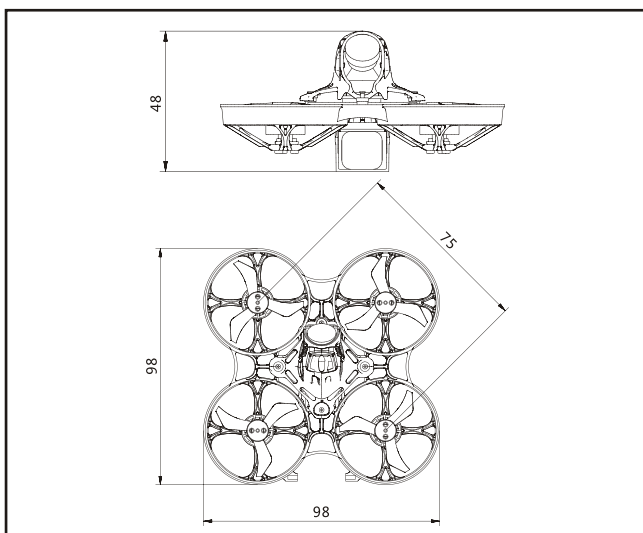


Item	Part No.	RTF	FLY More
Canopy	NC7501	1	1
75mm whoop frame	NC7502	1	1
Nano X F4 flight controller	NC7503	1	1
1102 KV13500	NC7504	4	4
Gemfan 1635-3 Propeller(2cw+2ccw)	NC7505	2	2
Camera : Runcam Nano2	NC7506	1	1
VTX: 5.8g 25mw~200mw switchable Nano VTX	NC7507	1	1
3.8v 300mah battery	NC7508	2	10
Damping ball for the flight controller	NC7509	4	4
6in1 6-way LIPO/LIHV Charger	NC7510	1	1
Eachine WT8 2.4G radio transmitter	NC7511	1	1
Eachine VR005 5.8G 48CH goggles	NC7512	1	1
Propeller disassemble tool	NC7513	1	1
Screwdriver	NC7514	1	1

1. Specification
Brand Name: Eachine
Item Name: Novice-I 1-2S brushless whoop
Wheelbase: 75mm
Size: 98mm*98mm*48mm
Weight: 33g(without battery)
2. Features
Nano X F4 pro flight controller
Powerful and smoothly
Betaflight OSD support
Camera Angle adjustable
VTX power switchable 25mw~200mw
Smartaudio ready
Ready to fly
Compatible both for 1s-2s Lipo/LIHV

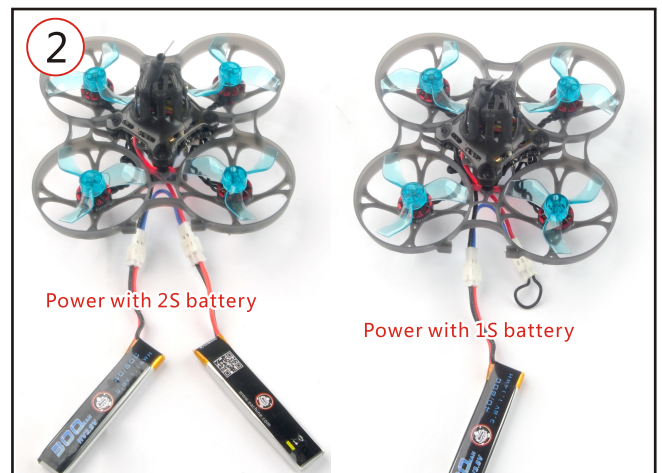


3. Start FPV Flight

Start by powering on your Radio and Goggles. NOVICE-I comes already bound to your radio and on the right video channel matched with your goggles. Power on NOVICE-I by sliding the battery into the battery tray and plugging it in. Once the battery is plugged in, set NOVICE-I on a stable surface so it can calibrate. Calibration takes a few seconds then NOVICE-I 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 radiator will alarm.



