EACHINE

FB90

QUICK START GUIDE

Micro FPV Racing Drones

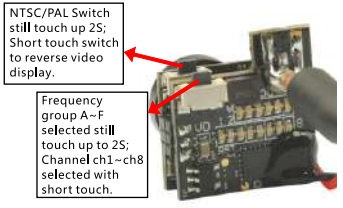
Specification
Brand Name: Eachine
Wheelbase: 90mm
Weight: 63g (with battery)
Size: 120*100*42mm
Flight controller: SP RACING F3_EVO_Brush
Firmware version: Cleanflight 1.13.0
Motor: 8520 coreless Motor
Prop Size: 40mm
Receiver Version1: Frsky compatible SBUS receiver
Receiver Version2: Flysky compatible PPM receiver
Receiver Version3: DSM2 compatible PPM receiver
Camera: 520TVL HD CMOS 1/4 inch Camera
AV Wireless Transmitter: 5.8g 25mw 48ch
Batterry: 7. 4V 400mah Lipo battery
Flight time: 5 minutes

Components	QTY	FRSKY	FLYSKY	SDM2	Part NO
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
8520_2S CW coreless Motor	3	Include	Include	Include	FB905CW
8520_2S CCW coreless Motor	3	Include	Include	Include	FB905CCW
F3_EVO_BRUSHED Built-in Frsky receiver	1	Include			FB906
F3_EVO_BRUSHED Built-in Flysky receiver	1		Include		FB906
F3_EVO_BRUSHED Built-in DSM2 receiver	1			Include	FB906
5.8G 48CH 25MW VTX with 520TVL Camera	1	Include	Include	Include	FB90V
Propellers(2pcs cw+2pcs ccw)	2	Include	Include	Include	FB90P
7.4V 400mah Lipo battery	2	Include	Include	Include	FB90B
2S USB Charger	1	Include	Include	Include	FB90C
Propeller Disassembly tool	1	Include	Include	Include	FB907
LED Headlight	1	Include	Include	Include	FB908
Velcro for battery	1	Include	Include	Include	FB909

CAUTION: Read and follow all instructions and warnings in the manual prior to setup or use. Failure to operate the product correctly can result in damage to the product, personal property and/or injury. This is a sophisticated hobby product. It must be operated with caution and common- sense and requires some basic mechanical ability.

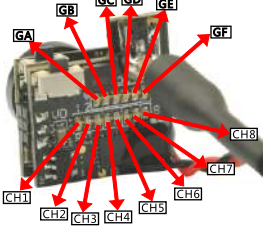
1. General Product Safety Precautions

- As the user of this product, you are responsible for operating it safely, not endangering yourself and others,or damaging the product or the property of others.
- Operate your product in open spaces away from people and property.
- Never operate your product with damaged electrical components.
- Keep the transmitter powered on while model is powered on.
- Let parts cool after use before touching, motors will get hot in use.
- Remove batteries after use, as applicable.
- Keep all batteries, chemicals, small parts and anything electrical out of the reach of children.
- Avoid water exposure to this product. Keep parts dry.
- Keep moving parts clean.



2. 5.8G VTX channels list

FR \ CH		CH							
		CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
FR	GA	5740MHz	5760MHz	5780MHz	5800MHz	5820MHz	5840MHz	5860MHz	5880MHz
	GB	5705MHz	5685MHz	5665MHz	5645MHz	5885MHz	5905MHz	5925MHz	5945MHz
	GC	5865MHz	5845MHz	5825MHz	5805MHz	5785MHz	5765MHz	5745MHz	5725MHz
	GD	5658MHz	5695MHz	5732MHz	5769MHz	5806MHz	5843MHz	5880MHz	5917MHz
	GE	5733MHz	5752MHz	5771MHz	5790MHz	5809MHz	5828MHz	5847MHz	5866MHz
	GF	5362MHz	5399MHz	5436MHz	5473MHz	5510MHz	5547MHz	5584MHz	5621MHz

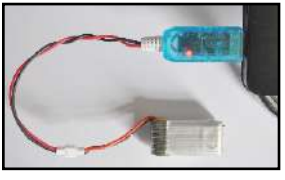


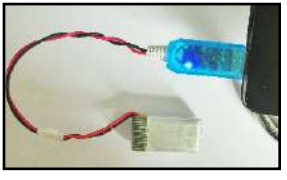
3. Charge the Flight Battery

⚠ NOTICE: Inspect the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured. Charge only batteries that are cool to the touch and are not damaged.

