EACHINE

Specifications

Brand Name: Eachine	
Item Name: 2S 75mm Brushless Whoop racer drone BNF	
Wheelbase: 75mm	
Size: 98mm*98mm*36mm	
Weight: 33g(without battery)	

VTX Bands and Channels setup

Blue LED5 and Red LED8 light on,indicating frequency
5917MHZ(BAND5 and CH8)
Blue LED1 and Red LED2 light on,indicating frequency
5845MHZ(BAND1 and CH2)

Frequency and channel frequency table:

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

There are 3 ways to switch the vtx channels:

1. Long press the switch button to change the Band of the VTX, shorter press the switch button to
change the channels of the VTX.
(Can't save ,it will lost the channel while re-power for the Trashcan since the Smartaudio funciton enalbed)

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 UART1, 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

Binding procedure

1.Power for the Trashcan and the LED Combo(2 red led and 2 white LED) will blinking slowly,
then Press and hold the bind button for 2 seconds, the LED Combo(2 red led and 2 white led)
will getting to be solid, this indicate the Trashcan Quadcopter is in binding mode

Another easy way to binding with the Frsky transmitter with new Betaflight v4.0 firmware:
Plug usb and go to the CLI command in the Betaflight configurator ,then type "bind" , the
Crazybee F4FR flight controller will getting into binding mode , and then you just make the
Frsky transmitter to Bind mode.

2.Turn on your Frsky Taranis transmitter, and move to BIND OPTION from SETUP MENU,
Choose receiver mode D16 or D8 according to your Betaflight receiver configuration
(Frsky_X = D16 mode, Frsky_D=D8 mode)

3.ENT [Bind] to binding with the Trashcan, the LED Combo(2 red led and 2 white led) will
blinking slowly on the flight controller ,this indicate binding successfully, and then exist
binding mode of your Frsky transmitter, the LED Combo(2 red led and 2 white led) will getting
to be solid again, this indicate working normal.

Receiver configuration

Please set Receiver mode to be SPI RX Support from the Configuration tab of the Betaflight
Configurator, then select FRSKY_X Provider for FRSKY D16 MODE or Select FRSKY_D Provider
for FRSKY D8 MODE, don't enable Serial RX since the CRAZYBEE Flight controller is integrated
SPI BUS Receiver

Arm/Disarm the Motor

1. The Default Arm/Disarm switch for Trashcan is AUX1(Channel 5),and you can also customize it
with Betaflight Configurator.
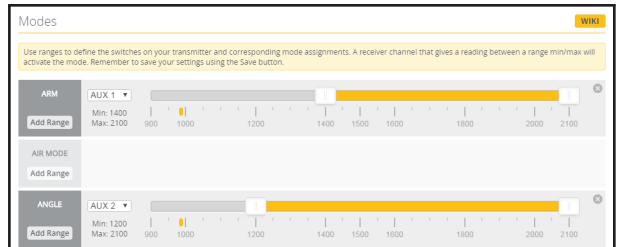
2.Turn on the Frsky transmitter (Use X9D+ as an example) and move to the MIXER interface,
Set "SA" or "SB" switch etc. for Ch5 to ARM/DISARM the motor.
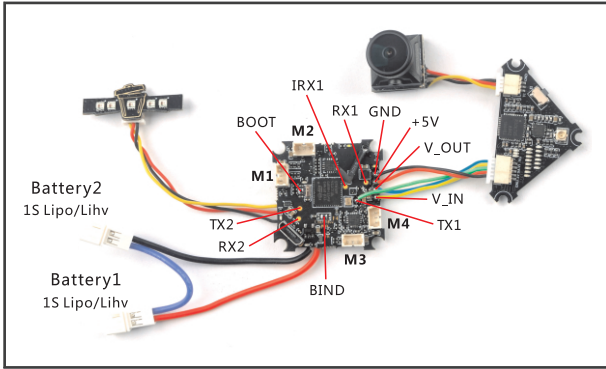

3.The default channel map for Trashcan Frsky version is TAER1234, please make sure your
transmitter is matched, otherwise it will can't be armed. Toggle the AUX1 Switch ,the Green
LED on the flight controller will getting to be solid, this indicates the motor was armed . And
also you can found "Armed" displayed on your FPV Goggles or the FPV Monitor. Please make
sure keep the Trashcan level before arming .Be careful and enjoy your flight now !