Connect the battery for the NOVICE-I



Turn on the VR005 goggles and check the Video

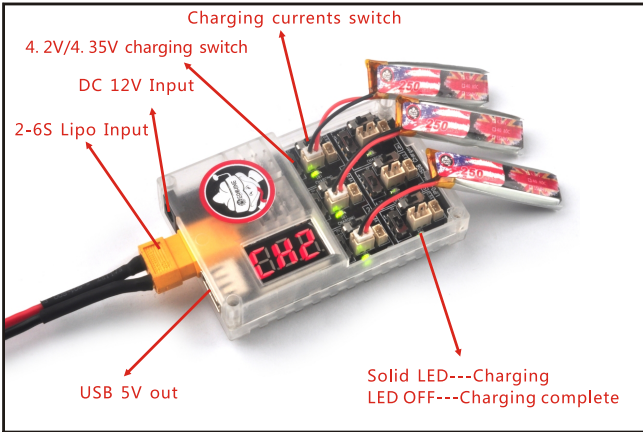


Press AUX1 (CH5) switch to arm the NOVICE-1, you will find "ARMED" notice in the screen of the Goggles. Recommend press AUX2(CH6) to choose Stable mode for the beginner. Happy flight and keep it safe.



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

4.Charger the Lipo Battery

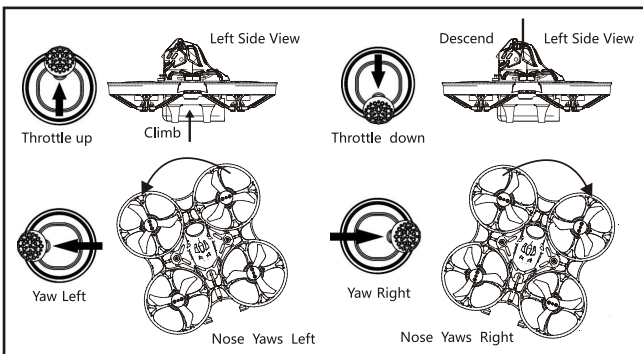


⚠ Ports are numbered 1-6. Do not put more than one battery on a single port. For example: do not insert one battery on the Picoblade 1.25 plug and another on the same port with the PH 2.0 plug.

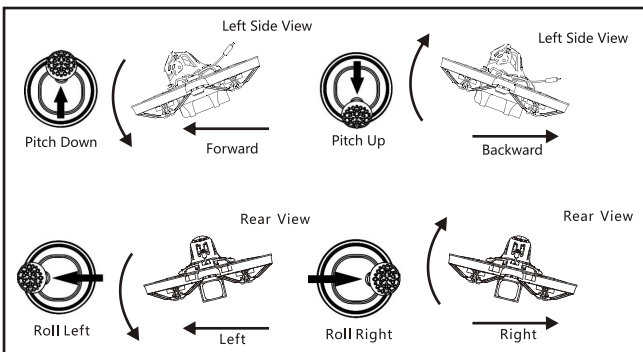
5.Flight and Radio Stick Controls

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 tinyhawk. The right stick controls pitch and roll of the aircraft.

Left Stick Diagram



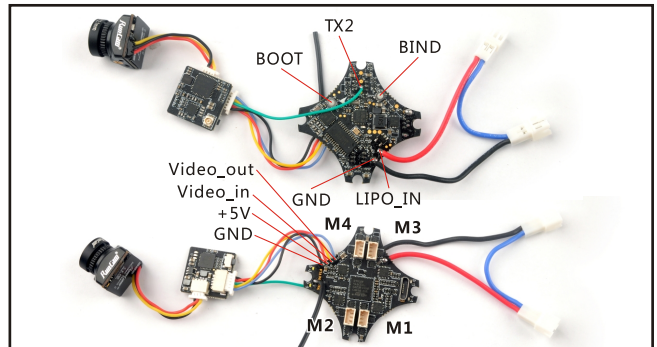
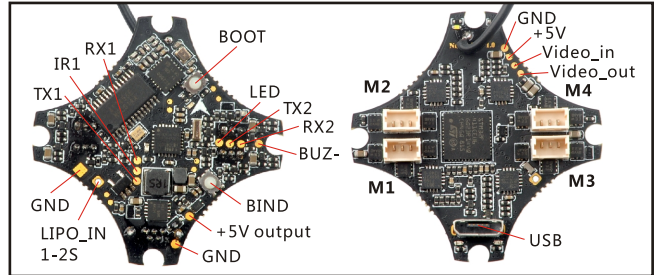
Right Stick Diagram



