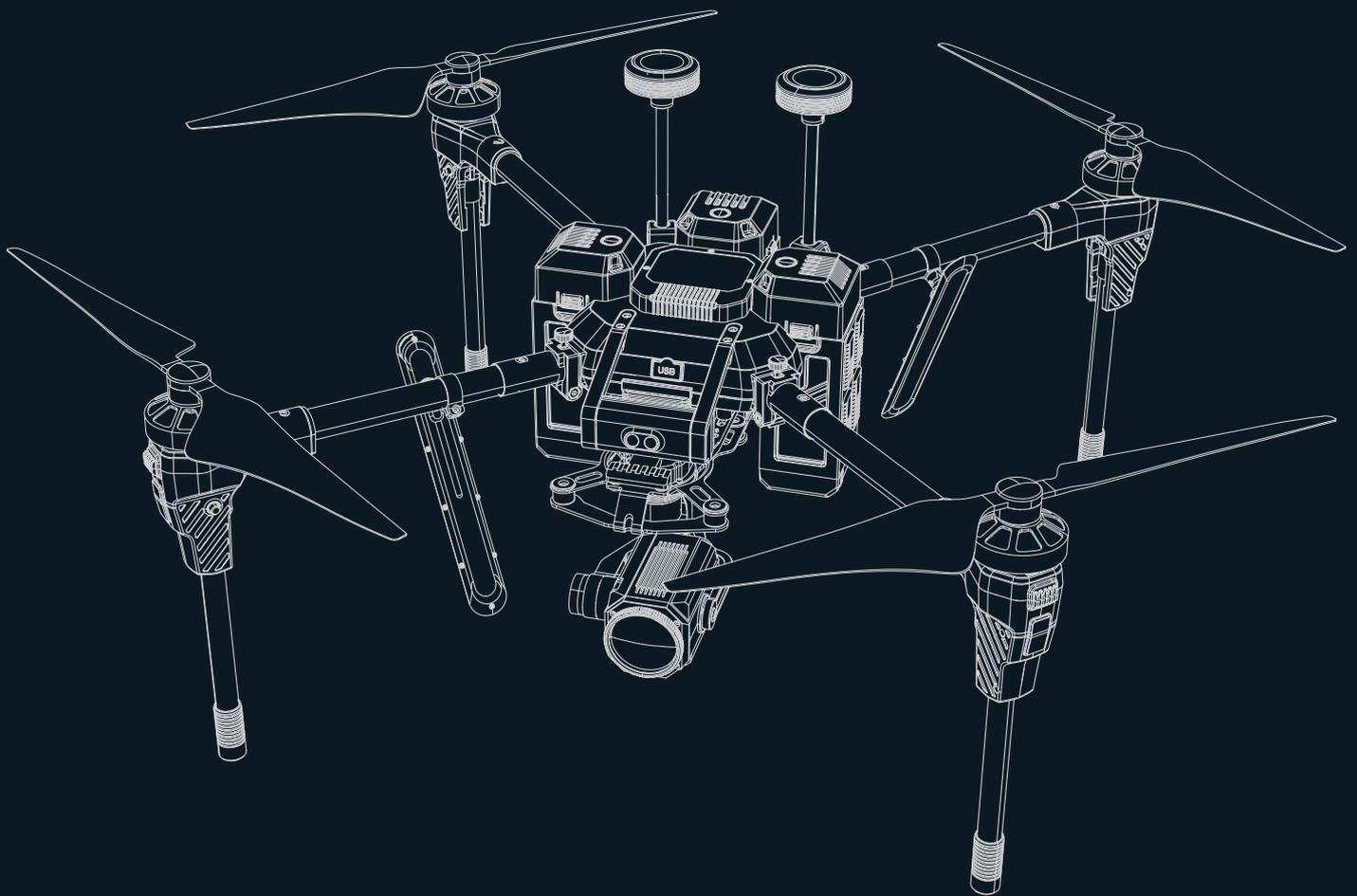


# VOYAGER 5 **5** 4G LTE

QUICK START GUIDE **V1.1**

Oct. 22th, 2018

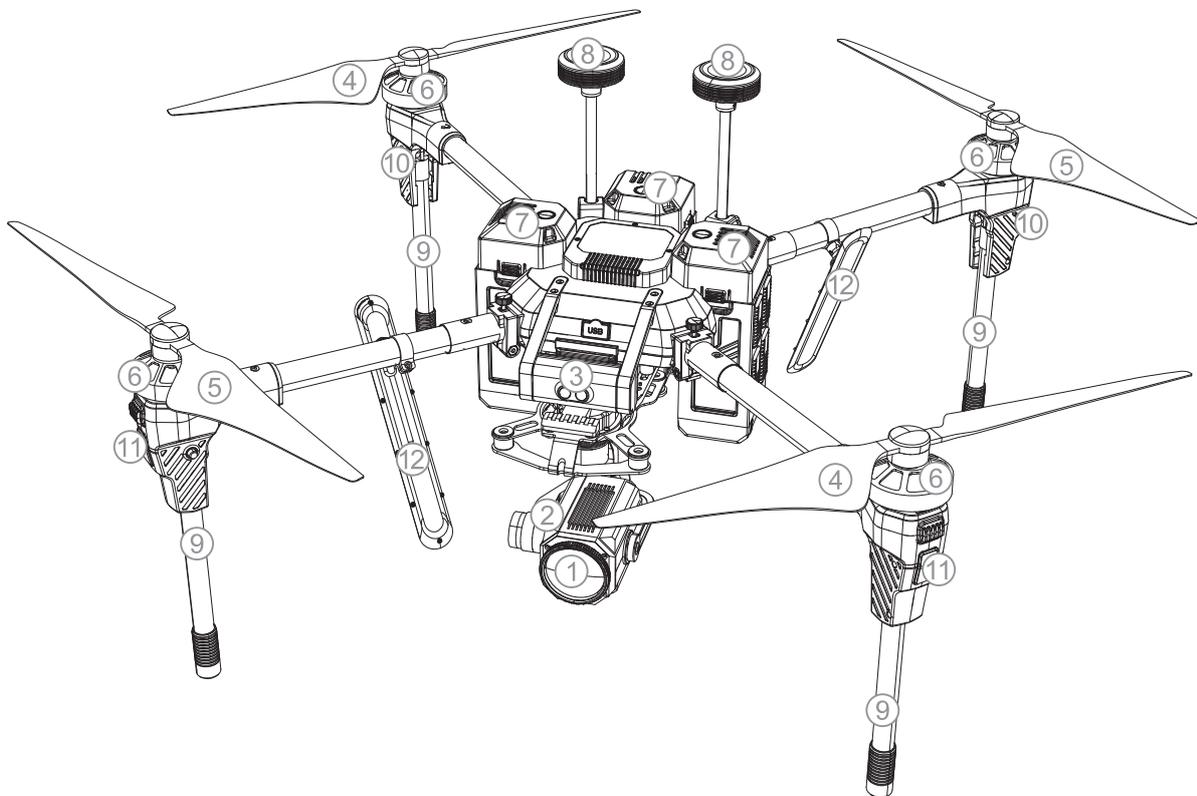


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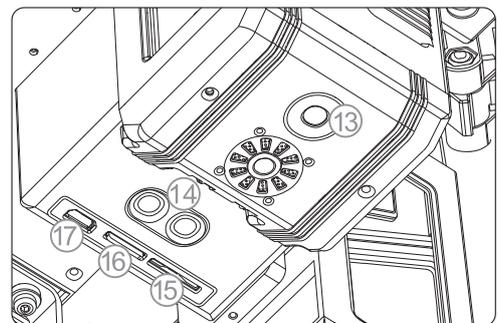
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## 1.0 Get to know your aircraft

- The innovative design makes the aircraft arms and landing gear all foldable and portable. Easy assembly generates quick operation.
- The brand new three-battery redundant system provide Voyager 5 with double protection. Even when two batteries have problem, the rest 1 battery still can ensure the flight safety.
- Voyager 5 integrated a safety assurance system called FlightSafety, which is composed of a dual IMU, dual compass, and dual GPS system, in order to make it much more reliable and safer.
- The front facing infrared obstacle avoidance module, altimeter and optical flow positioning module, enable the aircraft to better position and sense obstacles while flying in the air, greatly reducing risks caused by misoperations.
- Adopt 4G communication image transmission system, far transmission distance, wide range of applications.



- |                                       |                        |
|---------------------------------------|------------------------|
| 1. Gimbal and Camera                  | 10. Rear LEDs          |
| 2. Micro SD card slot                 | 11. Front LEDs         |
| 3. Infrared Obstacle Avoidance System | 12. 4G antennas        |
| 4. CW propeller (↻)                   | 13. Infrared altimeter |
| 5. CCW propeller (↻)                  | 14. Optical lens       |
| 6. Brushless motor                    | 15. 4G SIM card port   |
| 7. Smart flight battery               | 16. Idle port          |
| 8. GPS antennas                       | 17. USB upgrade slot   |
| 9. Landing gear                       |                        |

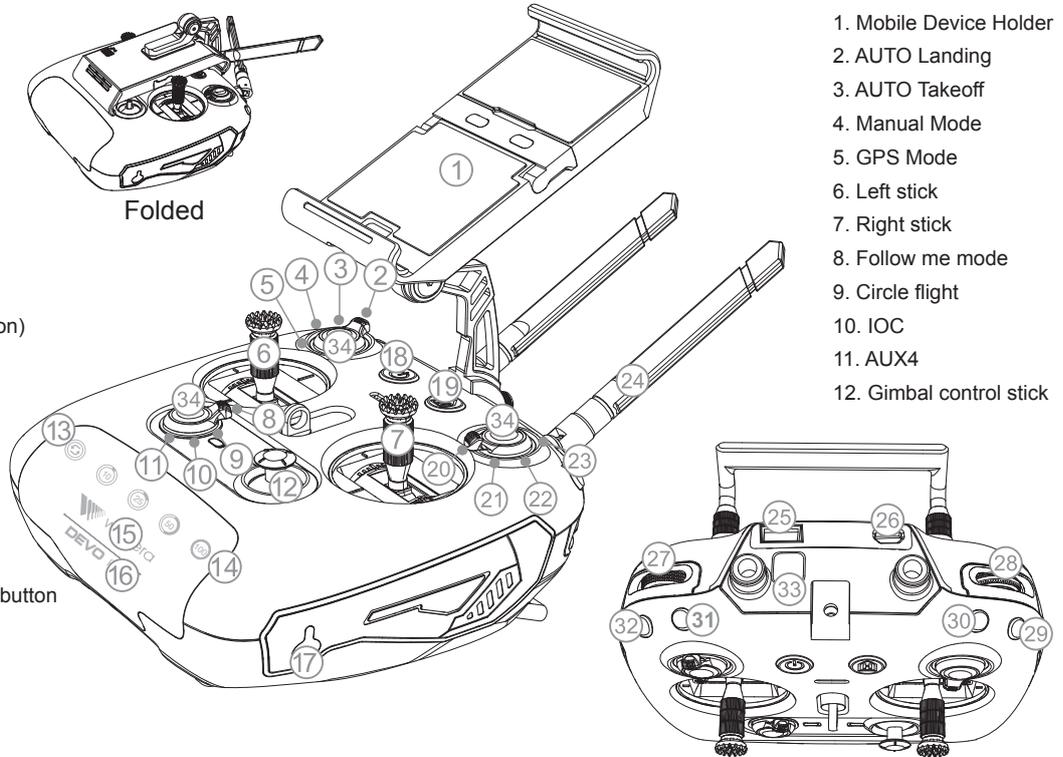


- \* 1) 4G communication card (SIM card) for aircraft and mobile devices, please buy and install them on your own.
- 2) To avoid property loss and personal injury caused by wrong operation, please read the manual carefully, upgrade the firmware and calibrate the related items by watching the tutorial video at [www.walkera.com](http://www.walkera.com) before using VOYAGER 5.
- 3) Please deploy the 4G antennas before flying to ensure the best communication signal.

