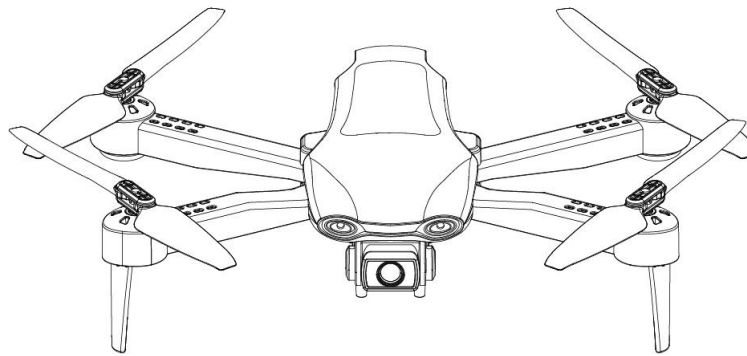




4D-F3

For people over 14 years old

4-AXIS AEROCRAFT INSTRUCTION MANUAL



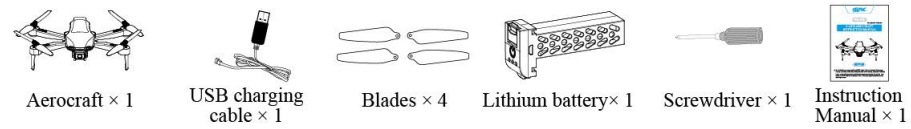
English

- It is forbidden to use any model and Aerocraft within 10km on the sides of the airport runway centerline, within 20km from both ends of the runway, and on civil aviation routes to meet the requirements of electromagnetic environment for aeradio. Any model and Aerocraft shall not be allowed in the no-fly zones specified by the relevant state departments.

