



FuriBee F90 Wasp Mini RC Racing Quadcopter

User Manual

V1.0

Warnings and Safety Notes

Thanks for purchasing F90 Was Mini quadcopter. Please regularly visit F90 web page at www.gearbest.com which is updated regularly. product information, technical updates and manual corrections will be available on this web page. Due to unforeseen changes or product upgrades, the information contained in the manual is subject to change without notice.

Read this disclaimer carefully before using this product. By using this product, you hereby agree to this disclaimer and signify that you have read them fully. please strictly follow the manual to assemble and use the product. The manufacturer and seller assume no liability for any resulting damage or injury arising from the operation or use of this product.

General Safety

This product is a multi-rotor aircraft which will provide a very good flight experience with the good condition of the power system and all the parts in good condition. Please contact customer service for the latest instructions and warnings. Idea-Fly will reserve the rights to update this disclaimer.

The quadcopter can be extremely dangerous and cause bodily injury. Exercise the utmost caution when flying and operating it. It can be dangerous if you do not fly it in a safe manner or do not pay close attention while flying it. You alone are responsible for its actions during flight.

Before flight, always do a quick motor test to verify that all four propellers are spinning the correct directions. If you're not careful, it's possible to accidentally install the outrigger arms and/or propellers incorrectly, which can result in the quadcopter not flying correctly and possibly crashing.



The propellers must be removed from the motors whenever you update the autopilot's firmware or whenever there's any question about safely operating the quadcopter.

- Do not attempt to fly the quadcopter if one or more of the propellers are damaged. Flying with damaged propellers is not safe and can make the quadcopter fly uncontrollably.
- Always make sure the propellers are installed correctly and that the propeller hub washers and mounting screws are secured tightly. Never install the propellers without also installing the propeller hub washers!

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Get to know your aircraft

• **SP Racing F3 EVO Brushed Flight Controller:**

- It can be powered by up to three LiPo cells
- Equipped with a buzzer and you can set the voltage of alarm
- Supports signal input of PPM, SBus, DSM receivers

• **Omnipotent 8CH DSM Receiver :**

- Compatibility: DSM2/DSMx series protocol remote controller
- Distance: 1.5km (outdoor) / 300m (indoor)
- Interface: PPM, SBus output

• **8520 Coreless Motor :**

- Motor diameter: 8.5mm
- Motor length: 20mm



(A) Body Shell

(B) Power Connector

(C) Camera & Transmitter

(D) Propeller(CCW)

(E) Paddle protection seat

(F) Coreless motor

(G) Propeller(CW)

(J) Antenna

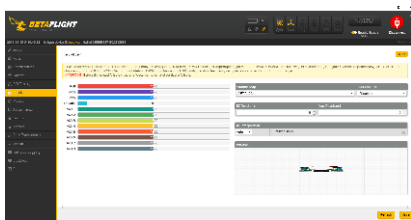
(K) Frame

Blind to your remote controller

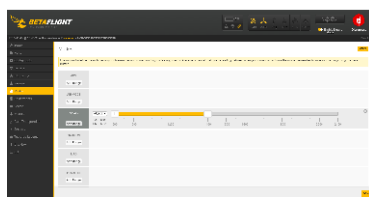
The FuriBee Mini quadcopter has a build-in receiver, which can support DSM2/DSMx type remote controller. If you get a version that without a remote controller, you need do a blind process.

Blinding Process

- 1). Power on the quadcopter and wait for about 3s, the LED on the receiver will flash quickly, it means that the receiver in blinding mode;
- 2). According to the user manual of the remote controller, do the correct steps to blind to your receiver.
***For Mkron i6, you just push the blind switch before powering on the remote controller.**
- 3). After blind successful, the LED on the receiver will be constant on.
- 4). Using a Micro USB cable connect the quadcopter to your PC and run the Betaflight-Configuration, then change the table to "Receiver", moving the sticks to check the endpoint and the Reverse of each channel.
- 5).After set the remote controller success, you need set the flight Mode appropriately if necessary using the Betaflight-Configuration tool.