Toggle the AUX1 Switch, the Green LED on
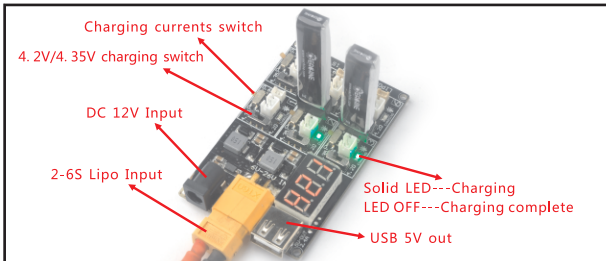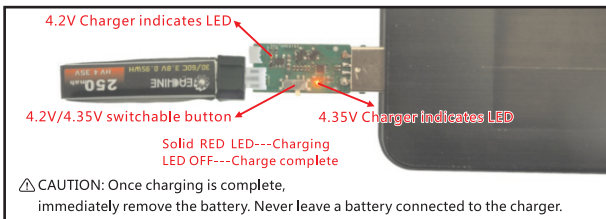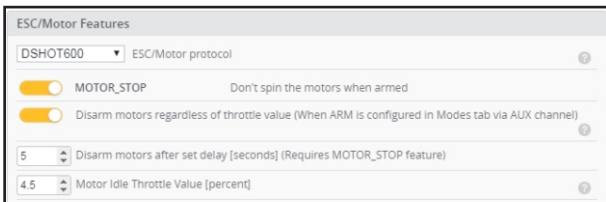the Flight controller will getting to be solid
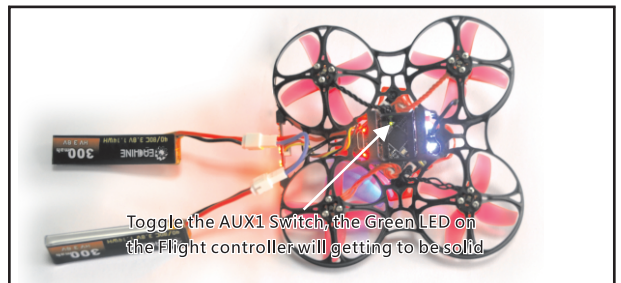
Flight controller connection diagram
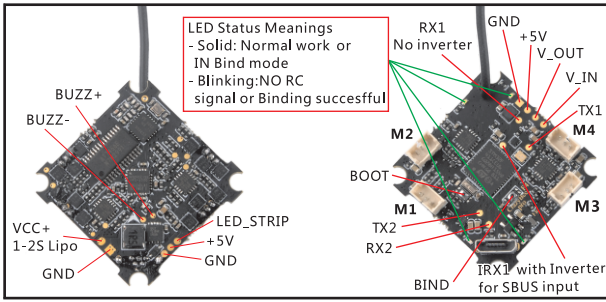
LED Status Meanings
- Solid: Normal work or IN Bind mode
- Blinking:NO RC signal or Binding succesfful

RX1 No inverter
GND
+5V
V_OUT
V_IN

BUZZ+
BUZZ-
TX1
M4
M2

BOOT

VCC+ 1-2S Lipo
LED_STRIP
+5V
GND
M1
TX2
RX2
M3

GND

IRX1 with Inverter for SBUS input
BIND

IRX1
RX1 GND
+5V
BOOT
M2
V_OUT
M1
V_IN
Battery2 1S Lipo/Lihv
TX2
M4
TX1
RX2
M3
Battery1 1S Lipo/Lihv
BIND

Charger the Lipo Battery

4.2V Charger indicates LED

4.2V/4.35V switchable button
4.35V Charger indicates LED

Solid RED LED---Charging
LED OFF---Charge complete

⚠ CAUTION: Once charging is complete, immediately remove the battery. Never leave a battery connected to the charger.