## 2.0 Get to know your Remote Controller

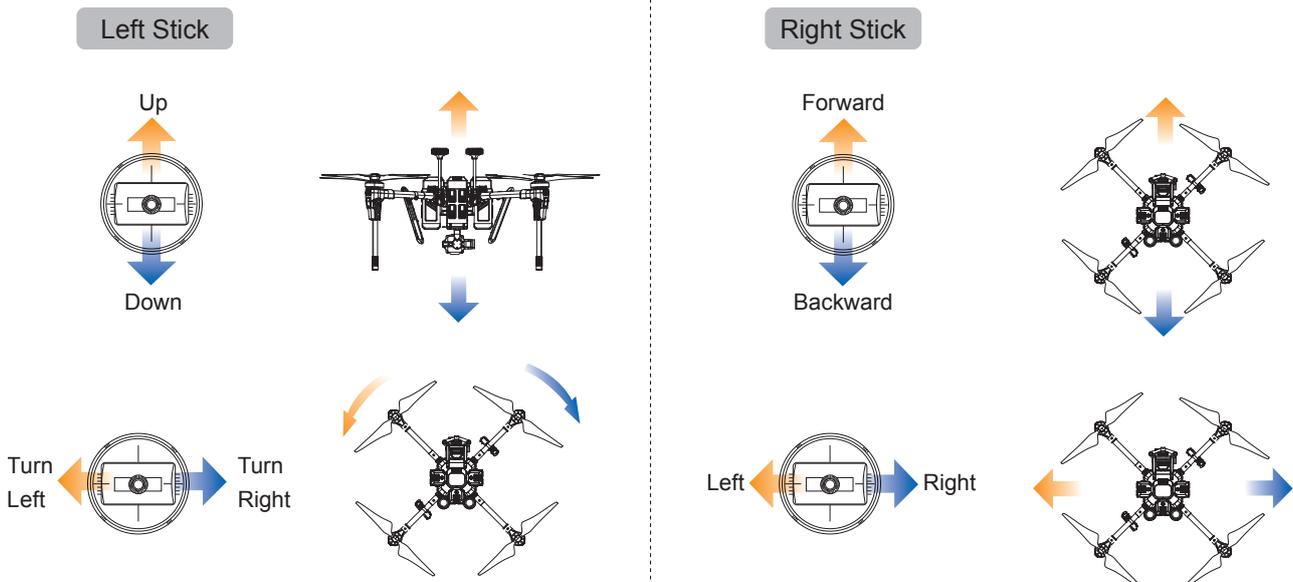
DEVO-F18 with the built-in Bluetooth Module, ensure the Max transmission distance can reach 1.5km, can see the clear picture by the APP in mobile device.

- 13. Status LED
- 14. Battery Level LEDs
- 15. Charging Indicator
- 16. Bluetooth blue LED
- 17. Charger socket
- 18. Power Button
- 19. Return To Home
- 20. AUX3
- 21. AUX2
- 22. Motion Mode(Common)
- 23. Beginner Mode
- 24. Antenna
- 25. Data transfer port
- 26. Upgrade port
- 27. Left Gimbal Dial
- 28. Right Gimbal Dial
- 29. Stop button
- 30. Skid landing control button
- 31. Photo button
- 32. Video button
- 33. Training port
- 34. Enter key



- 1. Mobile Device Holder
- 2. AUTO Landing
- 3. AUTO Takeoff
- 4. Manual Mode
- 5. GPS Mode
- 6. Left stick
- 7. Right stick
- 8. Follow me mode
- 9. Circle flight
- 10. IOC
- 11. AUX4
- 12. Gimbal control stick

Take "left-hand throttle (MODE 2)" as an example. The left stick controls the aircraft's altitude and heading, while the right stick controls its forward, backward, left and right movements.



\* 1) The Remote Controller have MODE 1, MODE 2, please select it in APP. Beginner is suggested to use MODE 2.

2) MODE 2 (Throttle stick on the left): Left stick--THRO/RUDD; Right stick --ELEV/AILE.

3) MODE 1 (Throttle stick on the right): Left stick--ELEV/RUDD; Right stick--THRO/AILE.

4) Please fly your aircraft in the open air without shelter and without electromagnetic interference.

The maximum signal range for the remote controller being about 1.5km is tested in experiment and only for reference.

## 3.0 Specifications

### • Aircraft

Main Rotor Dia.	17 x 5.5 inch
Diagonal Wheelbase	700mm
Overall (L x W x H)	Unfolded 1100 x 1100 x 340mm / Folded 300 x 300 x 340mm
Weight	No payload weight: 2.4kg / Maximum takeoff weight: 5.5kg
Remote Controller	DEVO F18
Brushless Motor	WK-WS-58-001
Brushless ESC	Voyager 5
Max Ascent Speed	5m/s
Max Descent Speed	3m/s
Max Horizontal Flight Speed	positioning mode 5m/s, motion mode 8m/s, posture mode 28m/s.
Max Angle Of Inclination	motion mode 30°, posture mode 30°, positioning mode 25°
Max Speed Of Rotation Angle	150°/s
Max Service Ceiling Above Sea Level	4500m
Max Wind Resistance	10m/s
Hovering Accuracy	vertical : ±0.1m(when vision positioning working), ±0.5m(when GPS positioning working); Horizontal: ±0.3m(when vision positioning working), ±1.5m(when GPS positioning working)
Battery	22.8V 4300mAh 6S LiPo
Flight Time	No payload: 41min, Payload: about 31min
Working Temperature	-10 C ~ +40 C

### • Gimbal

Stabilization System	3 axis (Pitch, Roll, Horizontal)
Controllable Accuracy	Static: ±0.008°; Motion: ±0.02°; Shake-proof: ±0.008°
Controllable Range	Pitch: -110°~ +60°; Horizontal: ±150°; Roll: ±10°
Max Controllable Speed	Pitch: 30°/s; Horizontal: 30°/s

### • Camera

Sensor	1/2.3 SONY IMX117 CMOS
ISO Range	100-3200(Video) / 100-1600(Image)
Video Resolution	4K 30fps
Photo Resolution	3840 x 2160
Focal Length	6.7-134.5mm
Zoom Ratio	30x optical zoom
Zoom Speed	About 2.0s
Horizontal View	59.8°- 3.0°(Wide Angle-Telescopic)
Close-shot Distance	10 - 1500mm(Wide Angle-Telescopic)
Video Storage Maximum	64Mbps
Compress Standard	H.264 / H.265
Files Format	JPG/MP4
Support Micro-SD	SD/SDHC/SDXC Micro-SD Card (maximum 128G, transmitting speed is C10 and above or UHS-1)

### • Downward Vision System

Velocity Range	Velocity ≤ 10.8km/h ( 2m above ground and sufficient lighting)
Altitude Range	≤ 3m
Hover Accuracy Range	±0.5m
Frequency	50Hz
Operating Environment	Surfaces with rich patterns and sufficient lighting

### • Infrared Obstacle Avoidance System

Obstacle detecting range	5m
FOV	horizontal 30°; vertical ±30°
Frequency	20Hz

### • Remote Controller

Overall (L x W x H)	165 x 174 x 62mm
Operating Frequency	2.4G
Transmitting Distance	About 1.5km (open without shelter, no electromagnetic interference)
Video Output Port	USB, HDMI
Built-in Battery	7.4V 3000mAh Li-po 2S
Mobile Device Holder	Applicable to tablet and phone

## 4.0 Attention Before Flight

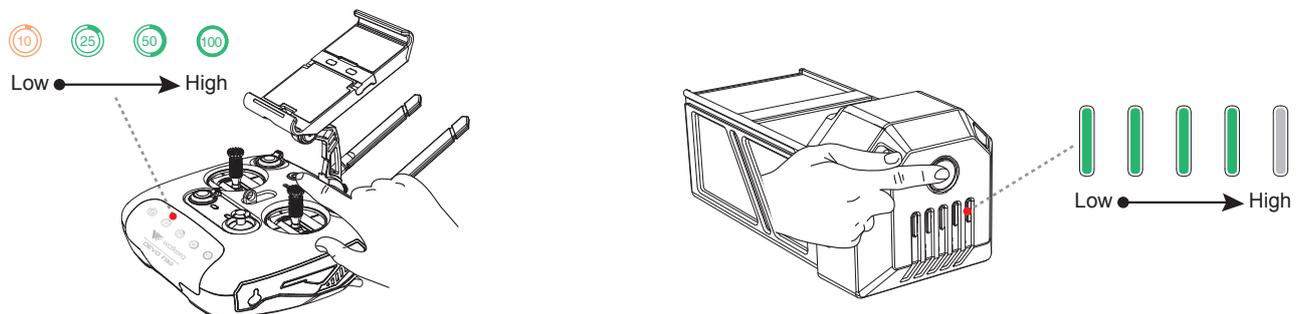
- 1) This product use 4G communication image transmission, please make sure the flight environment with strong 4G signal, wide and no electromagnetic interference.
- 2) This product is suitable for people who has flight experience of hobby model and ages 14.
- 3) Do not fly in bad weather, such as windy, snowy, foggy etc..
- 4) Select the open, no-tall-buildings area. Extensive steel-used buildings will affect the compass, blocking the GPS signal, causing worse on the aircraft positioning or even not able to locate.
- 5) Please keep away from highly spinning parts(such as propellers and motors).
- 6) Please keep away from obstacles, people, water and so on.
- 7) Do not fly it in where there is high-voltage lines, communication base stations or radio towers, in order to avoid signal interference.
- 8) Don't fly in no-fly zone according to the local laws and regulations.
- 9) Flight performance will be effected with environment when flying above 4500m of sea levels, as the battery and gravity system will be influenced.