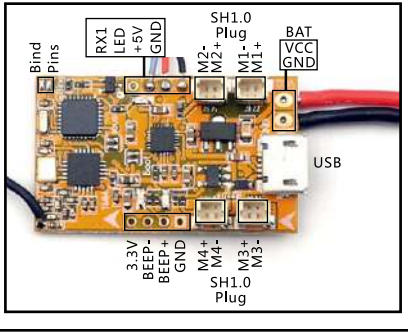
Charging with USB Li-Po Charger
Connect the battery to the USB Li-Po Charger, then plug into the USB port of your computer

LED STATUS:
Solid Red LED --Charging
Solid Blue LED --Charge Complete





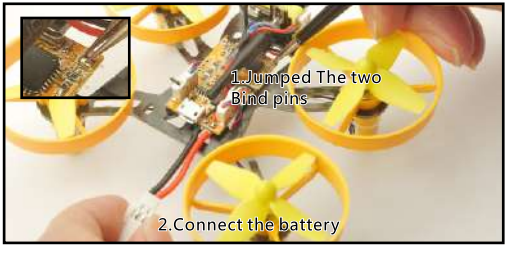
4.Flight controller connection diagram

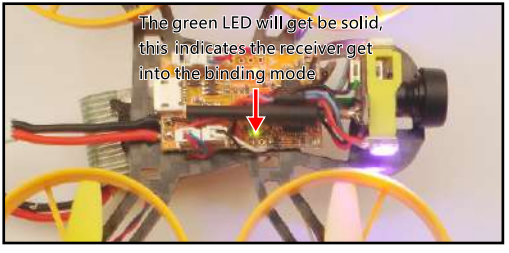


5. (Frsky version)Binding Procedure

1.Turn on the transmitter , select D8 mode for the Receiver.

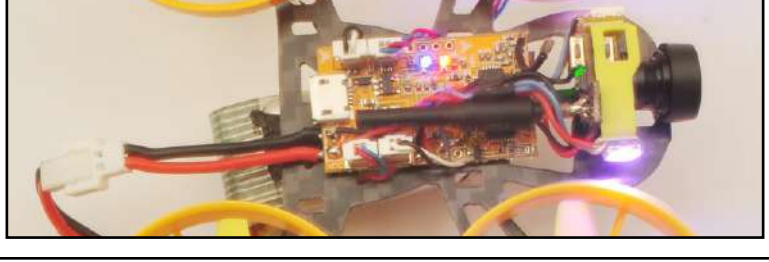
2.Connect the battery to FB90 while Jumped the two "BIND" pins on the Board, the green LED will get be solid, this indicates the receiver get into the binding mode.





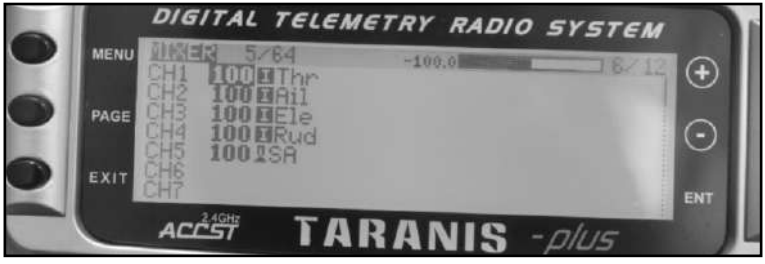
3.Go to the Receiver [Bind] option, and ENT to Bind with the receiver, The transmitter beeps.

4.The green LED on the receiver will turning off, this indicates that the bind process was successful Reconnect the battery for the FB90, and the green LED on the receiver is solid again.