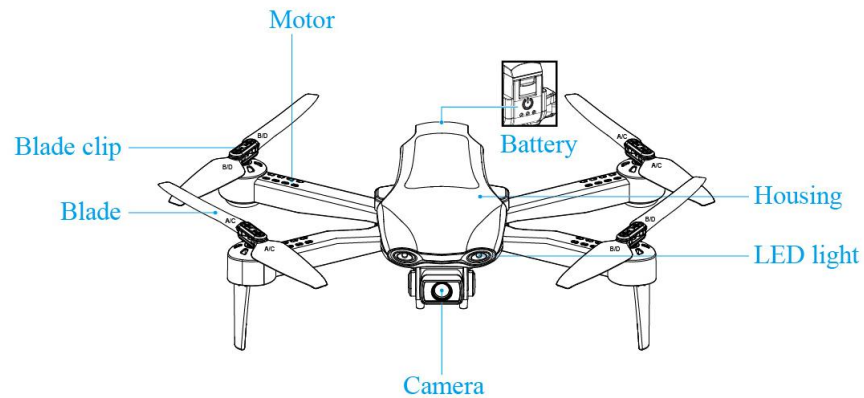
WARNING

- 1.The packaging and instruction manual provide important information and shall be kept for future reference.
- 2.You are responsible for ensuring that this aircraft will not cause any bodily injury and property damage.
- 3.The commissioning and assembly of the aircraft shall be strictly in accordance with the operation manual. Please be sure that the aircraft is kept a distance of 2-3m away from the operator and other persons when flying, to prevent the aircraft from hitting man's head, face and body when flying and landing, and causing injuries.
- 4.Our company and the seller bear no responsibility for any loss, damage or personal injury due to improper use or operation.
- 5.Children over 14 years old can operate this aircraft under the guidance of adults, and any children under 14 years old shall not be allowed to operate this product.
- 6.Please correctly install and use this product according to the Instruction Manual and Packing Instruction, some parts shall be assembled by adults.
7. This product contains small parts, please keep it out of reach of children to prevent accidental eating or suffocation.
- 8.It is forbidden to operate it on the road or sodden ground to prevent any accident.
- 9.Please put the packing materials away timely to avoid harm to children.
- 10.Do not disassemble or refit the aircraft to avoid any faults of that.
- 11.The USB charging cable shall be plugged into the specified power supply 5V = 2A as marked on the product.
- 12.Only the original USB charging cable is allowed to be used.
- 13.The USB charging cable is not a toy.
- 14.The rechargeable battery shall be charged under the guidance of adults, and shall be kept away from the inflammables when charging.
- 15.Short circuit or extrusion of the battery is not allowed, as which may cause an explosion.
- 16.Do not mix different types of batteries.
- 17.The aircraft uses the 7.4V rechargeable lithium battery that shall be removed for charging.
- 18.Do not short-circuit, disassemble or throw the battery into the fire; do not place the battery in a hot place (such as fire or area nearing an electric heating device).
- 19.The aircraft shall be used in the place far away from other electrical equipment and magnetic objects to avoid mutual interference.
- 20.Please keep a safe distance from the high-speed rotating propeller to avoid wringing and cutting.
- 21.The motor is a heating component, please do not touch it to avoid burns.
- 22.The light emitting diode has laser radiation, please do not directly transmit beam.
- 23.Do not use it near your ears! Misuse may cause hearing damage.
- 24.The rechargeable battery shall be charged by the USB charging cable that provided by the company, otherwise, the rechargeable battery may be damaged.
- 25.To meet the requirements of electromagnetic environment for aeradio, it is forbidden to use the remote controller of the model in the relevant regions during the radio control specified by the relevant state departments.
- 26.The battery shall be removed when the battery of the aircraft has run out, and then charge it after 30 minutes, otherwise, the battery may be damaged.

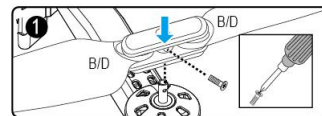
1. Accessories List:



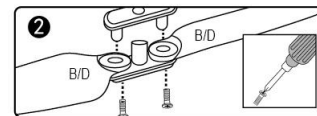
2. Component Name of Aircraft:



3. Installation Drawing of Blades:

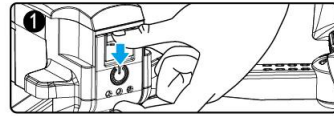


3.1 Unscrew the screw and remove the blades.
⚠ Notes: The blades are imprinted with letters of A, B, C and D, A=C, B=D, please correctly install it according to the drawing, otherwise, the aircraft cannot take off.

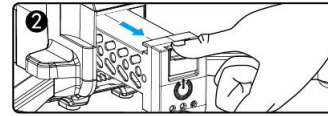


3.2 Unscrew the screw to separate two blades from the connecting parts to replace the blades. (replace the damaged B/D blade with B/D blade, and replace the damaged A/C blade with A/C blade, any wrong replacement will cause that the aircraft fails to take off.)

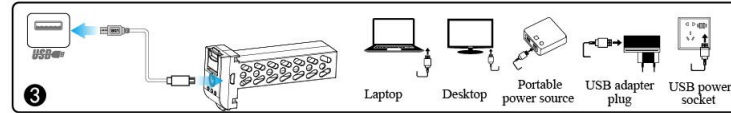
4. Charging Instructions of Lithium Battery:



4.1 Push the battery lock of the aircraft

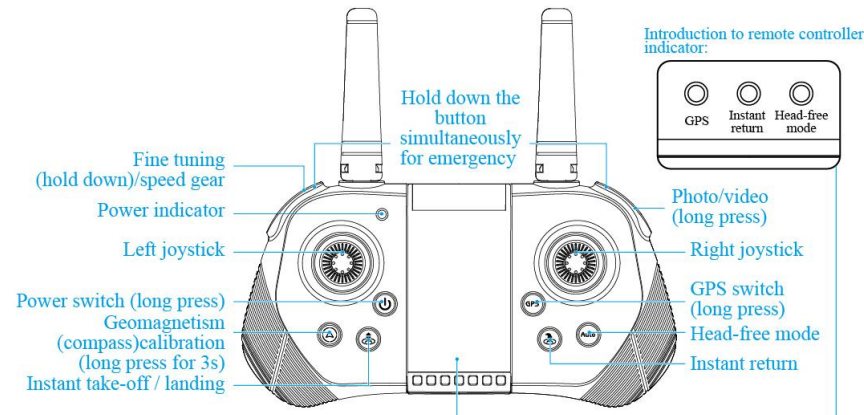


4.2 Remove batteries



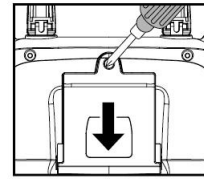
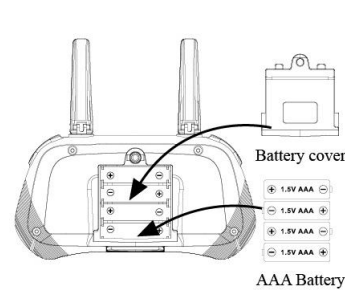
4.3 Charging: Insert the USB interface of the USB charging cable into the USB ports on the computer (Or use the output as: 5V = 2A power adapter), and connect the other side of the USB interface to the battery socket. When charging, the aircraft's USB red indicator light is on and green indicator light is flashing; when the battery is fully charged, the red indicator light is out and the green indicator light is on, indicating the charging is completed.

5. Component Name of Remote Controller:



- ① Common / GPS button: After matching the frequency, long press this button for 3s to select the common mode and GPS mode (default GPS mode, the GPS indicator light is on, if select the common mode, the GPS indicator light is out).
- ② Head-free mode button: Press the button once for head-free mode, and the head-free indicator light is on, press the button again to exit the head-free mode, the indicator light is out.
- ③ Return button: Press the button once for return, and the return indicator light is on. Press the button again to cancel return, and the indicator light is out.

6. Battery Installation of the Remote Controller:



Battery installation:

- 4.1 Press the battery cover button by screwdriver to remove the battery cover.
- 4.2 According to the polarity instructions on the battery holder, remove the battery cover and install 4 "AAA" batteries (not attached).

Notes:

1. When installing batteries, please pay attention to the anode and cathode of batteries and that marked on the battery holder.
2. Please do not mix new and old batteries.
3. Please do not mix different types of lithium batteries.

Precautions for charging:

- Please do not put the charged batteries in the places with high temperature, such as naked flame or electric heating devices to avoid damage or explosion.
- Do not impact or knock hard objects with batteries.
- Do not disassemble batteries.
- Do not soak batteries in water. Store the batteries in a dry place.
- Charge batteries under the monitoring of adults.

Warning: ⚠

When the aircraft is not in use, please disconnect the battery plug from the aircraft's circuit board power connection, to avoid battery damage.

7. Downloading And Installation Instructions Of The App:

7.1 APP downloading and installation

For Android system, scan the QR code, open the website in the browser and download the software



7.2 Link instructions

- ① Turn on the power of the aircraft, access the "Settings" (mobile phone or IPAD), open the wireless network, find the device "4DRC-4K-GPS *****" in the wireless network search list and connect the device, after the connection, exit the Settings.
- ② Open the "4DRC PRO" icon in your mobile phone to enter the control interface. (keep away from other signal sources when operating the aircraft)