(Remote Controller setting)



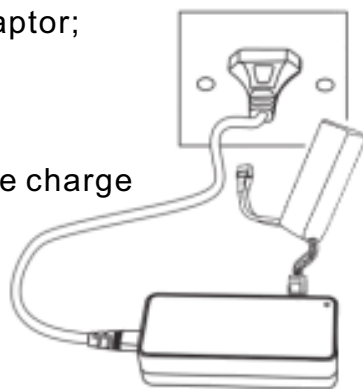
(Flight Mode setting)

Attention before flight

- The F90 mini-quad is recommended for pilots, 10 years or older, with RC hobby experience.
- Only fly the F90 in dry weather, with low wind, please do not fly in rain or heavy foggy conditions.
- Always choose large open fields for flying. Check local LAW and ordinances for legal flying areas.
- Always keep at least 10 feet distance to the aircraft when armed ,to avoid injury from high-speed propellers on the ground or while flying. Always disarm before handling the aircraft.

Charge The Battery

1. Connect the charger to the USB adaptor;
2. Inserting the 2S LiPo balance port to the charger;
3. When the battery is fully charged, the charge status LED glows constant green.




Low Voltage Alarm

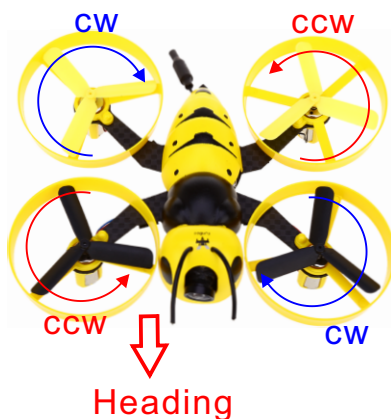
The flight controller has a build-in buzzer and you can set the voltage of alarm, the default warning cell voltage is 3.3V and the minimum voltage cell voltage is 3.0v, when the voltage is reach this points, the buzzer will give you a warning signal.

Prepare Your Quadcopter

1. Install the propeller

Fix the clockwise propellers onto the clockwise motors based on the rotation direction marked on the motors, then fix the counterclockwise propellers as the same way. Tighten the propellers manually and make sure the propeller is installed in proper way and fastened.

-  Install prop by hand and tighten by holding the motor with the included wrench. You can also use the wrench to help remove broken props in case of crash.




Battery (Insert Battery direction)

2. Install the battery

First open the battery cover, then put the battery into the top of the body and move it forward-backwards as required for perfect balance, then firmly secure the battery with the velcro strap.



-  1. Make sure the battery installed in a suitable place so that the quadcopter has a best balance.
2. Please secure the battery with the velcro strap firmly to prevent battery moving during the flight.

Ready for flight

1. Place the aircraft in a wide open space, with the rear facing you.
2. Put all the switch in the remote controller to the UP position, release all the trim buttons and function buttons, move the throttle to the lowest position, then turn on the remote controller.
3. If you have a video receive equipment(such as a 7 inch screen, glass, etc) please turn on the equipment and set the receive channel to the correct channel, then turn it on.

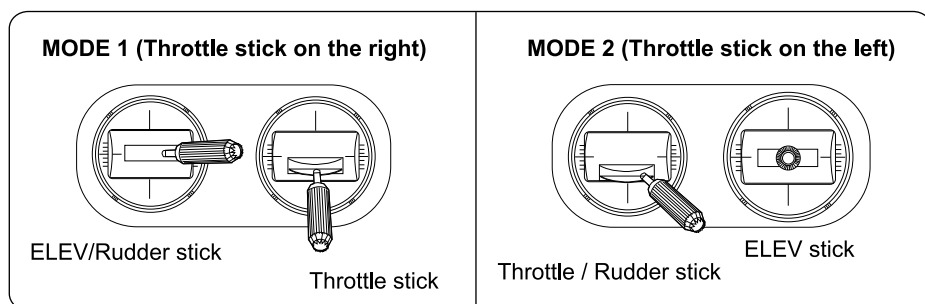
Motor Unlock/Lock

Motor Unlock

After power on the remote controller and aircraft, the rear indicator LED will be constant green, that means the flight controller initialization finished.

