JJRC®

ELFIE
THE WORLD'S SMALLEST FOLDABLE DRONE

ATTENTIONS

1. The 4-axis quadcopter is suitable for indoor/outdoor flight, please make sure the outdoor wind force is less than Beaufort force 4.
2. It adopts 2.4G frequency band for long remote control distance; allows multiple flights at the same time and in a same area without any interface. Gamer can control it to fly forward/backward, left/right sideward, turn left/right, to flip and roll.
3. The remote-controlled distance will be shortened when the battery power of the quarocopter/transmitter is insufficient. The quadcopter will be unable to take off or fly high when the power of quadcopter is insufficient.
4. Please repair the quadcopter in time when it is damaged. Do not fly the quadcopter when it is seriously damaged (rotor wing breakage), or it might lead to injury.
5. Do not crash the quadcopter from high altitude or crash it seriously, or it might shorten its lifetime.
6. Please read this manual carefully before operation and keep it properly for future reference.

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A.PRE-FLIGHT PREPARATION

1. Propellers installation

Installation of fan blades- the fan blades should be installed to the designated place. The number of fan blade should be the same as the number of air frame. A is corresponding with A, B is corresponding with B, press down the fan blade with the motor shaft. Please do not deform it.

2. Arms folding order

Arms folding order- fold the front arms near the camera first, then the back arms (opposite when unfold them)

3. Lithium battery instruction

Take out the lithium battery from the battery holder and disconnect with the power socket as shown in the figure, and connect the USB plug of charger with the computer USB port, then connect the charging socket of the charger with the lithium battery plug. When charging, the LED will light up; when fully charged, the LED will light off. The charging time is about 120 minutes (For the sake of safety, be sure that the battery in your sight when charging)

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Attention: when the quadcopter battery plugged in, please insert the charger that has a small iron as inside.

4. Attentions to lithium battery usage

- There is a certain risk when using lithium battery.It may cause fire,body injury or property loss. Users must be aware of the risks of using this product.Manufacturers,retailers and dealers do not bear any responsibility since accidents occur,so please read the safety guidelines and charging instructions carefully before operation.
- If battery leakage occurs,please avoid contacting your eyes and skin with electrolyte. Once it happens, please wash your eyes with clean water and seek medical care immediately.
- Please remove the plug immediately if you sense any peculiar smell, noise or smog.
- Please comply with the following requirements strictly, or it may cause fire, electric shock or explosion.

Battery Charging
- Please use the charger from original factory to ensure your safe usage.
- Do not charge the dilatant or outworn battery.
- Do not overcharge the battery.Please pull out the charger once the battery is fully charged.
- Do not charge the battery next to inflammables or on the surface of electro-conductive objects.When charging please observe the battery at all times.
- Do not charge batteries which not cool down yet.
- The charging temperature should be between 0℃ to 40℃.

Recycle
- Do not deal with the related equipment as daily rubbish. The damaged /unusablebatteries should be put into the designated container.
- This equipment is composed of electronic elements and batteries. For electronics garbage, please dispose them according to the special requirements.
- Please familiarize yourself with the local garbage disposal method.
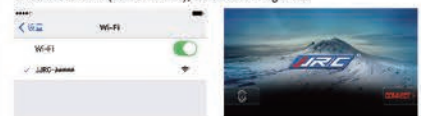
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B.INSTRUCTION OF APP

1. Wifi connection

1. Use your phone to scan the QR code, download and install the control software: 'JJRC'. Android, Android(Google Play) and IOS are all supported.

Android | Android (Google Play) | IOS | Figure 1

2. Turn on the drone and the lights will flash; turn on your mobile phone to connect WIFI (JJRC-#####), as shown in figure 2.

Figure 2 | Figure 3
Figure 4 | Figure 5

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Figure 6

Figure 7

3. Open the APP, enter the main interface, as shown in figure 3.
Click "play" into the manipulation interface, as shown in figure 4.
Click "▦" to enter ordinary control interface, as shown in figure 5
Click "▦", Altitude Hold key becomes yellow, and enter the Altitude Hold interface, as shown in figure 6. Click "▦" for more Settings interface, as shown in figure 7.
4. When the Video links successfully, you can see the images that WIFI camera transmits through your mobile phone screen.

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2. APP Interface description

1. Return
2. Photo
3. Video
4. Document (Album/video)
5. Speed control:30%/60%/100%
6. Altitude hold
7. Gravity induction
8. Show/Hide steering wheel
9. 360° flips and rolls
10. One-key unlocking
11. One-key down
12. Emergency stop
13. Left joystick (throttle)
14. Right joystick (rudder)
15. Left rotation fine-tuning
16. Right rotation fine-tuning
17. Left side fly fine-tuning
18. Right side fly fine-tuning
19. Forward fine-tuning
20. Backward fine-tuning
21. More settings
22. Camera reverse
23. 3D display
24. Headless mode
25. One-key calibration

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1. Accelerometer mode: click into accelerometer mode, put your right hand thumb on the right joystick, will be mobile phone swing to complete (Figure 1).
2. Selfie mode: In the Altitude hold mode, you can control the quadcopter to turn the camera back to itself, then click the camera button on the screen to take selfies(Figure 2).

Figure 1

Figure 2

Attention: selfie-taking must be practiced when you are skillful enough to control the quadcopter.

3. One-key calibration: This function is only allowed on the ground.

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3. Unlock quadcopter

Unlock the quadcopter before the flight. Click the Altitude hold icon in Figure 1, then click on the area in Figure 2 to unlock.