Open 4DRC PRO



Click Go into the control interface

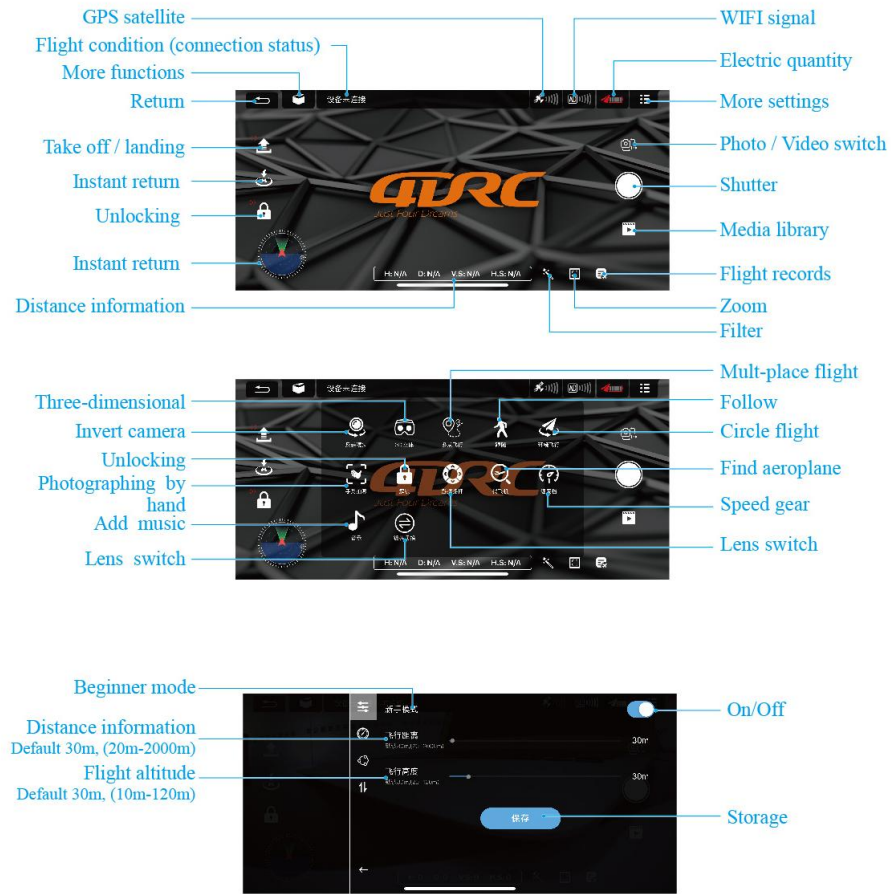


Click More Functions



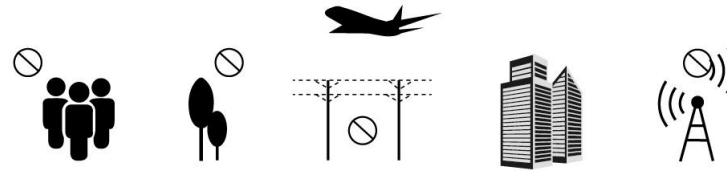
Access to the Function Menu

8. Function Introduction Of App's Control Interface:



⚠ Note: Turn off beginner mode with proficient flight operations, then set flight distance and altitude, so that the aircraft can fly farther!

9. Environment Requirement Before Flight:



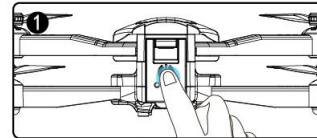
Please operate the aircraft in an outdoor open place without rain or snow and under the wind force below grade 3, and keep away from crowds, trees, power lines, tall buildings, airports, and signal towers. Do not operate it indoors or in the place with poor GPS signal.

10. Flight Preparation



Warning: Please make sure that the aircraft / remote controller must be fully charged, otherwise it cannot take off.

10.1 Turn on the power of the aircraft, put it on the horizontal place for automatic frequency matching, the front white indicator light and the red indicator light on the rear arm are flashing (the battery indicator light is on)

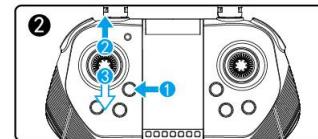


⚠ Notes: Adjust the aircraft direction to make the head face forward, and the aircraft must be placed on the horizontal place.

10.2 Open the WiFi function in the mobile phone, and select the "4DRC-4K-GPS*****" in WiFi list, connect the device and then open the App.



10.3 Turn on the remote controller (default mode), long press the Ⓢ "ON/OFF" button on the remote controller (Step 1), the power indicator light is on. Push the throttle rod up to the top (Step 2) and then down to the bottom (Step 3). When matching frequency is successfully matched, the UAV light is on instead of flashing.



10.4 Horizontal calibration:

Push the left and right operating rods on the remote controller to the lower left corner, the white and red indicator lights on the aircraft are flashing quickly. When the white and red indicator lights on the aircraft are on, the horizontal calibration is completed, the remote controller beeps (Figure 1).

Operations of the APP: Click "More settings" icon in the APP interface for horizontal calibration according to the text prompt. When the calibration is completed, automatically enter the next operation (Figure 2).

⚠ Notes: The calibration can be completed only when the aircraft is placed on the horizontal place.