## 5.0 Check Battery Levels

**Turn on the remote controller and intelligent flight Battery to check the battery level.**

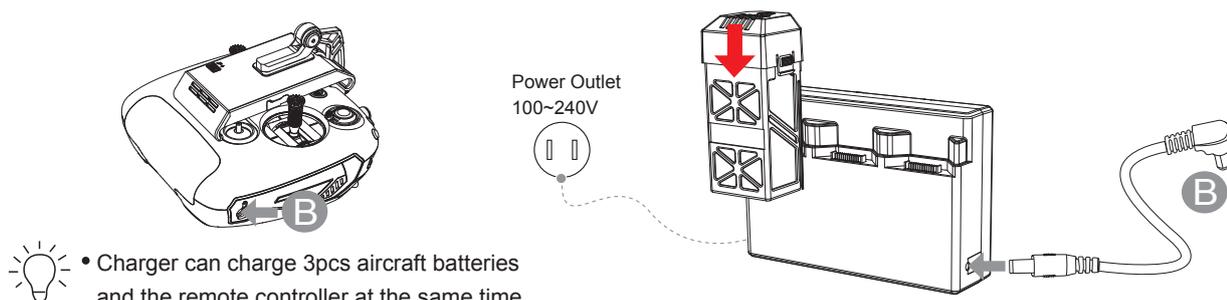
**Be sure the battery was fully charged at the first use.**

- 1) Long press the power button for 2~3 seconds to turn on the remote controller.
- 2) Long press the power button for 3~5 seconds to turn on Intelligent Flight Battery.  
(Repeat above operation to turn off the intelligent flight battery and remote controller)



## 6.0 Charge the Batteries

- 1) Connect the charger to the AC power (100 ~ 240v 50/60hz).
- 2) Only use the walkera charger for your Intelligent Flight Battery and remote controller.  
Please turn off the intelligent flight battery and remote controller before charging.
- 3) The Level indicator of intelligent flight battery light off means charging finished completely;  
The charging indicator of remote controller turns green means remote controller charging finished completely.



- Charger can charge 3pcs aircraft batteries and the remote controller at the same time.
- 3pcs batteries maintain charge and discharge at the same time, to ensure best performance.
- When charging, put it in a dry, ventilated place, keep away from the heat source and flammable and explosive.

## 7.0 Downloading and Installing APP

APP software supports Android 5.1 and above systems iOS 9.0 and above,

Android system please download at Walkera official website ([www.walkera.com](http://www.walkera.com)) or go to Google play to search for Walker Drone or scan the QR code to download and install;

iOS system please go to the APP Store to search for Walker Aircraft or scan the QR code to download and install.



Android download



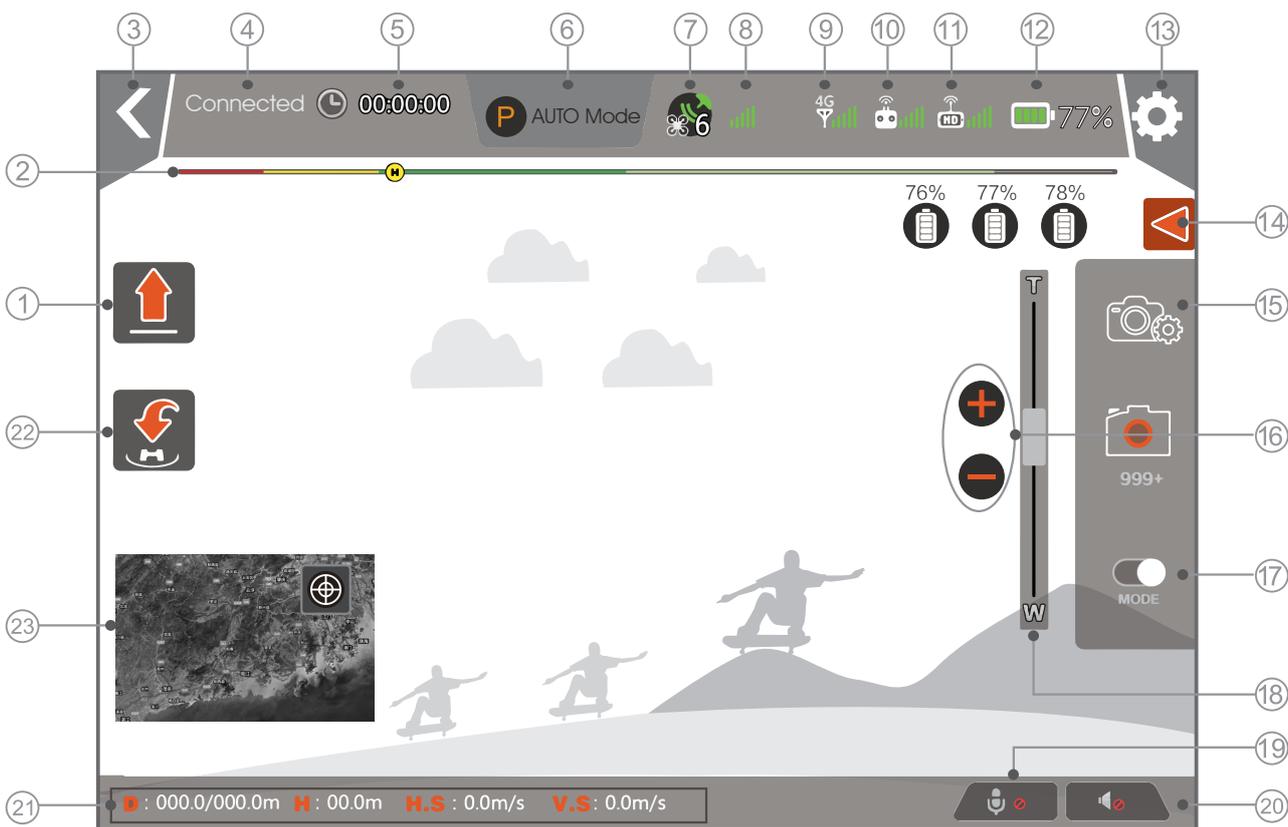
Android download



iOS download

## 8.0 APP Interface Instructions

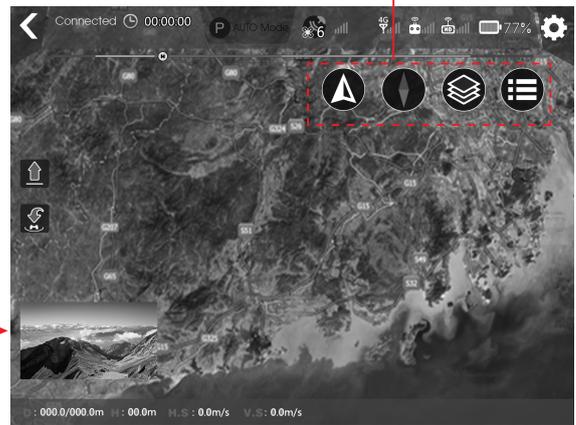
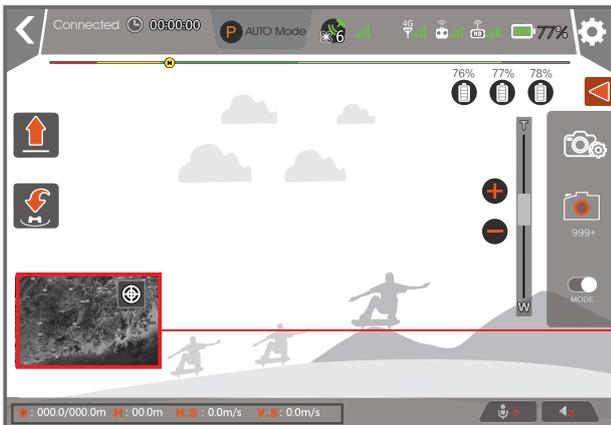
On the interface, HD video and photographs can be previewed in realtime and you can set the dynamic parameters, such as aircraft, remote controller, gimbal and battery.



- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1. Auto Takeoff: Click it, the aircraft takes off automatically.</li> <li>2. <b>Battery level return: When the residual battery level reach  , aircraft will automatically return back.</b></li> <li>3. Back: Back to last step.</li> <li>4. <b>Device connection status: Display connected or disconnected.</b></li> <li>5. Flight time: Aircraft flight time.</li> <li>6. The aircraft model: Displays aircraft's flight mode.</li> <li>7. Number of aircraft satellite:<br/>Displays the received satellites of aircraft.</li> </ul> | <ul style="list-style-type: none"> <li>8. Positioning accuracy:<br/>Displays aircraft positioning accuracy.</li> <li>9. 4G signal:<br/>Displays the 4G communication signal strength.</li> <li>10. The remote controller signal strength:<br/>Displays the signal level between remote controller and aircraft.</li> <li>11. Camera signal</li> <li>12. 3pcs batteries average capacity: Display the drone batteries remaining capacity (or you can set as voltage)</li> </ul> |
|--|--|

13. Setting: Click the icon to open the Setting menu, Normal setting, aircraft, remote controller, gimbal and battery can be charged.
14. Display/hidden picto: Display/hidden 3 batteries capacity.
15. Camera Settings:
  - Touch icons it has preview settings, recording settings and so on. Under identical Video Size, the larger the stream Rate, the better the picture quality, anyway, the video transmission distance is shortened accordingly.
16. Focusing: tap the icon "+,-" to adjust camera focusing.
17. Photo & video switch:
  - Photo: Photo button is used to trigger the camera to take pictures. While this function is also supported in the remote controller.
  - Video: video button to start/stop video. You can also press the video button on the remote controller for video.
18. The camera zoom control: divided into wide Angle (W) and telescopic (T).
19. The intercom: click the icon, opening and closing the intercom.
20. Sound: click the icon, opening and closing.
21. Flight status parameters:
  - Distance(D): horizontal distance between aircraft and returning point.
  - Height(H): vertical distance between aircraft and returning point.
  - Horizontal speed(H.S): speed of aircraft in a horizontal direction.
  - Vertical speed(V.S): speed of aircraft in the vertical direction.
22. Return to Home: Click the button, the aircraft stop waypoint flying, and return back automatically.
23. A thumbnail map icon:
  - Click the thumbnail icon to quickly switch to the map interface.

