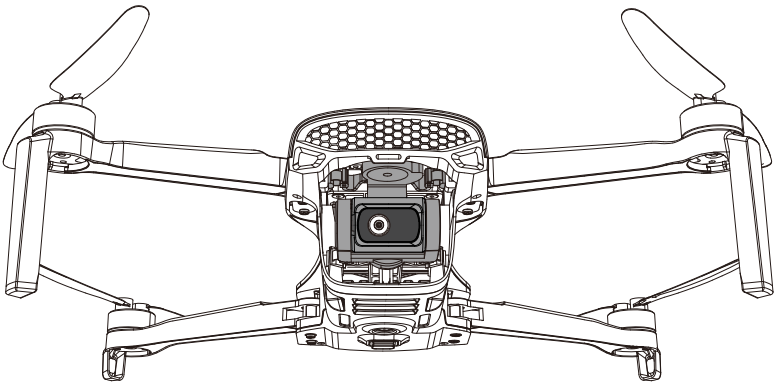
MINI SE (P2 Hi)

Operation Guide v1.2

March 10, 2025



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Understand the flight safety

Use of the product may pose certain safety risks. It is not suitable for people under the age of 14. The Safety Summary contains only a portion of the flight safety knowledge, so be sure to read the entire Operation Guide carefully to avoid property damage or even personal injury due to improper operation.

☆ **This product uses 5.8GHz high-definition map, should fly in an open without shielding and electromagnetic interference environment.**

☆ **This product is suitable for people who have experience in operating models and who are not less than 14 years old.**

☆ **Do not fly in bad weather, such as strong wind, snow, rain, fog weather, etc.**

☆ **Choose an open space without tall buildings around it.A large use of reinforcement buildings will affect the work of the compass, and will block the GPS satellite signals, resulting in the positioning effect of the aircraft is worse or even impossible.**

☆ **This product does not equipped with heading lights and must be flown in the daytime and in the visible area, and it is strictly prohibited to fly at night or under the circumstances of poor visibility!**

☆ **This product does not have automatic obstacle avoidance function, only equipped with physical anti-collision protective cover. Please maintain control of the aircraft throughout the flight, do not only depend on the information and data displayed on the App interface. You should combine with visual observation, reasonably judge the flight conditions, timely avoid obstacles, and set the appropriate flight and RTH height according to the flight environment.**

☆ **When flight, stay away from high speed rotating components (eg. propeller, brushless motor).**

☆ **When flying, keep in line of sight, away from obstacles, people, water, etc.**

☆ **Do not fly in areas such as high-voltage line, communication base station or transmission tower to avoid interference with the remote control.**

☆ **Do not fly in no-fly areas restricted by relevant laws or regulations.**

☆ **Do not release the aircraft by throwing to fly function in a crowded place.**

☆ **Flying at an altitude of about 4,500 meters, due to environmental factors, the aircraft battery and power system performance will decline, and the flight performance will be affected.**

Disclaimer & Warnings

There are safety risks associated with the use of the aircraft, and is only suitable for people aged 14 and above who have experience in operating models, not for people under the age of 14. Keep children away from the aircraft, and special care must be taken when operating it in scenes where children are present. Please read this document carefully before using this product. This statement is of great importance for the safe use of this product and for your legal rights.
The product is a multi-rotor aircraft and will provide an effortless flying experience when the power supply is working normally and all components are undamaged. Walkers reserves the right to update this disclaimer at any time. It is important that you read this document carefully to understand your legal rights, responsibilities and safety instructions before using this product; failure to do so may result in property damage, accidents and personal safety hazards. Once you use this product, you are deemed to have understood, approved and accepted the terms and conditions of this statement in its entirety. The user undertakes to be responsible for his or her own actions and for all consequences arising therefrom. The user undertakes to use this product only for legitimate purposes and agrees to these terms and conditions and to any related policies or guidelines that Walkera may establish. To the fullest extent permitted by law, in no event will Walkera be liable for any indirect, consequential, punitive, incidental, special or criminal damages, including damages resulting from your purchase of, use of, or inability to use this product (even if Walkera has been advised of the possibility of such damages).The laws of some countries may prohibit the exemption of warranties, so your rights may vary from country to country. Walkera reserves the right of final interpretation of these terms and conditions, subject to the laws and regulations of the country in which you reside. Walkera reserves the right to update, revise or discontinue these terms and conditions at any time without prior notice.