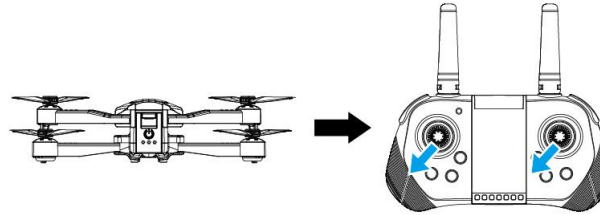


Figure 1

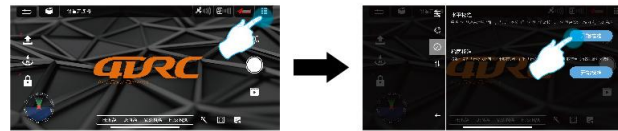


Figure 2

10.5 Geomagnetic calibration

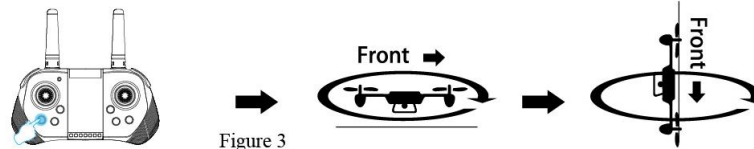


Figure 3

1. Long press "Ⓜ geomagnetic calibration" button until the front white indicator light and the red indicator light on the rear arm are flashing quickly.

2. Horizontally rotate the aircraft clockwise - take the aircraft horizontally and rotate it clockwise until the front white indicator light and rear red indicator light are slowly flashing, when remote controller beeps, the horizontal calibration is completed.

3. Rotate the aircraft clockwise with the tail upward - take the aircraft with the head downward, rotate the aircraft clockwise until the front indicator light and the red indicator light on the rear arm is on, when remote controller beeps, the compass calibration is completed.

Operations of the APP: Enter the "More settings" interface, complete the compass calibration according to the text prompt and operating steps (Figure 4). When the compass calibration is completed, automatically enter the flight operation interface.

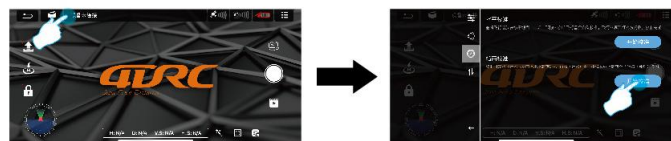


Figure 4

10.6 Satellite search state (default GPS mode)

When the remote controller is under GPS mode, the GPS indicator light is on, indicating that the GPS enters the satellite search state. When the red tail light of the aircraft is flashing, the satellite search is completed, and the remote controller beeps, the aircraft can be used (Figure 5).

⚠ Notes: It takes at least several minutes for the first satellite search, when the satellite search signal reaches at least Level 10, the aircraft can take off.

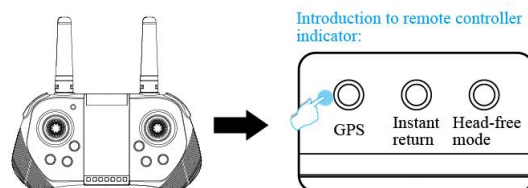


Figure 5

10.7 Start/Stop (GPS mode)

Push the left and right operating rods on the remote controller outward for unlocking the aircraft (the aircraft cannot be unlocked for operation if the satellite search is uncompleted) (Figure 6). Under this condition, the aircraft can take off, and all indicator lights will be on after take off (Figure 7).

APP application operation: Click the "One Key Unlock" icon (Figure 7) in the APP control interface, the same key unlock function can also be achieved.

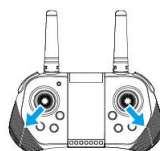



Figure 6



Figure 7

10.8 Instant take-off/landing

After unlocking the aircraft, lightly press  "Instant take-off/landing" button on the remote controller (Figure 8), when the aircraft automatically fly to about 1m, maintain a stable flight at this altitude; press this button again, the aircraft will automatically land on the ground slowly.

Operations of the APP: Click the "instant take-off" icon (Figure 9) in the APP interface to implement this function; during the flight, click the icon again, the aircraft will automatically land on the ground slowly.

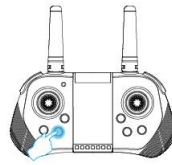


Figure 8



Figure 9

10.9 Common mode (optical flow positioning)

The aircraft is under common mode: When the aircraft flies on good ground, optical flow will assist the aircraft. to hover in a place. According to the ground conditions and flight height, an excursion of about 1m is a normal condition.