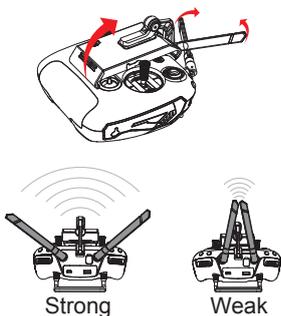
**Before you plan to fly, turn off the aircraft power, and connect internet, click "A thumbnail map icon" to download the map.**



## 9.0 Prepare for Remote Controller

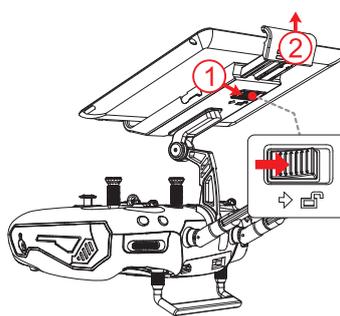
### Unfold

Unfold mobile device holder and antenna, and adjust the position of the antenna.



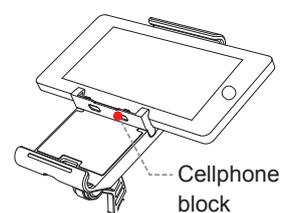
### Install tablet

1. Press the button to release the clamp.
2. Place your mobile device and adjust the clamp to secure.



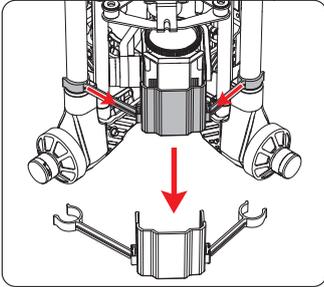
### Install Cellphone

Open the cellphone block, and install the cellphone same way as tablet

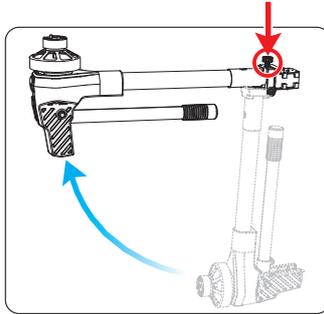


## 10.0 Prepare for Aircraft

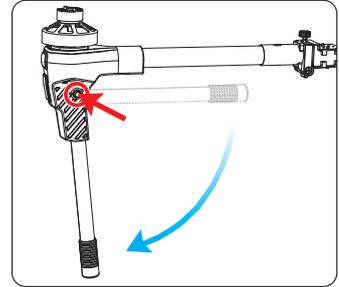
### Unfold The Arms and Landing Gears



Remove the camera fixture.

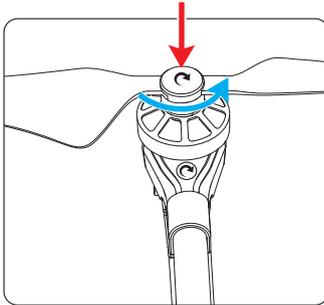


Press the machine arm folding lock, launches the machine arm upwards, and then loosen the lock buckle.

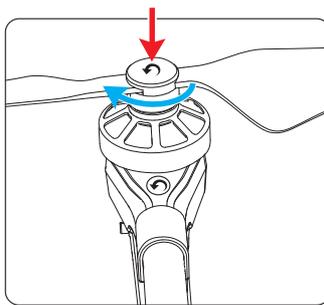


Press the landing gear lock, launches the landing gear downwards, and then loosen the lock buckle.

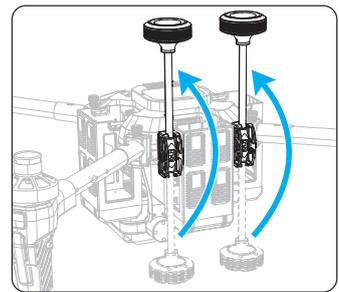
### Install Propellers



Install the CW propeller ⚙️:  
Insert the propeller cap into blade holder and press it to the bottom. Turn the lock counterclockwise and gently lift it up. The propeller will bounce automatically.



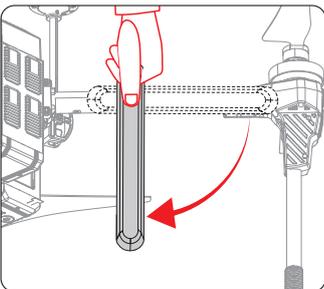
Install the CCW propeller ⚙️:  
Insert the propeller cap into blade holder and press it to the bottom. Turn the lock clockwise and gently lift it up. The propeller will bounce automatically.



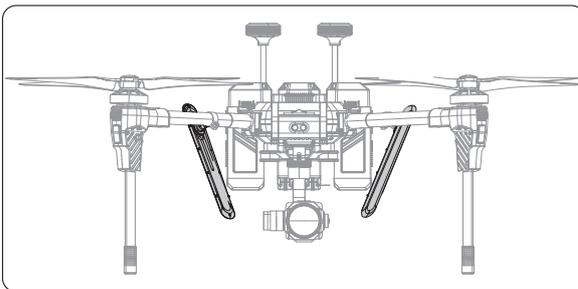
Unfold the GPS holder in the direction of the arrow.

- ⚠️ • Ensure the consistency of propeller and motor fixed identity.
- Ensure the propellers assemble correct and firm.

### Expand 4G communication antennas

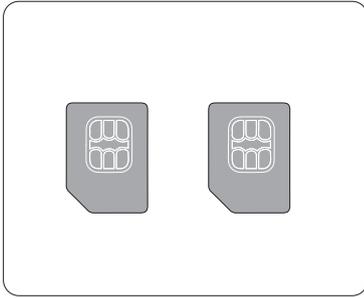


Press and hold the antenna mount to rotate the antenna down.

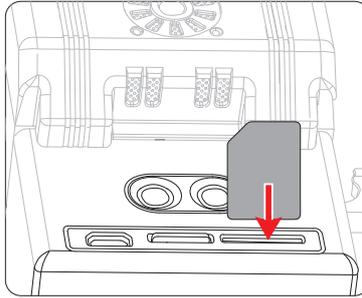


Expand antennas completed.

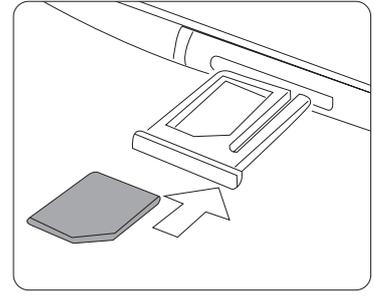
## Install 4G Communication SIM Card(should buy it by your own)



Prepare two 4G communication cards (should buy it by your own)



Put the 4G communication card into 4G card slot of the aircraft.



Put the 4G communication card into the mobile device.



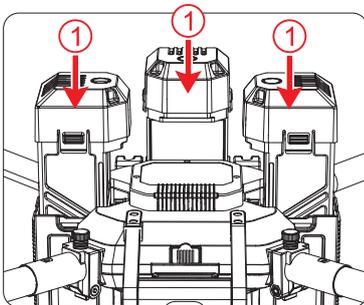
- If your mobile device have already had 4G communication card, you only need to prepare one 4G communication and then put it into the aircraft.

## 11.0 Ready for Flight

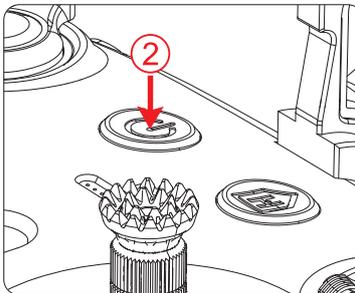
Before you plan to fly, please download the map in the APP (turn off the aircraft power, and connect internet, click the "A thumbnail map icon" to download the map.).

Place the aircraft in an open outdoor area, with its tail facing the operator.

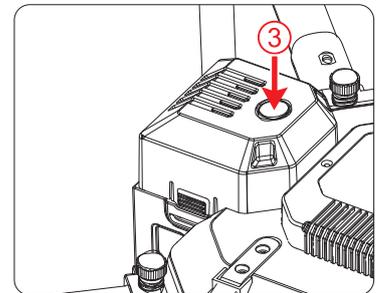
### 11.1 Starting the aircraft / Get binding



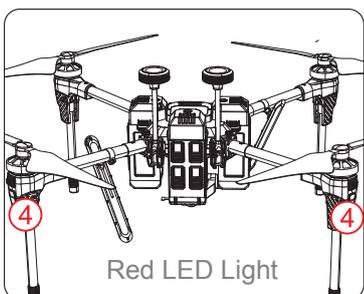
1. Make sure all three intelligent flight batteries are fully charged and powered off. Insert the batteries into the battery compartments.



2. Turn on the Remote Controller.



3. Turn on the aircraft.

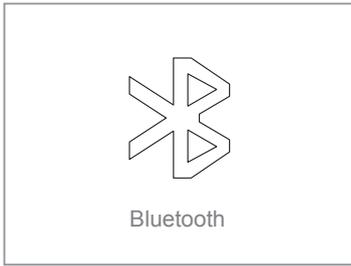


4. Place aircraft at horizontal position, the red LED light flashing until goes out indicates completion of IMU prewarming & code-matching. (The red and blue LED lights alternatively flashing indicates aircraft being abnormal, see also APP tips.)

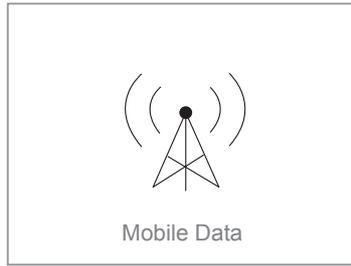


- Make sure to use 3 sets same intelligent batteries to power on the aircraft.
- Turn on the aircraft batteries: just turn on one battery, and all 3 will be turn on at the same time. DO NOT manually power on more than one Intelligent Flight Battery to avoid damaging the batteries.
- Turn off the aircraft batteries: you need to turn off 3 batteries one by one.