1. Get to Know Aircraft

- The MINI SE(Hi) features a mainstream lightweight, foldable design that is unprecedentedly easy to use and carry, while maintaining flight and usage quality.
- Adopt GPS/GLONASS/BeiDou tri-mode satellite positioning navigation system, ensuring more accurate and safer flight.
- Equipped with forward and backward visual systems and downward TOF systems, capable of stable flight and hovering indoors and outdoors, and possessing the ability to perceive obstacles in three directions: forward, backward, and downward
- The self-developed flight control system is adopted to provide agile, stable and safe flight performance, and can realize throwing and flying and a variety of intelligent flight functions.
- Using high-precision three-axis mechanical anti-shake and stabilized gimbal, the camera can steadily take 4K HD video and 48 megapixel photos.
- Adopting domestic chip and a new 5.8GHz long-distance digital encryption transmission technique provides safer and more stable data, stronger anti-interference ability, and longer distance of video transmission.

1) Gimbal shield(remove it before flight)

2) All-in-one gimbal camera

3) Brushless motor

4) CCW blade( )

5) CW blade( )

6) Front arm

7) Rear arm

8) TOF ranging sensor

9) Aircraft status indicator

10) Battery

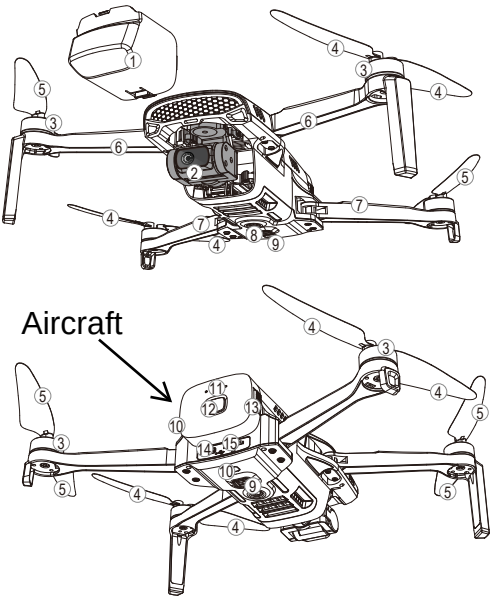
11) Battery level indicator

12) Power button

13) Battery snap

14) Upgrade/External Device /Charging port

15) MicroSD card slot

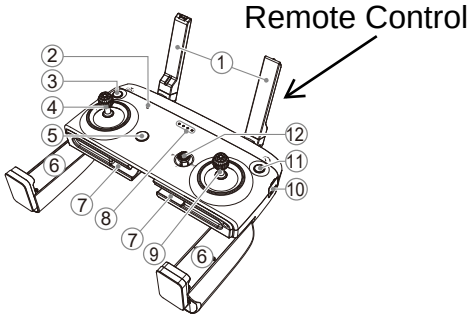


*** 1) Before using the product , please watch the instructional video, upgrade related firmware and calibration related items and read the "Operation Guide" carefully to avoid property damage or even personal injury caused by improper operation.**

2) The high-speed rotating propeller is dangerous. The operator should keep a safe distance from the aircraft and keep the aircraft away from people, buildings, trees or other obstructions to avoid collision.

2.0 Get to Know Remote Controller

This remote control has a built-in a ground receiving terminal of digital image transmission system. which can achieve a real-time display of high-definition images on a mobile device by using APP,with a foldable holder capable of holding mobile phone.



1) Antennas

2) System status light

3) Return(RTH) Button

4) Left Stick

5) Power Button

6) Handle(used to place mobile phone)

7) Stick storage slot

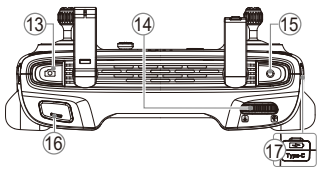
8) Battery indicator

9) Right Stick

10) Type-C port (for connecting mobile phone)

11) Flight mode switch button(Short press to switch flight mode, which are stable, normal, and sport.)

12) Small Stick(toggle left/right camera exposure value adjustment, toggle up/down default function is non-functional, you can set the button function on the App flight interface > System Settings > Control > Remote Control > Button Customization).