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 .

6.Flight controller connection diagram



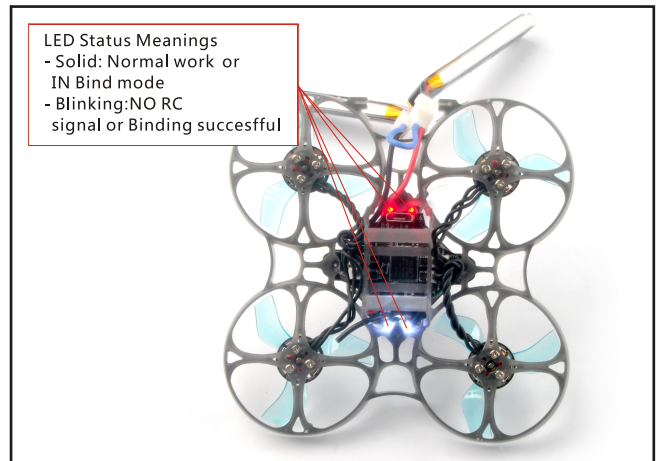
7.Binding procedure

1.Plug the usb and go to the CLI command tab in the betafight configurator, then type "bind_rx_spi" ,the receiver will getting into bind mode , and then make your Frsky radio to bind mode.

```

$M>[0e"000|000000 0000000000$M> n000000000e
Entering CLI Mode, type 'exit' to return, or 'help'
# bind_rx_spi
Binding..
    
```

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 betafight receiver configuration(Frsky_X = D16 mode, Frsky_D=D8 mode), we recommend use D8 mode.

8.Receiver configuration

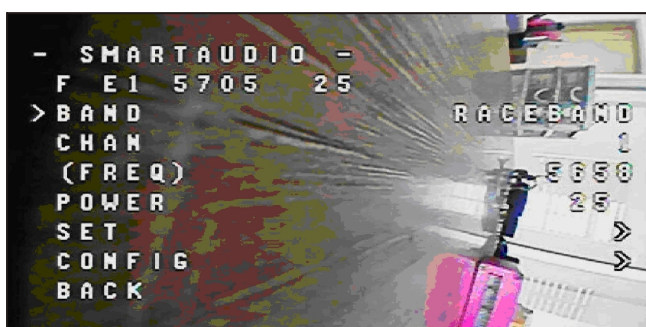
Please set Receiver mode to be SPI RX from the Configuration tab of the Betaflight Configurator, then select Frsky_D for the stock Radio. If you use other radio which support D16, then you can select Frsky_X.

9.VTX Bands and Channels setup

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

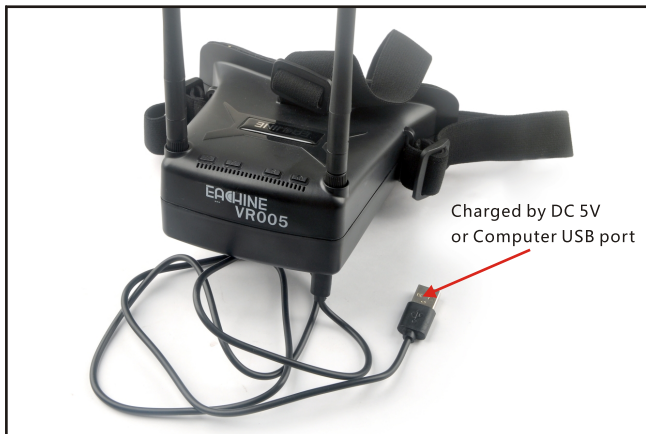
Notes:
 Default vtx setting is 200mw but the VTX power LED indicate will always show 25mw when the quad was disarmed, because we have "set vtx_low_power_disarm=on"
 There are 3 ways to switch the vtx channels:
 1.Short press to choose the VTX channel, press and holding the button to Choose the VTX Band (Can't save , it will lost the channel while power off)
 2.Go to Betaflight CLI ,type the command:
 Set vtx_band=3
 Set vtx_channel=1
 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 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