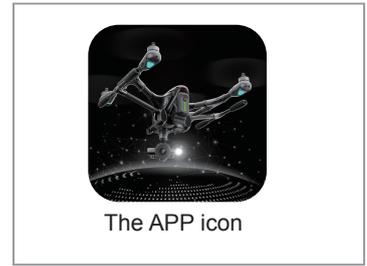
## 11.2 Connect to APP Software



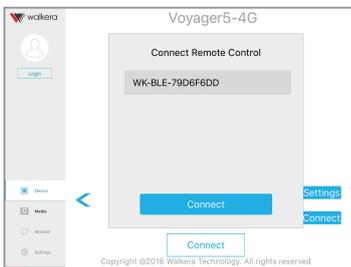
1. Turn on the Bluetooth of the mobile device



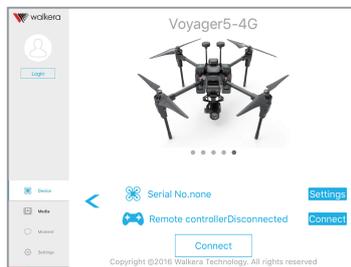
2. Turn on the mobile data of the mobile device



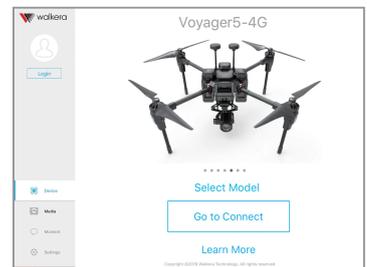
3. Click the icon on mobile device



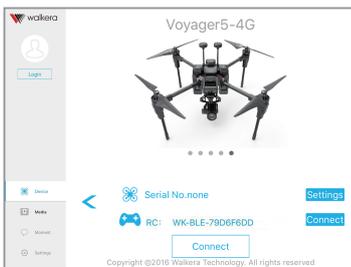
6. Remote controller serial number will pop up automatically, click "serial number and connect".



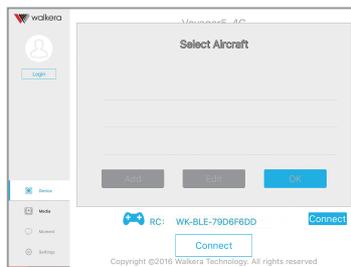
5. Select remote controller(RC), click "Connect".



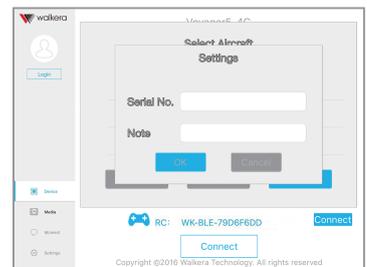
4. Click "Select Model", select "Voyager 5-4G", and then click "Go to Connect".



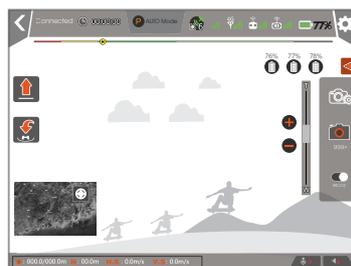
7. Select the aircraft serial number item, click "Settings".



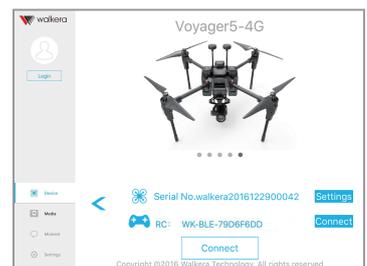
8. Click "Add", it will pop up the input box.



9. Enter the serial number of the aircraft, and note the name, click "OK."



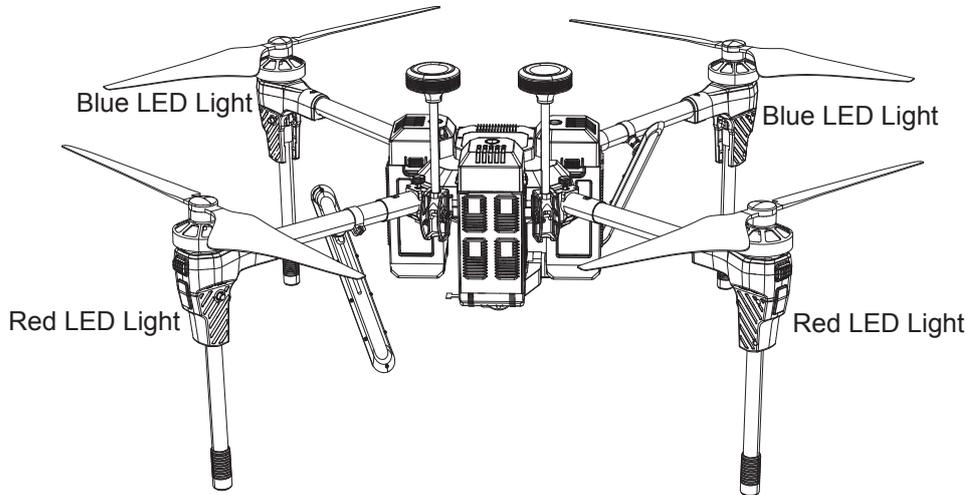
11. Enter the main interface.



10. Click "Connect"

## 11.3 GPS Indicator Lights

When blue and red LED lights flash at the same time, you can work GPS function.



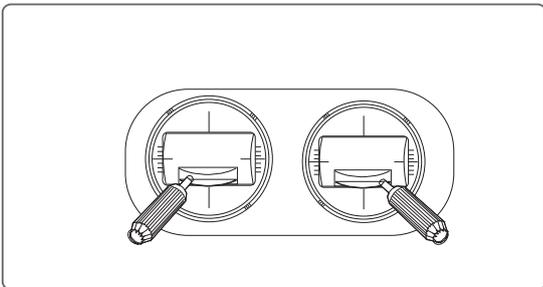
## 11.4 Motor Unlock/Lock

### Motor Unlock

After successful code-matching, move the left & right sticks down and toggle them outward, and hold for more than 2 seconds.

You will see **the red and blue LED lights keep on**, indicating that motors are unlocked.

**The unlocked motors will rotate, and please immediately release sticks.**



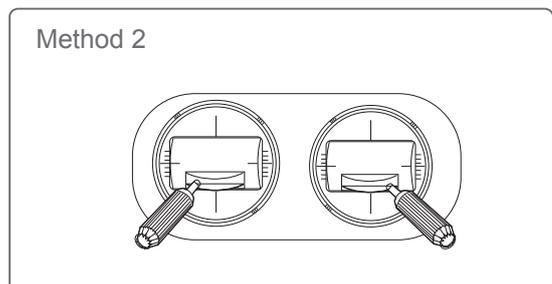
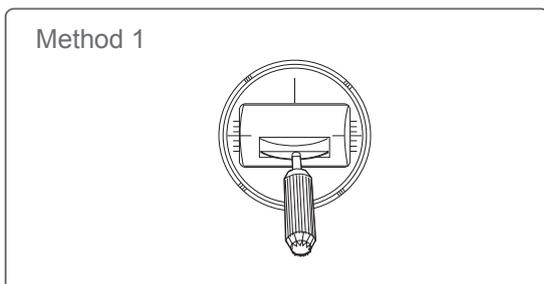
### Motor Lock

**There are two methods to lock the motors:**

Method 1: When the aircraft is landed, move the throttle stick down and hold for 5 seconds. The motors will then stop.

Method 2: Move the left and right stick down and toggle them outward and hold for more than 2 seconds.

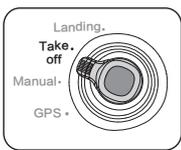
You will see **the red and blue LED lights turn off**, indicating that motors are locked.



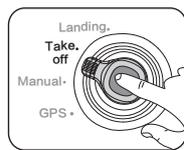
## 12.0 Flight Control

- 1) Make sure that the GPS signal is received (the blue and red LED lights blink at the same time).
- 2) Only when “Connected” displays on the upper bar of the main interface of the APP, you can perform APP operation.
- 3) Please unlock motors before takeoff. (refer to Page 12 for the detailed method)

### AUTO Takeoff (Remote Controller or APP Operation)



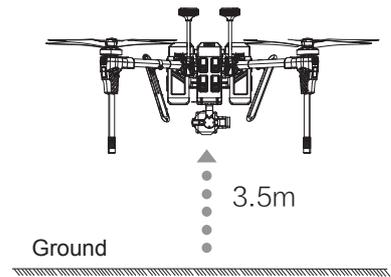
Switch to “Take off” position



Short press the Enter key, aircraft will take off automatically.



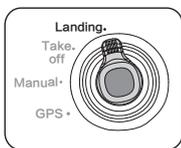
Please click the icon in the APP main interface, then the aircraft will take off automatically.



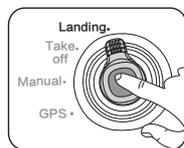
#### Attention:

- 1) Auto Takeoff is usable only under AUTO mode or SPORTS mode.
- 2) Auto takeoff default to 3.5m altitude, and it can be removed by pushing the throttle to midpoint or above, whenever manual control over the throttle is needed.

### AUTO Landing (Remote Controller or APP Operation)



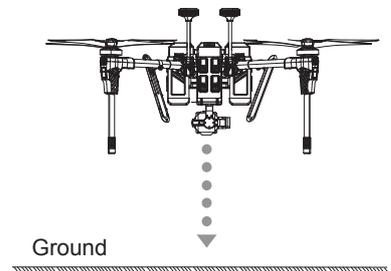
Switch to “Landing” position



Short press the Enter key, aircraft will land automatically.



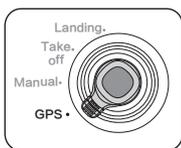
Please click the icon in the APP main interface, then the aircraft will land automatically.



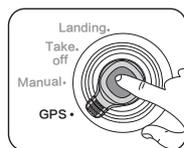
#### Attention:

- 1) During landing, you can operate the aircraft forward, backward, rightward and leftward.
- 2) During the landing process, please switch the flight mode of the remote controller if landing needs to be cancelled.

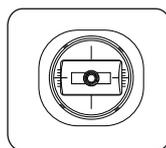
### GPS mode (Remote Controller Operation)



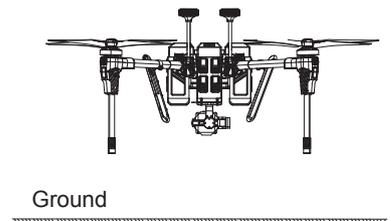
Switch to “GPS” position



Short press the Enter key to enter the GPS mode



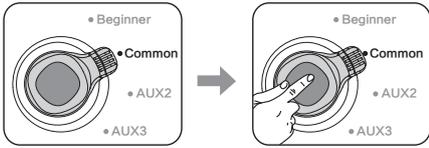
Throttle stick return neutral



#### Attention:

- 1) The first flight default to GPS Mode after each power on.
- 2) In the GPS mode, there are Altitude hold, fixed point, brake function, the flight speed is slower ( $\leq 5\text{m/s}$ ).
- 3) If the GPS signal is poor or no signal, can only be Altitude hold, but not fixed point.
- 4) Switch to manual mode can not be fixed point.