Gently push the throttle stick down and move the rudder(YAW) stick to the right side and hold for more than 2 seconds(On the mode 2 the throttle and YAW stick is the same stick), you will see the rear LED becomes constant blue, means the motors are unlocked. Be very careful at this point, as pushing the throttle stick will start the motors.

The unlock method shown as below

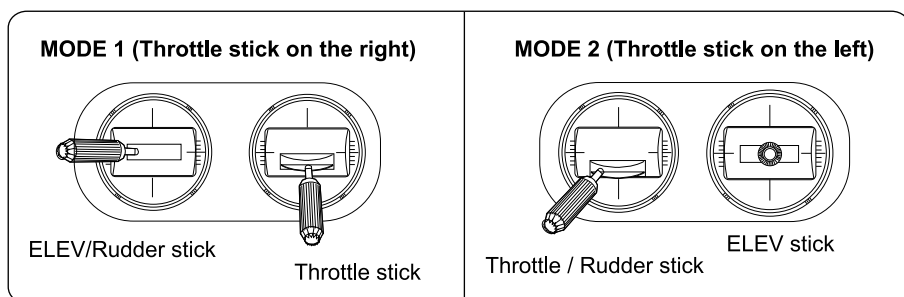


Motor Unlock/Lock

Motor Lock

Lock the motors by moving the throttle stick all the way down and the rudder(YAW) stick all the way to the left side and hold for about 2 seconds, the rear LED will become constant green means that the motors are locked.



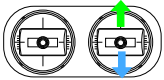
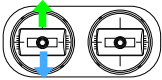
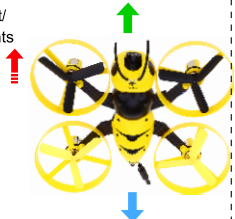
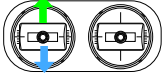
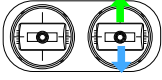
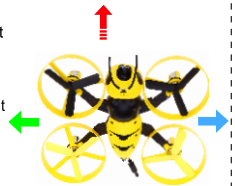
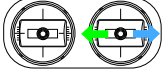

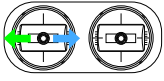
TEST: Push the throttle up a little, the motors will not start.



End of flight

1. Land the aircraft, disarm(lock) the aircraft.
2. First power off the aircraft by unplugging the battery, then turn off the remote controller.
3. Finally, remove the battery from the aircraft.

Operation Instruction

Aircraft posture( the direction of head)	Remote Controller control instruction	
<p>THROTTLE</p> <p>Up/down</p> <p>The rear toward operator</p> 	 <p>MODE 1 (Throttle stick on the right)</p>	 <p>MODE 2 (Throttle stick on the left)</p>
<p>PITCH</p> <p>Forward/backward</p> <p>When backward, the left/ right turn indicator lights will be solid.</p> 	 <p>MODE 1 (Throttle stick on the right)</p>	 <p>MODE 2 (Throttle stick on the left)</p>
<p>ROLL (lean)</p> <p>Left / right</p> <p>When lean left, the left turn indicator light will be solid.</p> <p>When lean right, the right turn indicator light will be solid.</p> 	 <p>MODE 1 / MODE 2</p>	
<p>YAW (turn)</p> <p>Left / right</p> <p>When turn left, the left turn indicator light will flash.</p> <p>When turn right, the right turn indicator light will flash.</p> 	 <p>MODE 1 / MODE 2</p>	

Specifications

General	Brand: FuriBee Type: Battery,Camera,Frame Kit,Motor, Propeller,Receiver,Transmitter
Motor	Shaft Diameter: 1.0mm Motor Dimensions: 8.5 x 20mm Max. Continuous Current (A): 0.15A
Battery	Battery (mAh): 400mAh 7.4V 2S 30C
Camera	Video Resolution: 600TVL (horizontal)
Dimension and Weight	Package weight: 0.450 kg Package size (L x W x H): 20.00 x 15.00 x 6.00 cm / 7.87 x 5.91 x 2.36 inches



FuriBee