Figure 1 | Figure 2

4. Operation method

Attention: After flight, please disconnect the battery plug from the power connection of circuit board in case of battery damages.

1. Connect the power plug of the quadcopter with the lithium battery socket correctly as shown in the figure. Place the quadcopter on a level surface, and please do not move it when the indicator light of mainboard is flashing.
2. Please put the quadcopter in an open space. Before flight, please make sure that the rear part of quadcopter is pointing to you directly.

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Ascend / Descent
Push up the left joystick(throttle), the rotating speed of main blades increase, the quadcopter will ascend.
Push down the left joystick(throttle), the rotating speed of main blades decrease, the quadcopter will descend.

Turn right / Turn left
Push the left joystick(throttle) to the left, the quadcopter will turn left;
Push the left joystick(throttle) to the right, the quadcopter will turn right;

Forward / Backward
Push up the right joystick(rudder), the quadcopter will fly forward.
Push down the right joystick (rudder), the quadcopter will fly backward.

Left side / Right side
Push the right joystick(rudder) to the right, the quadcopter will fly sideways to the right.
Push the right joystick(rudder) to the left, the quadcopter will fly sideways to the left.

Attention: Push the left joystick(throttle) slowly to take off. When the quadcopter revolves or flies sideways in the air, make use of fine-tuning function to calibrate the action.

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Attention: The camera of quadcopter indicates the forward direction, conversely, the backward direction.

If the quadcopter revolves to the left while hovering, please press the right rotation fine-tuning key continuously until it is back to normal.

If the quadcopter revolves to the right while hovering, please press the left rotation fine-tuning key continuously until it is back to normal.

If the quadcopter flies sideways to the left while hovering, please press the right side flight fine-tuning key continuously until it is back to normal.

If the quadcopter flies sideways to the right while hovering, please press the left side flight fine-tuning key continuously until it is back to normal.

If the quadcopter flies backward while hovering, please press the forward fine-tuning key continuously until it is back to normal.

If the quadcopter flies forward while hovering, please press the backward fine-tuning key continuously until it is back to normal.

Attention: When the quadcopter is within 30cm from the ground, it will be affected by the blade vortex made by itself and become unstable. This is "ground effect". The lighter the quadcopter is, the greater the effect will be.

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C.FLYING EXERCISE

1. Preflight environment

1. Indoor flying: choose a wide place without barriers, pets and people.
2. Outdoor flying: Choose a warm, sunny and windless day.
   ①Do not fly in extreme temperatures. Flying in extreme temperatures may affect the performance and damage the product.
   ②Do not fly in windy days. The performance and the control of the quadcopter will be affected by the strong winds. Flying in winds condition may cause disappearance or damages to the quadcopter.

2. Fundamental flying

You can try to fly a square, cross-shaped pattern after the fundamental flight training of fixed-point take-off, landing, rotation and other basic exercises.

Fixed-point revolving

Fixed-point landing | Fly a SQUARE pattern. | Fly a CROSS pattern.

3. Altitude Hold

When you release the left joystick (throttle) after the up/down operation, the quadcopter will still hover over the height when the joystick is released.

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4. 3D Flips and Rolls

When you skillfully operate the basic moves, you can try some adventurous rotations. Fly the quadcopter more than 3 meters high from the ground, push the rotation button and push the right joystick(rudder) to one direction, the quadcopter will rotate to the direction you push.
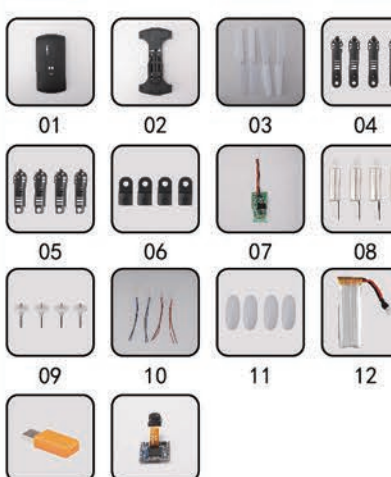
Flip forward | Flip backward
Flip to the left | Flip to the right

D.COMMON PROBLEMS AND SOLUTIONS

PROBLEMS	CAUSES	SOLUTIONS
Control failure	1.Did not connect with the quadcopter battery.	1.Connect the quadcopter battery in right way.
	2.Too strong wind force.	2.Do not fly in windy day. The performance and the control of the quadcopter will be affected by the strong winds.
Fail to ascend	1.The rotation speed of main blades is too slow.	1.Push up the throttle joystick.
	2.The battery of the quadcopter is not fully charged.	2.Please full charge the quadcopter.
Landing too soon	The throttle stick is pulled down too fast.	Pull down the throttle stick slowly to perform a smooth landing.
Out of control	Beyond the effective controlling distance.	Ensure that the flying distance is within 30 meters.

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E.ACCESSORIES

01 | 02 | 03 | 04
05 | 06 | 07 | 08
09 | 10 | 11 | 12
13 | 14

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Number	Name	Quantity	Number	Name	Quantity
01	Up cover of enclosure	1	08	Motor	4
02	Down cover of enclosure	1	09	Gear	4
03	Propeller	4	10	Flashing lights	4
04	Up cover of arms	4	11	Lampshade	4
05	Down cover of arms(A)	4	12	Battery	1
06	Down cover of arms(B)	4	13	USB charger	1
07	Circuit board	1	14	Camera plate	1

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