13) Take photo button

14) Left dial (gimbal camera tilt adjustment)

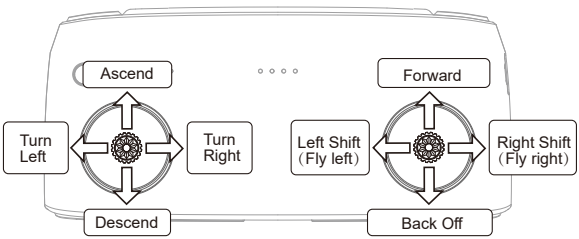
15) Start/Stop recording button

16) Customize function button(The default function of press is to switch between the gimbal back to center/down; and the default function of double-press is non-functional,you can set the button function on the App flight interface > System Settings > Control > Remote Control > Button Customization.)

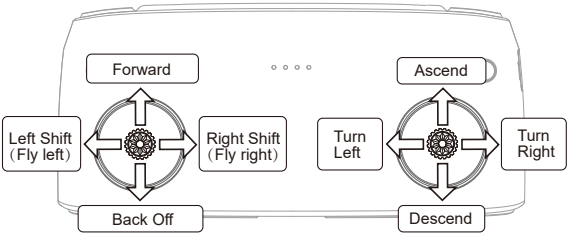
17) Charging port (connect the charger to charge the remote control)

The remote control stick has three operation modes, the factory default stick operation mode is mode 2 (American hand left-hand throttle), which can switched in the APP settings, and it is recommended that beginners use mode 2(American hand left-hand throttle) as the mode of operation.

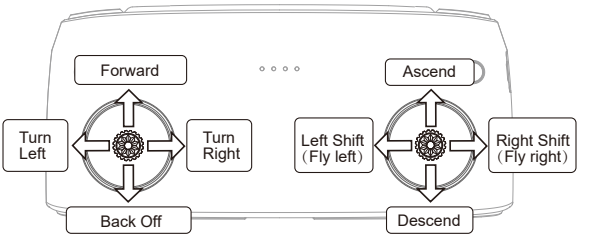
Mode 2 (American hand,throttle on the left):



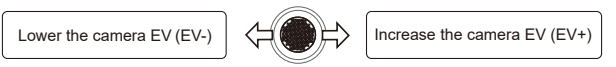
Mode 3 (Chinese hand,throttle on the right):



Mode 1(Japanese hand, throttle on the right):



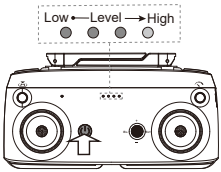
Small joystick function:

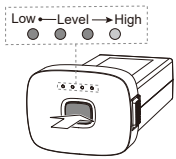


3.0 Check Battery Level

Remote Controller:
Short press the power button to turn on the battery indicator light(displaying the battery level) to check the battery level.

Aircraft Battery:
Short press Power on button to turn on the battery indicator light(displaying the battery level) to check the battery level.



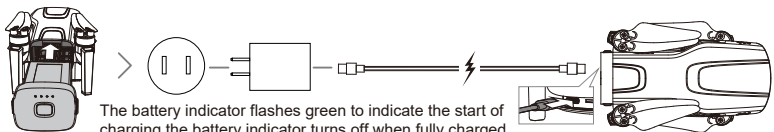


4.0 Charge

※**Caution:**
Please use the charger designated by Walkera for charging, and Walkera will not be responsible for any consequences of charging with a charger that is not officially designated by Walkera.

4.1 Aircraft Battery Charging

Tips: The aircraft battery must be installed on the aircraft to charge, the aircraft is compatible with the market standard Type-C interface, please use a USB charger that meets the PD protocol (such as mobile phones, cameras and other digital product USB chargers) for charging. If there is smoke, odor, or leakage during the charging of the remote control, please do not continue to charge the remote control, and please transfer it to our company for repair.

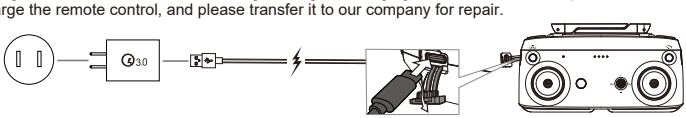


The battery indicator flashes green to indicate the start of charging.the battery indicator turns off when fully charged.

Note:
Do not charge the aircraft battery immediately after flight as it may be too hot. Wait for the battery to cool down to to room temperature before charging again.