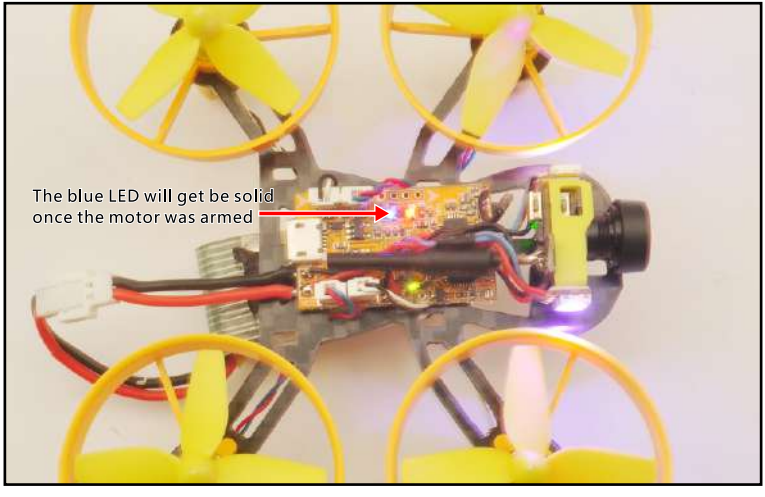
6. Set the switch to ARM/DISARM the motor

1.Turn on the transmitter and move to the MIXER interface, Set "SA" or "SB" switch etc. for Ch5 to ARM/DISARM the motor.



2.The FB90 Frsky Version BNF was set AUX1(CH5) to ARM/DISARM the motor before shipping, you can also customize it.The default receiver channel map for frsky version is TAER1234, please ensure your transmitter is matched with it, otherwise it can't be armed.

3.Toggle the Switch and the blue LED on the flight controller will get be solid, this indicate the motor was armed ,enjoy yourself now !



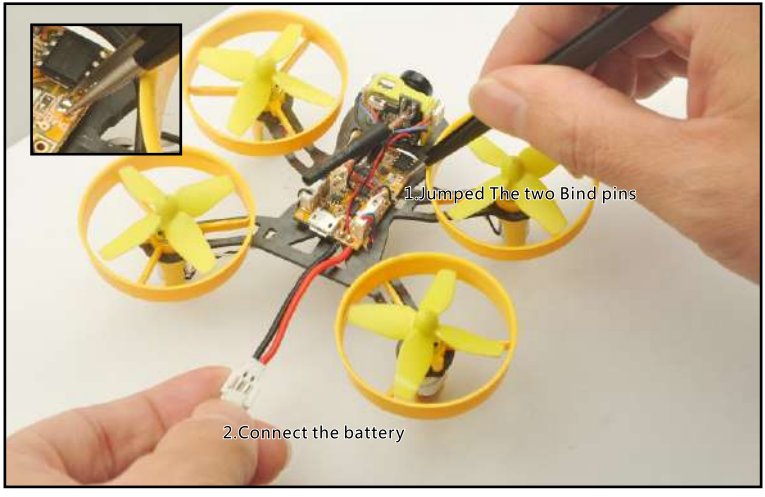
7. (Flysk version)Binding Procedure

1.Select RX setup to AFHDS Mode, turn on the transmitter while holding the bind button to getting into binding mode.

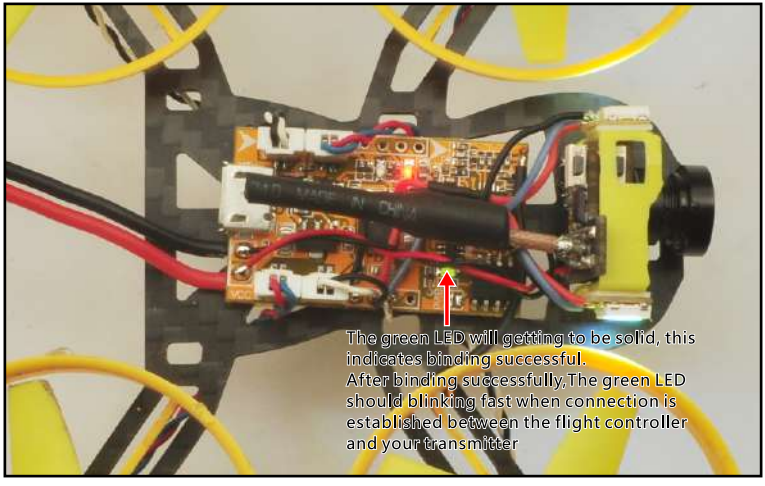
1.Select RX setup to AFHDS Mode

2.Turn on the transmitter while holding the bind button

2.Connect the battery to FB90 while Jumped the two "BIND" Pins on the board ,the green LED will getting to be solid first and turn off for a second ,then it will getting to be solid again , this indicates binding successfully



3.Reconnect the FB90 and the battery, the green LED on the board will blinking fast, this indicates Receiver and transmitter are all works.