## Motion mode (Remote Controller Operation)



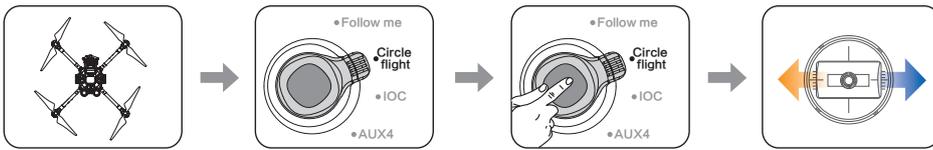
Switch to "Common" position

Short press the Enter key to enter the Motion mode

### Attention:

- 1) In the Motion mode, there are Altitude hold, fixed point, brake function, the flight speed is faster ( $\leq 8\text{m/s}$ ).
- 2) If the GPS signal is poor or no signal, can only be Altitude hold, but not fixed point.
- 3) Switch to manual mode can not be fixed point.

## Circle flight (Remote Controller or APP Operation)



Aircraft in GPS mode

Switch to "Circle flight" position

Short press the Enter key to enter the circle flight mode

Move the **AILE** stick, aircraft begin circle flight.



Please click the icon in the APP interface, then the aircraft enter circle flight mode, Move the **AILE** stick, aircraft begin circle flight.

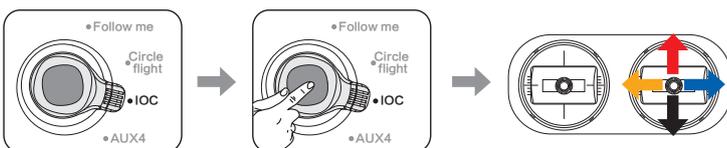
### Attention:

- 1) The aircraft is at a quiescent state when it is in Circle Flight. The circling function can only work after you set circle speed and direction by **moving AILE stick left or right** (-5m/s to +5m/s speed changeable, 0m/s at default).
- 2) **Move ELEV stick up or down** to change circle radius (5~50m radius changeable, 5m at default).
- 3) please see the page 4 to get stick 's instructions.

<p>Move AILE stick to the left Clockwise circles</p>	<p>Move AILE stick to the right, Counterclockwise circles.</p>	
<p>Speed: the larger volatility toggling and longer holding time, the faster circling. The slower on the contrary.</p>		
<p>Move ELEV stick up, Circle radius turns small</p>		<p>Move ELEV stick down, Circle radius turns large</p>

## Hyper IOC Mode (Remote Controller Operation)

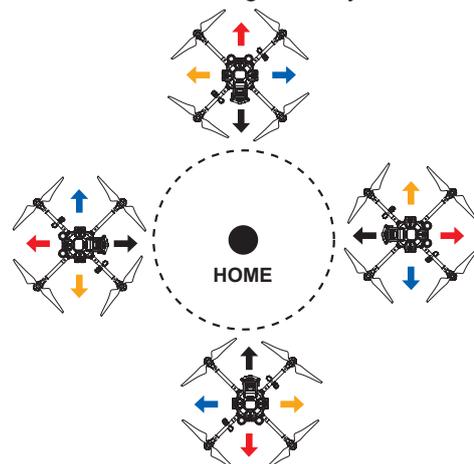
IOC or Intelligent Orientation Control mode means that the aircraft's flight direction is only relative to the original take-off point (where you armed the motors). REGARDLESS of the actual aircraft heading, in this mode you can fly past something and pan the aircraft to frame your shot, without having to worry what direction the aircraft is facing.



Switch to "IOC" position

Short press the Enter key to enter the Hyper IOC mode

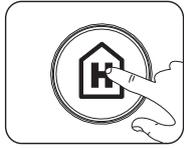
Mode2 (Throttle stick on the left)



### Attention:

- 1) During GPS flight, all can enter the IOC mode.
- 2) When under hyper IOC mode, you can make the drone return to the initial position only by holding the stick backwards.

## RETURN TO HOME (Remote Controller or APP Operation)



Long press this key(3-5 seconds) on the remote controller and the aircraft will return automatically



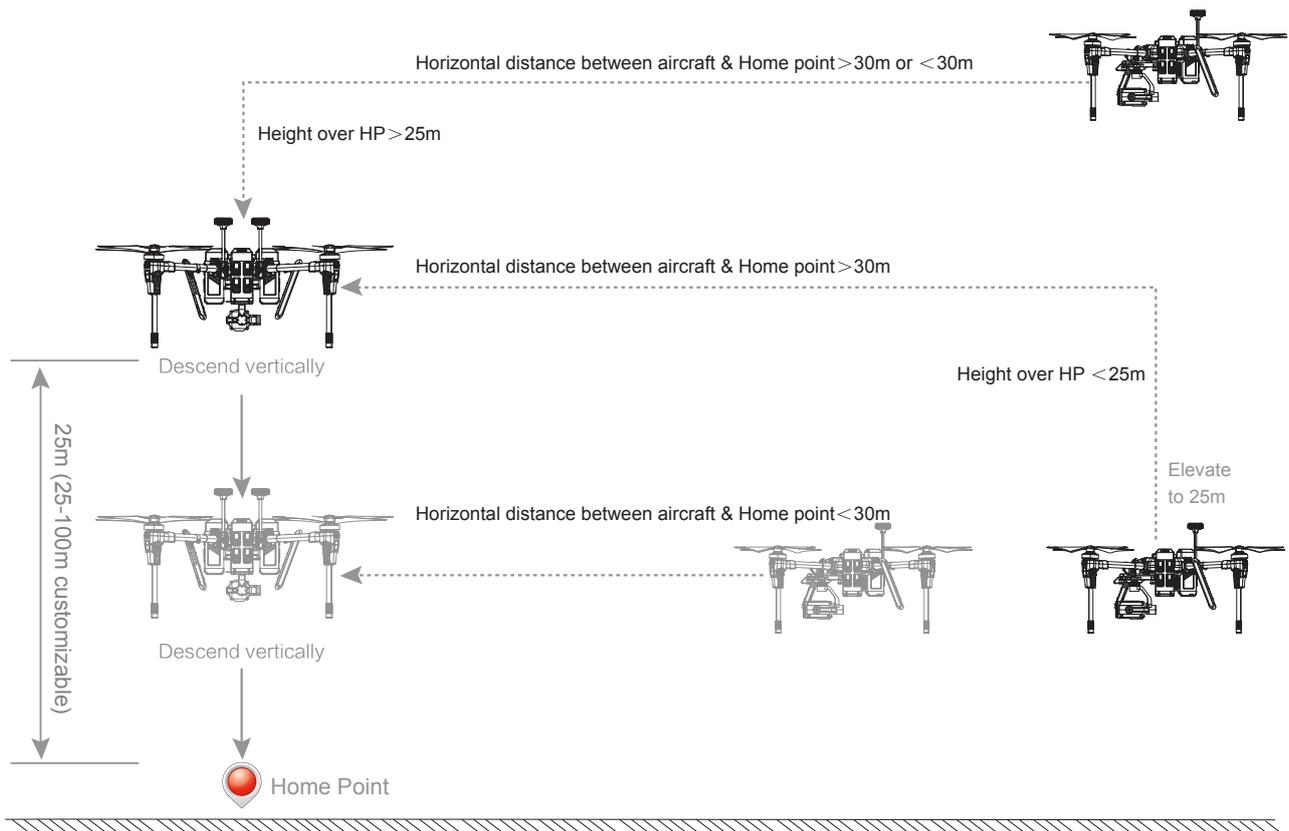
Click this key in the APP interface and the aircraft will return automatically

### Horizontal distance between aircraft & Home point > 30m

- When the flight altitude is over RTH Height, the aircraft will keep the current altitude and automatically fly back above the Home Point, then descend vertically.
- When the flight altitude is below RTH Height, the aircraft will ascend vertically to 25m high, then automatically fly back above the HP, and descend vertically.

### Horizontal distance between aircraft & Home point < 30m

- When the flight altitude is over RTH Height, the aircraft will keep the current altitude and automatically fly back above the Home Point, then descend vertically.
- When the flight altitude is below RTH Height, the aircraft will keep the current altitude and automatically fly back above the Home Point, then descend vertically.



### Attention:

- 1) After pressing Return To Home, please don't move other switches or buttons.
- 2) When the aircraft loses the remote controller's signals, it will automatically enter Failsafe RTH.
- 3) When the aircraft's battery voltage is too low and the horizontal distance between the aircraft and the Home Point is greater than 15m, the aircraft will automatically return to home. When the horizontal distance between the aircraft and the Home Point is less than 15m and the aircraft's battery voltage is too low, the aircraft will return automatically from the current position and land.
- 4) When GPS signal is abnormal or GPS not working, Auto return is unusable, but auto landing is usable.
- 5) During the returning home process, please switch the flight mode of the remote controller if returning home needs to be cancelled.

## Waypoint Flight (APP Operation)

Click icon  on APP map interface,  
Click icon  to enter the waypoint flight interface.

 Add → 1. Click this icon to add waypoint

 Start → 2. Click this icon to start waypoint flight

 Exit → 3. Click this icon to exit

 → 1. Click this icon to set fore-and-aft Course overlap, Sidelap, Waypoint Height

 Start → 2. Click this icon aircraft will fly according to waypoints and take photos automatically.

 Exit → 3. Click this icon to exit

## Waypoints Flight (APP Operation)

Click icon  on APP map interface,  
Click icon  to enter the waypoints flight interface.

 Add → 1. Click this icon to add waypoints

 Clear → 2. Click this icon to clear waypoints

 Start → 3. Click this icon to start waypoints flight

 Exit → 4. Click this icon to exit

## Mapping (APP Operation)

Click icon  on APP map interface,  
Click icon  to enter the mapping interface.

## Photo & Video (Remote controller or APP operation)

### APP Operation

- 1) Select working mode: photo or video
- 2) Touch the Photo or video icon to take photo or video.

### Zoom adjustment: telescope and wide angle.

Telescope: push the scroll bar to T end.

Wide angle: pull the scroll bar to W end.

### Focus adjustment:

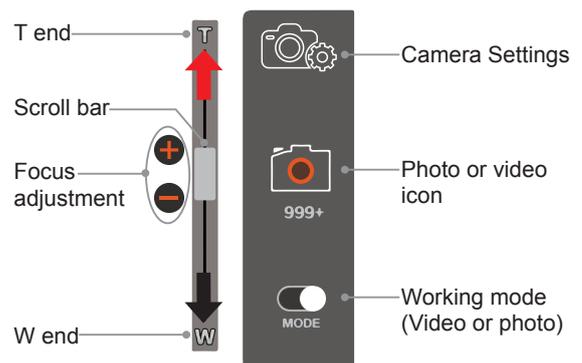
Touch the icon "+,-", image definition increase or decrease.

### Attention:

The video defaults to be stored in Micro SD card.

You can also change it to be stored in your mobile phone.