4.2 Remote Controller Charging

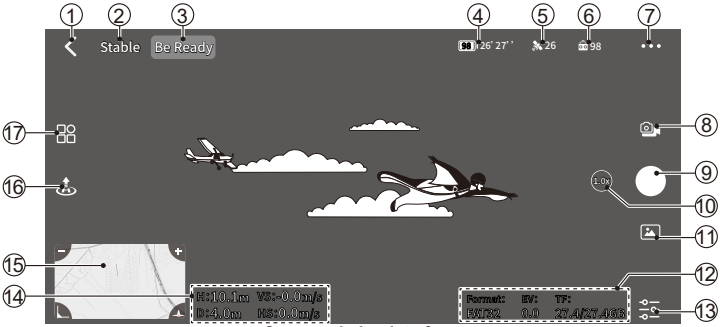
Tips: The remote controller is compatible with the market standard Type-C interface, please use a USB charger that meets the QC3.0 protocol (such as mobile phones, cameras and other digital product USB chargers) for charging. If there is smoke, odor, or leakage during the charging of the remote control, please do not continue to charge the remote control, and please transfer it to our company for repair.



The battery indicator flashes green to indicate the start of charging.the battery indicator turns off when fully charged.

5.0 Introduction of the WK Fly APP Interface

In this interface, you can preview the real-time HD video and photos taken by the aircraft camera, as well as dynamically set the parameters such as the aircraft, remote controller, camera gimbal and battery.



Camera window interface

1) **Return:** Click to return to the home screen.

2) **Flight Mode:** displays the current flight mode.

3) **Device Status:** displays device status and various warning messages. Click to view more information when a warning prompt appears.

4) **Aircraft battery information:** displays the current battery level and remaining flight time. Tap to view more information about the battery.

5) **GPS status:** displays the GPS(strength of the satellite positioning signal) status. When the icon is displayed in white, it means the signal is good. Click the icon to view the specific satellite(satellite positioning signal) status.

6) **HD image transmission signal strength:** displays the strength of the video signal transmitted between the aircraft and the remote control.

7) **System Settings:** system settings include safety, control, camera, and about interface.

   Safety settings include virtual fence, maximum height(max height), maximum distance(max distance), RTH height setting(auto RTH altitude); beginner mode switch; avoidance obstacles switch; battery information(battery info); sensor status information (sensor); remote ID registration status; missing action and emergency behavior and Aircraft loss of contact behavior.

   Control settings include unit settings, control feel settings, stick operation mode (joystick mode) settings, custom button customization settings, remote control calibration, and throwing switch.

   Camera settings include grid(auxiliary line) setting, photo animation and sound switchs, gimbal calibration, gimbal quickly back to center/down button, action time setting, formatting TF card button, TF card information, and maximum recording time setting.

   About include information such as device name, aircraft and remote control serial numbers, firmware Version, App Version, etc.

8) **Camera working mode switching:** every time you click on the icon, the camera working mode will be switched between the photo and the video.

9) **Photographing/Video:** every time this icon is clicked in the photo mode, a camera will be taken; click on this icon in the video mode, the camera will start recording and click on this icon again, the camera will stop and save the video.

10) **Zoom Ratio:** displays the digital zoom ratio of the current screen, and you can change the digital zoom ratio of the screen by using two fingers to make a zoom gesture on the screen displayed in the camera window or clicking on the zoom ratio icon.

11) **Media Library:** tap to open the location of photos and videos taken by the aircraft, tap on the pictures or videos to quickly share, download or manage media files.

12) **Camera status parameters of the aircraft:**
    EV Camera Exposure Value, displays the current exposure value of the aircraft camera.
    TF card capacity information, display the total capacity of the camera TF card and the current available capacity information.

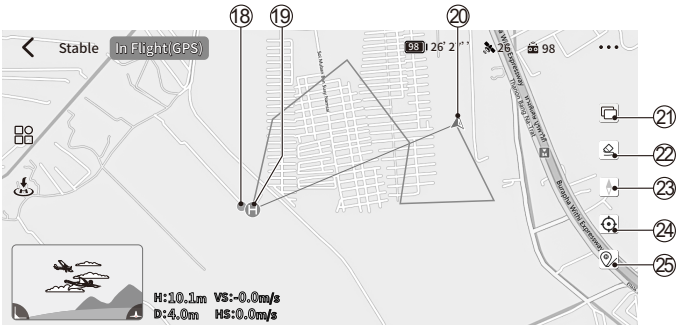
13) Camera settings: adjust the settings for display, photo, video, live image transmission quality and screen ratio.