10.10 Start/Stop (common mode for indoor operation)



Figure 10

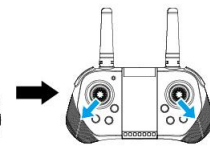


Figure 11

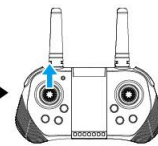


Figure 12

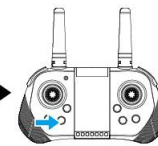




Figure 13

1. Long press the  "GPS" button on the remote controller, the GPS indicator light is out, enter the common mode(Figure 10).

2. Push the left and right joysticks on the remote controller outward for unlocking the aircraft (Figure 11).

3. Push the left operating rod upwards (Figure 12)

4. Or press  "Instant take-off" button (Figure 13)



Warning: Before taking off, operate the aircraft in accordance with the following steps. Frequency matching (refer to 10.1) → connect WIFI(refer to 10.2) → Remote control start frequency (refer to 10.3) → horizontal calibration (refer to 10.4) → geomagnetic calibration (refer to 10.5) → Satellite search state (default GPS mode) → (refer to 10.6) → Start/Stop (GPS mode) (refer to 10.7) → Start/Stop (common mode) (refer to 10.8) → Common mode (optical flow positioning) (refer to 10.9) → Start/Stop (common mode for indoor operation) (refer to 10.10)

11. Operation Methods:

Operations of the APP: Enter APP's control interface, click "joystick ON/OFF" icon for joystick operation modes:


			Push the left joystick (throttle rod) upwards, the main blade speed increases, the aircraft rises. Push the left joystick (throttle rod) downwards, the main blade speed decreases, the aircraft drops.
			Push the left joystick (rudder) to the left, the aircraft head turns to the left. Push the left joystick (rudder) to the right, the aircraft head turns to the right.
			Push the right joystick (rudder) upwards, the aircraft flies forwards. Push the right joystick (rudder) downwards, the aircraft flies backwards.
			Push the right joystick (rudder) to the right, the aircraft fuselage flies to the right. Push the right joystick (rudder) to the left, the aircraft fuselage flies to the left.



Warning: When the aircraft is lower than 100CM from the ground, the flight will become unstable due to the blade vortex, namely, the "ground effect". The lower the flight height of aircraft is, the greater the ground effect is.

12. App Operation And Introduction Of Remote Controller Functions:

12.1 Head-free mode

 The front of the aircraft during frequency matching is the default front under head-free mode; if you want to adjust the default direction, please restart the aircraft for frequency matching and keep short press of the "head-free mode" button (Figure 14) on the remote controller, and lightly re-press this button when exiting.

 **Special tips:** Please adjust the aircraft and make it aligned with the straight line, so that the gyroscope can automatically detect the straight line to achieve straight flight under head-free mode.

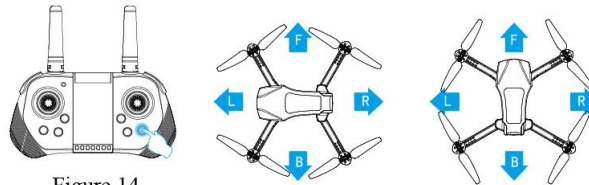



Figure 14

12.2 Instant return

Press  "Instant return", the aircraft will fly back above the geomagnetic calibration position (Figure 15), (if the flight height is lower than the safety height, the aircraft will rise to the safety height), and land the ground slowly. In case of any obstacles, re-press the "Instant return" button to turn off the function, and manually control the rudder to avoid obstacles, then press the throttle rod down to land the aircraft.

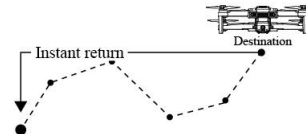
Operations of the APP: Click the "Instant return" icon (Figure 16) in the APP's control interface to make the aircraft fly back; During the return, re-click this icon to cancel the return.



Figure 15



Figure 16





Out-of-control return When the remote controller's signal is interrupted for about 4s, the aircraft will automatically fly back to the place with relevant signal. Low-battery return In case of low battery, the aircraft will be forced to return to the place about 20 meters above the takeoff place. During the return under low battery, the return cannot be cancelled.