(Method: App main interface → Setting → Gimbal → Location)



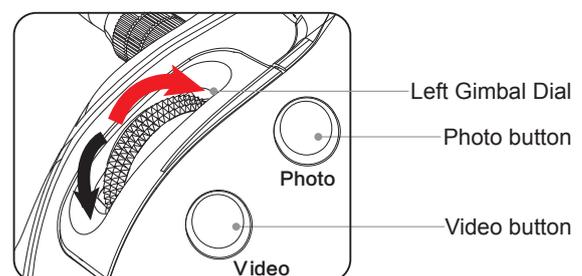
### Remote Controller Operation

- 1) Take photo: short press the "photo button" can take pictures.
- 2) video: short press the "video button" to record the video.

### Zoom adjustment: telescope and wide angle.

Telescope: move the left gimbal dial to black arrow direction.

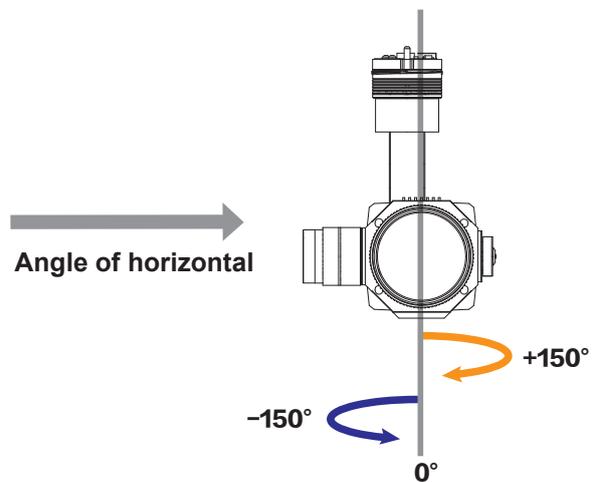
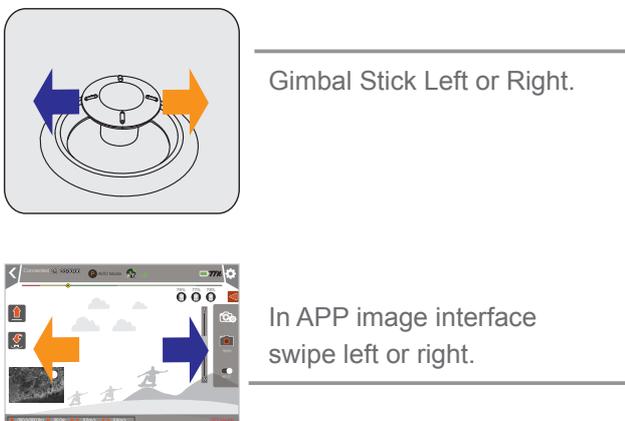
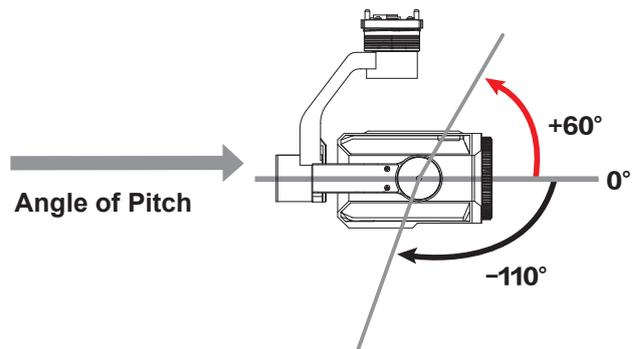
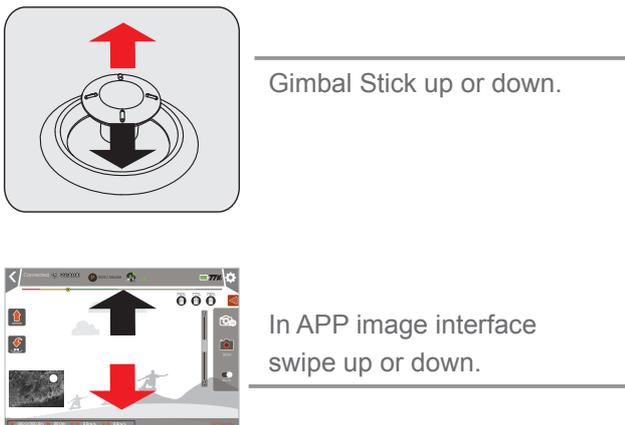
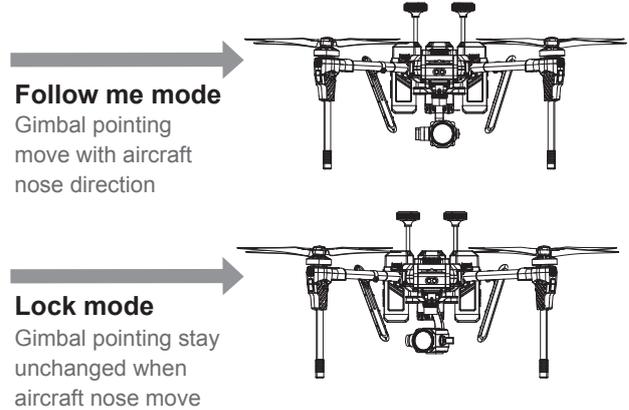
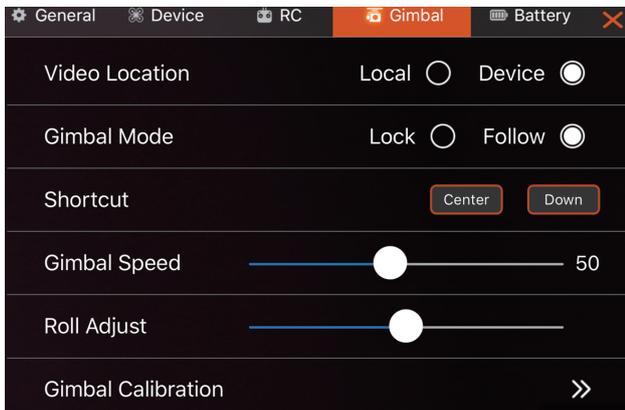
Wide angle: move the left gimbal dial to red arrow direction



## Control the gimbal (remote controller or APP operation)

Three-axis stabilization gimbal makes the camera steady so that it can shoot stable photos even fly with high altitude. And you can control pitch and horizontal angle of the gimbal by Gimbal stick on Remote Controller or APP Software.

Gimbal has two modes: Follow me mode and Lock mode, please choose the mode you need.



### Attention:

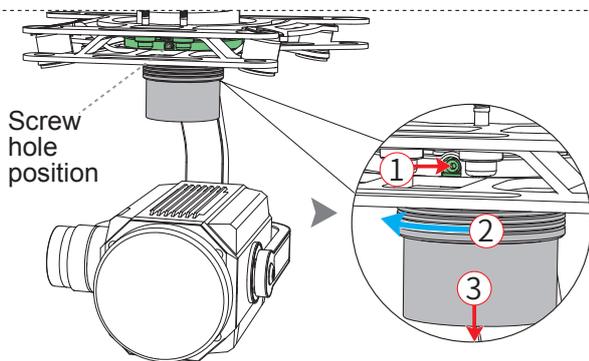
- 1) You must select the mode first and then adjust the angle. In follow me mode, the horizontal angle (YAW) is not adjustable.
- 2) Gimbal stick position determines the rate of change of the gimbal: when the stick is located at the midpoint the velocity is zero, the greater the offset of the stick the gimbal changes faster, whereas the slower.

## 13.0 End flight

1. Manual Landing, AUTO Landing or Return to Home function landing.
2. First, turn off the 3 batteries one by one, then turn off the remote controller.
3. Finally, remove the battery from the aircraft.

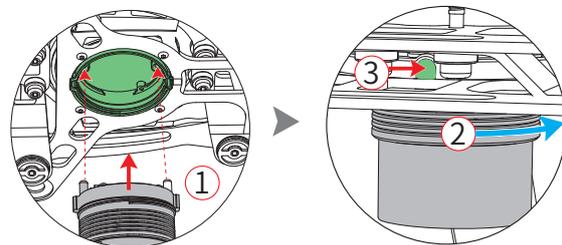
## 14.0 Additional remarks

### 14.1 Camera Gimbal Removal and Installation



#### Removal

Loosen the M3x3 fixed gimbal screw first, then turn the gimbal nut clockwise to the unlocked position to pull down the Gimbal



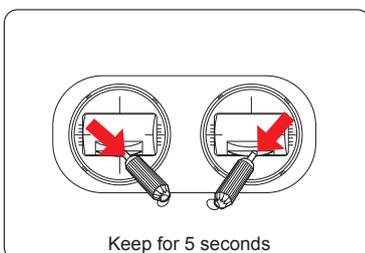
#### Installation

Put the white mark position column aim at the white mark position hole, and put the gimbal in the install position upwards embed. Rotate the gimbal nut to the locked position following to the direction of the arrow. Tighten M3x3 screw to fix the gimbal.

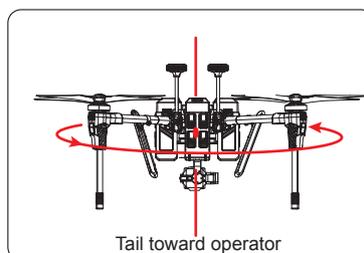
### 14.2 Compass Calibration

- ⚠ If there is circles or drift in flying, please calibrate the compass.  
(the motor must be locked and the red and blue LED lights turn off )
- Please calibration outdoors and far away from strong electromagnetic interference.

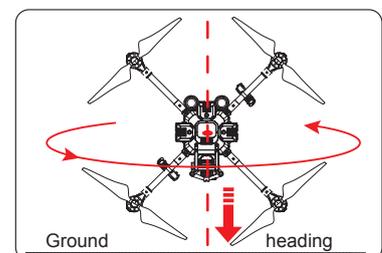
The compass calibration steps are as follows:



Place right/left sticks at lowest location, toggle them inward and keep for 5 seconds until the aircraft's red LED lights flash quickly .



Horizontal 360° rotation of aircraft until red LED lights turn off and blue LED lights flash quickly.



Vertical 360° rotation of aircraft (heading down) until blue LED lights turn off, indicating successful calibration, and place aircraft at a horizontal location

**In case of failure to calibrate, please follow above procedure to repeat calibration.**

## 14.3 Downward Vision System

Downward vision system use the camera to get the aircraft Position information, at the same time, can use the Infrade sensor to fix the aircraft attitude, to ensure the aircraft precise positioning.

It is suitable for environments with altitude of less than 3 meters without GPS signal or with weak GPS signal. Please make sure sufficient lighting of the environment and rich patterns of the ground surface, as the Downward Vision System identifies position variations based on the ground surface.