Identifier	Configurator/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200	Disabled	AUTO	Disabled	AUTO
UART1	115200	Disabled	AUTO	Disabled	AUTO
UART2	115200	Disabled	AUTO	Disabled	VTX (TBS Smx) AUTO



10.Goggles and VTX Receiver channel setting

Band	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
A	5645	5665	5685	5705	5885	5905	5925	5945
B	5740	5760	5780	5800	5820	5840	5860	5880
C	5725	5745	5765	5785	5805	5825	5845	5865
D	5733	5752	5771	5790	5809	5828	5847	5866
E	5658	5695	5732	5769	5806	5843	5880	5917
F	5362	5399	5436	5473	5510	5547	5584	5621

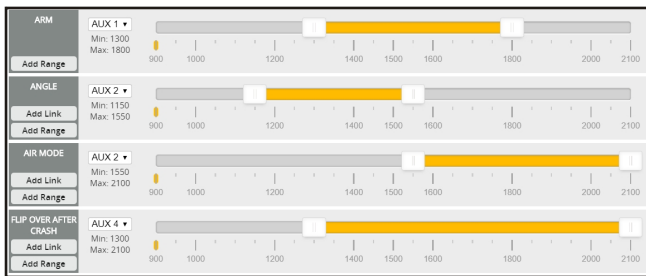
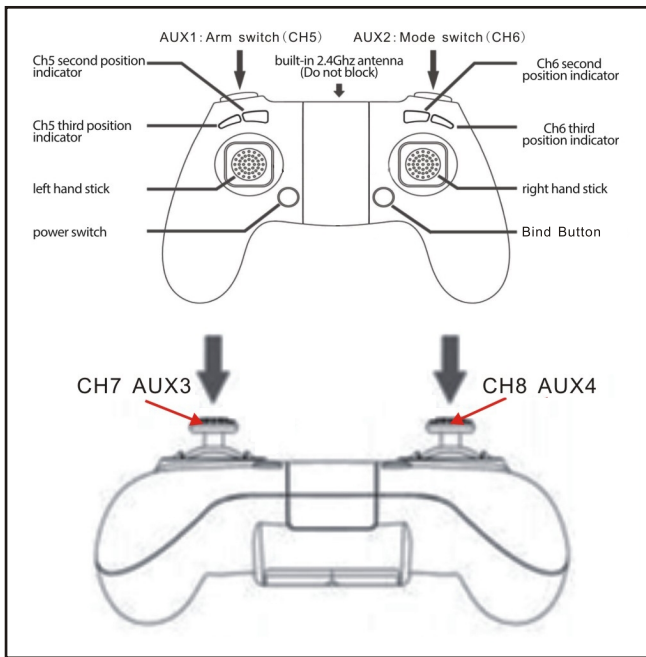


11.Mixer type and ESC/motor protocol

12.Default PID setting and currents setting

	Proportional	Integral	Derivative	Feedforward	RC Rate	Super Rate	Max Vel (deg/s)	RC Expo
Basic/Acro	40	45	20	60	1.00	0.76	833	0.10
ROLL	40	50	20	60	1.00	0.76	833	0.10
PITCH	40	50	20	60	1.00	0.76	833	0.10
YAW	60	45	0	60	1.00	0.80	1000	0.00