Charging currents switch
4. 2V/4. 35V charging switch
DC 12V Input
2-6S Lipo Input

Solid LED---Charging
LED OFF---Charging complete
USB 5V out

Mixer type and ESC/motor protocol

Quad X

Props out

Fix the CCW propellers onto the M1 and M4 motor (CCW motors)
Fix the CW propeller onto the M2 and M3 motor (CW motors)

reversed

Motor direction is reversed

ESC/Motor Features

DSHOT600 ▼ ESC/Motor protocol

MOTOR_STOP   Don't spin the motors when armed

Disarm motors regardless of throttle value (When ARM is configured in Modes tab via AUX channel)

5   Disarm motors after set delay [seconds] (Requires MOTOR_STOP feature)

4.5   Motor Idle Throttle Value [percent]

Default PID setting

	Proportional	Integral	Derivative	Feedforward	RC Rate	Super Rate	Max Vel [deg/s]	RC Expo
Basic/Acro								
ROLL	46	45	25	60	1.20	0.75	960	0.00
PITCH	50	50	27	60	1.20	0.75	960	0.00
YAW	45	100		100	1.30	0.80	1300	0.00

ESC Check and Flash firmware

1.Download New release Blhelisuite from:
https://www.mediafire.com/folder/dx6kfaasyo24l/BLHeliSuite
2.Connect the Crazybee F4 PRO flight controller to computer and power for it with battery

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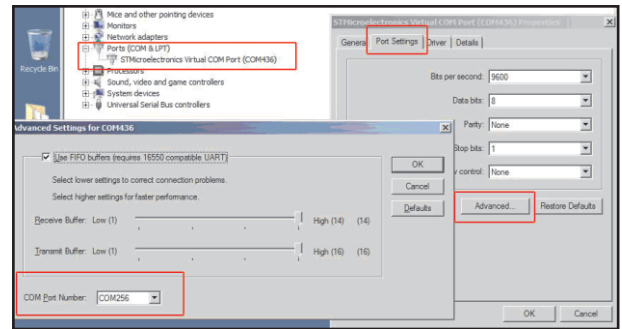
4.Open the BLHELISUITE, Select SILABS BLHeli Bootloader (Cleanflight) from the third tab on the top side. Then Select the right Serial com port and Click connect. You can also Flash the new release BLHeli_s firmware via the BLHEILISUITE, the firmware Target is "S-H-50"

Firmware target
Flash firmware
Click check to see the details of the 4in1 ESC
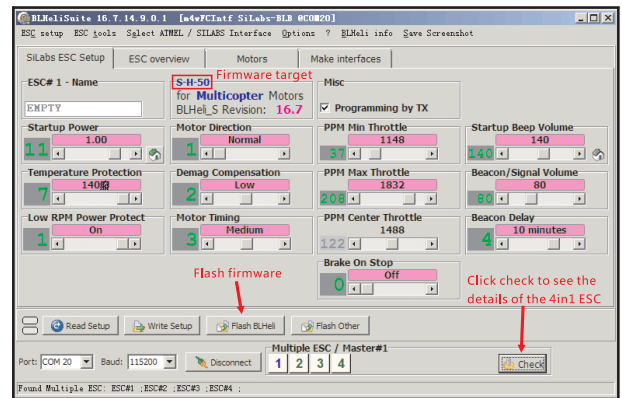
Flight controller firmware update

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). solder the boot pad and 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.
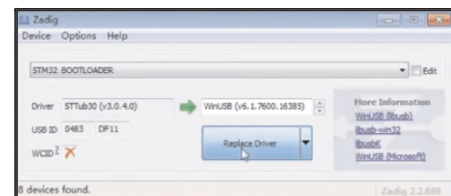
*We will update the firmware for Crazybee F4 PRO and release to our website in time.

"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.

Crashed ➡ Disarm The Quad ➡ Activate Flip over ➡ Arm The Quad ➡ Move stick to flip the Quad