**!** The measuring accuracy of the Downward Vision System tends to be affected by illumination intensity and pattern of the ground objects, so please use this function under the circumstances below with caution:

- Monochrome surfaces(eg pure black, pure white, pure red, pure green)
- Highly reflective surfaces
- Water or transparent surfaces.
- Surfaces of moving objects(eg stream of people, shrub or grass)
- Places where the illumination conditions dramatically change.
- Extremely dark(less than 10 lux) or bright(more than 10,000 lux) surfaces
- Surfaces without clear patterns
- Surfaces with highly repetitive patterns(eg checker bricks with the same color)

## 14.4 Infrared Obstacle Avoidance System

The infrared obstacle avoidance system on the aircraft utilizes infrared sensors to detect nearby obstacles and therefore automatically help the aircraft avoid obstacles.

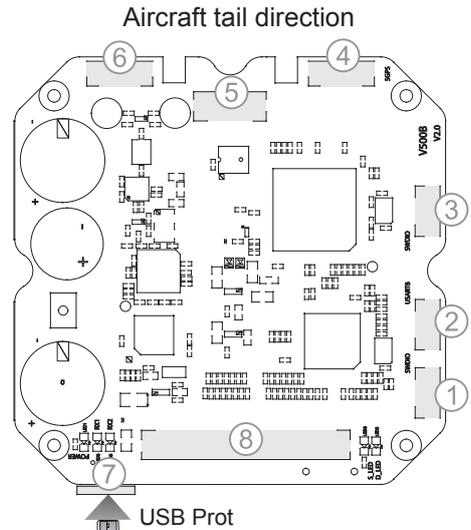
In GPS mode, the aircraft can Obstacle Avoidance on both hovering and flight status.

<p>Infrared obstacles avoidance at Forward</p>	<p><b>Hovering status in GPS mode:</b> Obstacles avoidance available at forward.</p>
	<p><b>Flight status in GPS mode:</b> Obstacles avoidance available at forward.</p>

## 14.5 Main board introduction

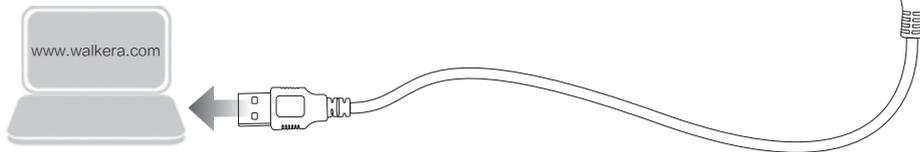
### Port introduction

- |                     |   |
|---------------------|---|
| 1. SWDIO Port:      | Emulation 1                                     |
| 2. USART6 Port:     | UART port                                       |
| 3. SWDIO Port:      | Emulation 2                                     |
| 4. GPS Port:        | Connect the GPS cable                           |
| 5. Connection Port: | Connect gyro flexible flat cable                |
| 6. GPS Port:        | Connect the GPS cable                           |
| 7. USB Port:        | Used for upgrading                              |
| 8. Connection Port: | Used to connect power board flexible flat cable |

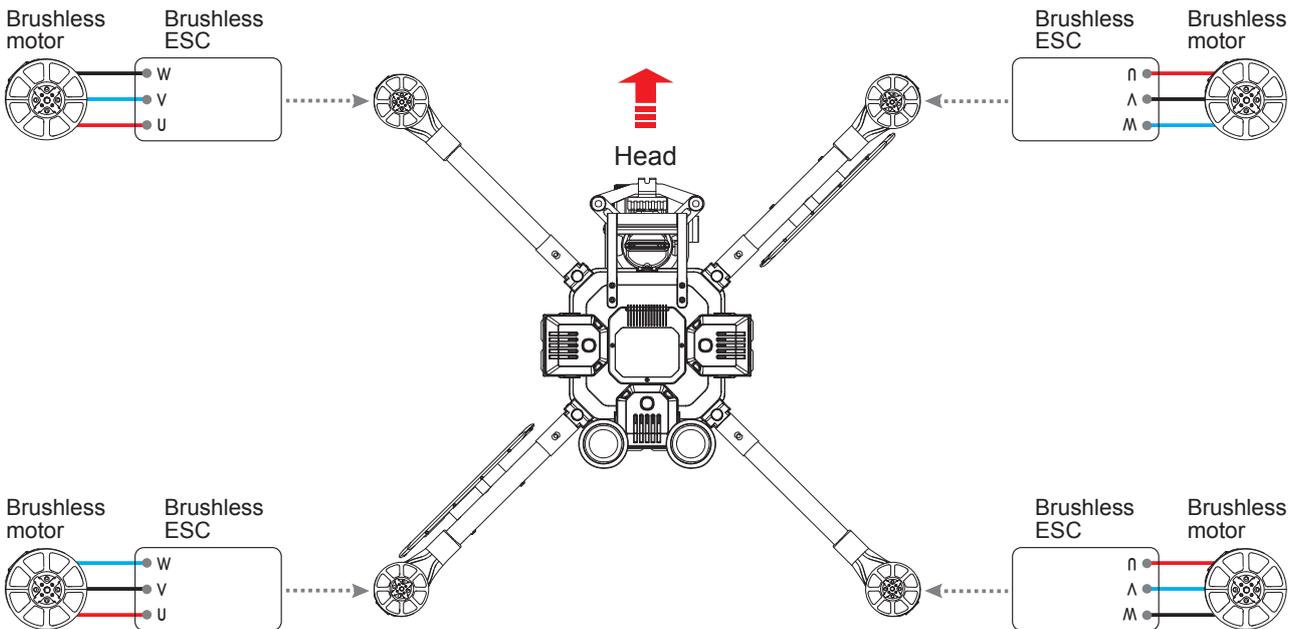


### Upgrading

Please upgrade online via Walkera official website



## 14.6 Brushless ESC and Brushless Motor connection diagram



- The red, blue and black wires of the brushless motors must be soldering to the brushless ESC according to the illustration.

## 14.7 Stick Mode Switch & Stick/Thumbwheel Calibration

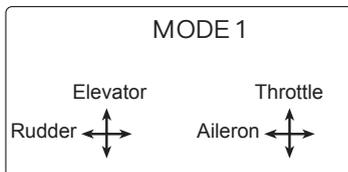


- Factory setting of DEVO F18 stick mode & stick calibration has been determined; please refer to the following operation method for switching and calibration.
- Be sure to switch off the aircraft power or lock motor before operation.

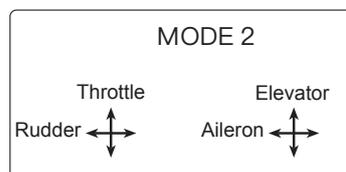
### Stick Mode Switch

<b>Enter stick Mode switch</b>	1. Long press "  " 3~5 sec ..... ➔ When power indicate lights off, enter the stick mode switch.
	2. Short press "  " ..... ➔ Choose MODE 1、MODE 2
<b>Exit stick Mode switch</b>	3. Long press "  " 3~5 sec ..... ➔ When power indicate lights up, exit the stick mode switch.

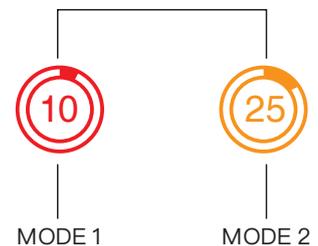
MODE 1 is right-hand throttle



MODE 2 is left-hand throttle



power indicate lights match the stick mode



※ **Customization also supported in APP.**

### Stick / thumbwheel calibration

Long press "  " button for 3 to 5 seconds, four lights flash alternately to enter stick / thumbwheel calibration.

Operate the stick /thumbwheel several times within mechanical tuning range and then back in the middle.

Long press the "  " button for 3 to 5 seconds again, four indicator lights turn on, then exit stick /thumbwheel calibration.



- When you exit if vibrate alert, then the calibration fails, please recalibrate.

## 15.0 Intelligent Flight Battery Safety Guidelines



- Store Intelligent Flight Batteries in a ventilated location.
- To avoid fire, serious injury, and property damage, observe the following safety guidelines when using, charging, or storing your batteries.

### 15.1 Battery Use

- 1) DO NOT allow the batteries to come into any kind of liquid. DO NOT leave batteries out in the rain or near a source of moisture. DO NOT drop the battery into water. If the inside of the battery comes into water, chemical decomposition may occur, potentially resulting in the battery catching on fire, and may even lead to an explosion.
- 2) Never use non-walkera batteries. Go to [www.walkera.com](http://www.walkera.com) to purchase new batteries. Walkera takes no responsibility for any damage caused by non-walkera batteries.
- 3) Never use or charge swollen, leaky, or damaged batteries. If your batteries are abnormal, contact Walkera or a walkera authorized dealer for further assistance.
- 4) Never install or remove the battery from the aircraft when it is turned on. DO NOT insert or remove batteries if the plastic cover has been torn or compromised in any way.
- 5) The battery should be used in temperatures from  $-10^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ . Use of the battery in environments above  $50^{\circ}\text{C}$  can lead to a fire or explosion. Use of battery below  $-10^{\circ}\text{C}$  the life cycle of battery will be damaged.
- 6) DO NOT use the battery in strong electrostatic or electromagnetic environments. Otherwise, the battery control board may malfunction and cause a serious accident during flight.
- 7) Never disassemble or pierce the battery in any way or the battery may leak, catch fire, or explode.
- 8) Electrolytes in the battery is highly corrosive. If any electrolytes contacts with your skin or eyes, wash the affected area with fresh running water at least 15 minutes, and then see a doctor immediately.
- 9) DO NOT use the battery if it was involved in a crash or heavy impact.
- 10) If the battery falls into water with the aircraft during flight, take it out immediately and put it in a safe and open area. Maintain a safe distance from the battery until it is completely dry. Never use the battery again and dispose it properly.
- 11) DO NOT put batteries in a microwave oven or in a pressurized container.
- 12) DO NOT place loose battery cells on any conductive surface, such as a metal table.
- 13) DO NOT put the loose cells in a pocket, bag or drawer where they may short-circuit against other items or where the battery terminals could be pressed against each other.
- 14) DO NOT drop or strike batteries. DO NOT place heavy objects on the batteries or charger. Avoid dropping batteries.
- 15) Clean battery terminals with a clean, dry cloth.

### 15.2 Battery Maintenance

- 1) Never over-discharge, as this may lead to battery cell damage.
- 2) Never use the battery when the temperature is too high or too low.
- 3) Battery life may be reduced if not used for a long time.



Manufacturer: Guangzhou Walkera Technology Co.,Ltd.

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Nansha Dist, Guangzhou, China.511453

Hotline:+86 20-84915115