13. Radio channels/Switch and Betaflight mode setting



14. Nor/Rev set up for the radio

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

1. Turn On: short press the power switch and keep lowest stick	2. Enter set up mode: long press Ch5/6 button simultaneously for 10s	3. Throttle reverse set up: keep the throttle stick at center and lower the stick to reverse the throttle once
4. Aileron, Elevator, Rudder. Move the stick to desired reverse channel	5. Nor/Rev Ch5/6. Long press the desire reverse channel for 1s	6. Cancel Nor/Rev set up, Long press the Ch5/6 for 3s.

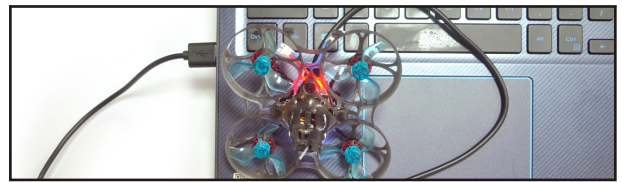
15. Other features of the radio

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

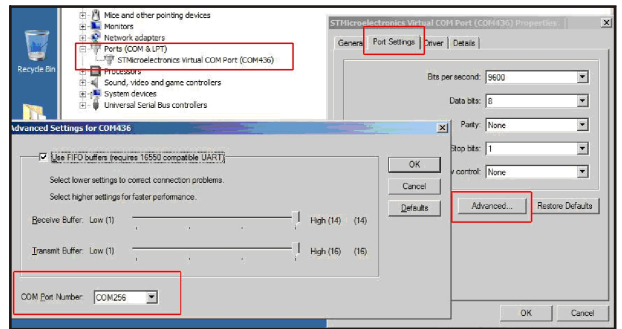
Low Voltage alert on Radio
4.6V second grade alert Beep-Beep-Beep.
4.2V first grade alert Beep-Beep-Beep-Beep.

16. ESC Check and Flash firmware

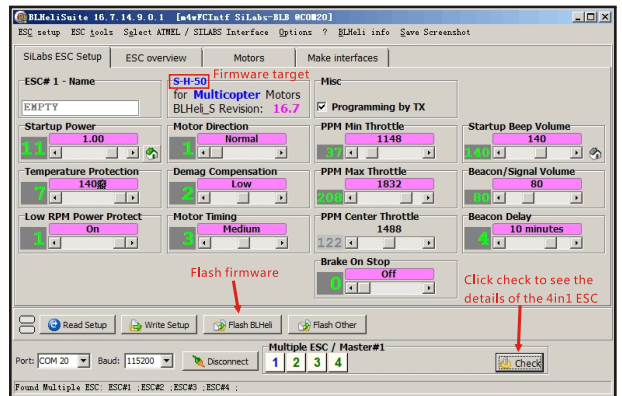
1. Download New release BLHeliSuite from: <https://www.mediafire.com/folder/dx6kfaasyo24l/BLHeliSuite>
2. Connect the NOVICE-I flight controller to computer



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 BLHELISUITE. You can change the port serial number like the following step :

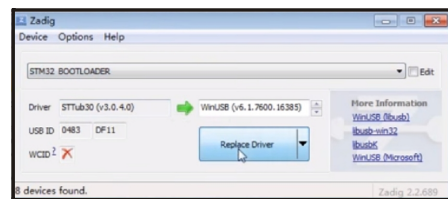


4. Open the BLHELISUITE, Select SILABS BLHeli Bootloader (Cleanflight) from the third tab on the top side. Then Select the right Serial com port and Click connect. You can also Flash the new release BLHeli_s firmware via the BLHELISUITE, the firmware Target is "S-H-50"



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 "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. 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.



18. "Flip over after crash" procedure

Set one channel of your radio transmitter to activate the Flip over function in the Mode tab of Betaflight configurator.
The default Switch for Activate "Flip" is AUX4(Channel8)