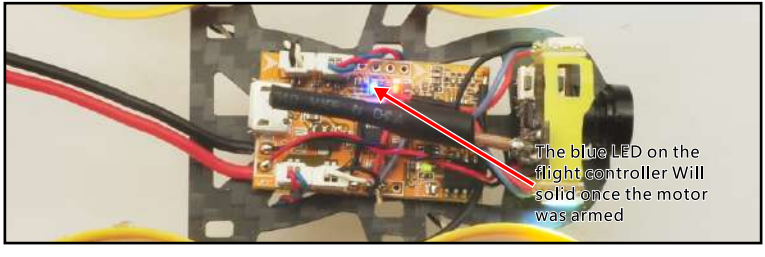


8. Set the switch to ARM/DISARM the motor

1.Turn on the transmitter and move to the AUX. Channels interface, Set "SWA" or "SWB" switch etc. for CH5 to ARM/DISARM the motor, USE FLYSKY I6 as an example.

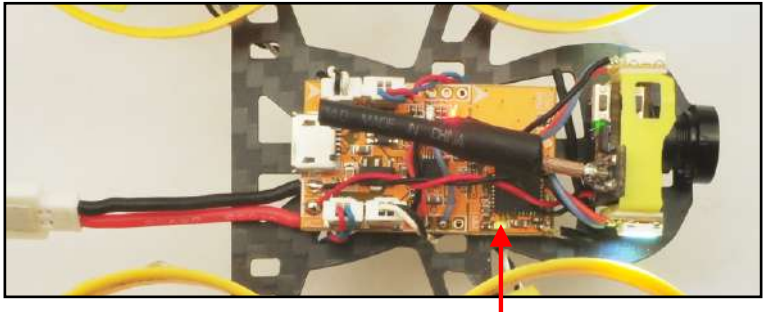
2.The FB90 Flysky Version BNF was set AUX1(CH5) to ARM/DISARM the motor before shipping, you can also customize it.The default receiver channel map for flysky version is AETR1234, please ensure your transmitter is matched with it, otherwise it can't be armed.

3.The blue LED on the flight controller Will getting be solid once the motor was armed



9. (DSM2 version)Binding Procedure

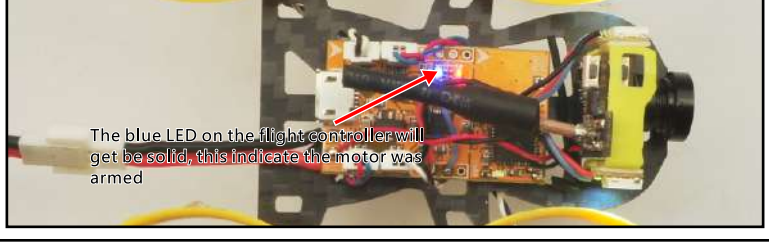
1.This DSM2 protocol receiver has an "auto-bind" procedure just like with small toy quadcopter . First Connect the battery to FB90, waiting Receiver to get into binding mode . The Green LED will blinking slowly ,and it will blinking fast soon , this indicate receiver is in Binding mode , turn on the transmitter and Enter into Binding mode, the green LED on the receiver will turn off and then get be solid ,this indicate binding successfully .



2.The Fb90 DSM2 Version BNF was set AUX1(CH5) to ARM/DISARM the motor before shipping ,and you can also customize it with Cleanflight Configurator. The default receiver channel map for DSM2 version is TAER1234, please ensure your transmitter is matched with it, otherwise it can't be armed.

3.Turn on the transmitter and set a switch for CH5 to ARM/DISARM the motor , some transmitter like Specktrum DX6I, the default CH5 is Gear switch.

4.Toggle the Switch and the blue LED on the flight controller will get be solid, this indicate the motor was armed ,enjoy yourself now !



www.eachine.com

*User manual is subject to change without prior notice.