12.3 Speed switching:

⊕ When aircraft take off, it flies under low speed mode (3 gears) by default, lightly press the remote controller, "di" for low speed gear, "di di" for medium speed gear, and "di di di" for high speed gear (Figure 17). Operations of the APP: Click the "More settings" icon (Figure 18) in the APP's control interface to switch the flight speed of the aircraft (Figure 19).



Figure 17



Figure 18



Figure 19

12.4 Waypoint flight mode

- ① Under GPS mode, click the "More settings" icon (Figure 20) in the APP's control interface to enter the multi-place flight (Figure 21), then the interface is converted from the image transmission page to the map page. On the map page, click to set the track range composed of a single waypoint or continuous waypoints (Figure 22). During the setting, if there are too many track waypoints, you can click the Delete icon to delete all waypoints (Figure 23).
- ② After setting the waypoints, click the Send icon (Figure 24), the aircraft will automatically fly to all waypoints from the initial point to complete the preset flight path. You can control the aircraft direction through joystick during the flight.



Figure 20



Figure 21



Figure 22



Figure 23



Figure 24

12.5 Circle flight mode

Under GPS mode, click the "More settings" icon (Figure 25) in the APP's control interface to enter circle flight (Figure 26), the aircraft will automatically make a radius (Figure 27) that can be adjusted in the APP (Figure 28). At this moment, push the right rudder to the left or right to make the aircraft fly to the left or right (Figure 29) to achieve the circle flight, and the flight speed is adjustable. Push the right rudder forward and backward to adjust the radius for circle flight. Re-press the circle flight button to stop the circle flight (Figure 30).



Figure 25



Figure 26



Figure 27



Figure 28



Figure 29



Figure 30

12.6 GPS following mode

Under GPS mode, click the "More settings" icon (Figure 31) in the APP's control interface to enter following mode (Figure 32). The aircraft will automatically fly with the moving of mobile device based on the distance from the current location of the aircraft to the controlling device (mobile phone or IPAD). During the following mode, lightly press the GPS following button to cancel the following mode.



Figure 31



Figure 32

12.7 Gesture recognition

Under GPS mode, when facing the front lens of the camera, you can enable the Timer or Auto REC of the aircraft through the following gestures.

 **Special tips:** Please keep about 3m away from lens and the face it in the place with good light to conduct gesture recognition operations.



Photographing by Yeah gesture

About 3m in front of the aircraft lens, rise single hand horizontally and make Yeah gesture; when the aircraft successfully recognizes this gesture, it will take pictures after 3s.



Palm gesture for Auto REC

About 3m in front of the aircraft lens, rise single hand horizontally with closed 5 fingers; when the aircraft successfully recognizes this gesture, it will record video immediately. Make this gesture again, it will stop recording this video (the time difference between the two recognitions shall be greater than 3s).

12.8 MV interface

Click the "Filter interface" icon (Figure 33) in the APP's control interface to select your favorite filter effects, click the Record icon to record MV (Figure 34). When it is finished, the composite short video or pictures will be saved to the media library (Figure 35).


 **Special tips:** During recording, you can rotate the screen or change filter effects, turn on the joystick ON/OFF button to control the flight direction and range of the aircraft.



Figure 33



Figure 34



Figure 35

13. Solutions To Common Problems:

Problems	Causes	Solutions
Aerocraft's indicator light flashes, but the aerocraft does not work	1. Unsuccessful GPS satellite search of the aerocraft 2. Low battery of the aerocraft	1. Place the aerocraft to the open place and search satellite again 2. Charge the battery
The aerocraft cannot take off with the rotated blades	1. Low battery power 2. Distorted blades	1. Charge the battery 2. Replace the blades
Badly shaky aerocraft	Distorted blades	Replace the blades
The aerocraft cannot fly smoothly even though the fine tuning is adjusted to the minimum	1. Distorted blades 2. Poor motor	1. Replace the blades 2. Replace the motor
The aerocraft is out of control after the impact	The three-axis acceleration sensor loses balance due to the impact.	Stand the aerocraft for 5-10s, or correct it with correction gyroscope.