14) Aircraft real-time status parameters:
H Height: Vertical distance of the aircraft to the return point.
D Distance: Horizontal distance between the aircraft and the return point.
V.S Vertical speed: the flight speed of the aircraft in the vertical direction.
H.S Horizontal speed: the flight speed of the aircraft in the horizontal direction.

15) Map/camera view thumbnail small window: Click the small window the map window to swap with the camera view window(the map window switch to the full-screen large window, the camera view switch to the small window).
− Zoom out the map: Click the icon to zoom out the map.
+Zoom in the map: Click the icon to zoom in the map.
Hide: click on the icon to hide the map view thumbnail small window.
Posture Sphere: click on the icon to display the Posture Sphere.

16) Take-off/Landing/RTH mode icon: when the aircraft is not taking off, the takeoff icon is displayed; after the aircraft takes off, the RTH mode icons displayed.
When the auto takeoff condition is reached,click the takeoff icon, and then press and hold the icon to confirm take-off,the aircraft will takeoff automatically and hover at a certain height.
When the aircraft has taken off,click the RTH icon ,and then press and hold the icon to confirm landing, the aircraft will land at the current position.
When the aircraft has taken off and flown horizontally for a certain distance(not over the takeoff point), click the RTH icon ,and then press and hold the icon to confirm RTH, the aircraft will automatically return to HOME point and landing.

17) Intelligent Flight Function: click on the icon to expand the intelligent flight mode selection interface. There are intelligent flight functions such as Assist Camera Movement(Auxiliary Shoot), Automatic Short Film(Short Film), Time-Lapse, Intelligent Following(Smart Follow) etc.



Map window interface

18) Mobile phone/ Remote Control Position: Displays the real time position of the current controller (Mobile phone/ remote control) on the map.

19) Home Point(Return Point): displays the the location of the home point(return point) on the map.

20) Heading Icon: displays the real time heading (nose direction) of the current aircraft.

21) Map switching: click the icon to expand the map type switching options.

22) Erase the flight track: erase the flight track displayed on the map interface.

23) Map lock: click the icon to lock/unlock the north (upper for north, lower for south, left for west, right for east); " " to lock the north state; " " to unlock the map status.

24) Position display switch: click the icon to select the aircraft position or the controller(mobile phone/ remote control) position.
Click the icon " " to display the aircraft position;

Click the icon " Ⓖ " to display the controller(mobile phone/ remote control) location;

" ⊕ "map follows the aircraft, lights up the icon map to follow the movement of the aircraft, and the aircraft is always in the center of the map.

25) Home Point Setting: when the aircraft has taken off and has flown horizontally for a certain distance (not above the take-off point), and the user's position has also moved (for example, the user has been far away from the take-off point after following the flight), user can manually set the home point near the user. (Tap the icon > Enlarge map > Drag the map so that the location icon points to the location you want the aircraft to return to > click "Set as home point" > click "Confirm").

6.0 Download the WK Fly Application

WK Fly App supports Android 5.1 and above, HarmonyOS 2.0 and above, and Apple iOS9.0 and above mobilephones and tablets.

For Android system or HarmonyOS system mobile device, please scan the QR code or open the browser and enter the URL (https://fly.walkera.cn/a/) to download and install the App. Android system can also go to Google Play search WK Fly to download and install.

For Apple iOS system, please go to the APP Store and search for WK Fly to download and install.

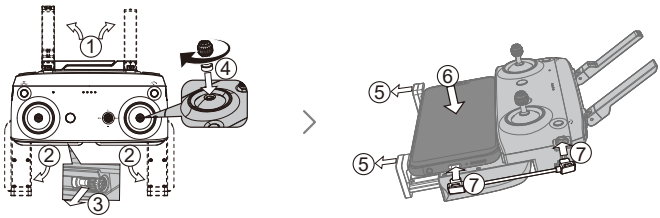
※ **In order to ensure flight safety, users who use aircraft in Chinese mainland need to complete real -name registration in accordance with the relevant regulations of the Civil Aviation Administration of China, please register through the UAV real-name registration system of the Civil Aviation Administration of China. In addition, you must activate it in the WK Fly App, bind the mobile phone and complete the registration information.**

For more information, visit https://uom.caac.gov.cn.

For overseas use, there is no need to register with the Civil Aviation Administration of China.

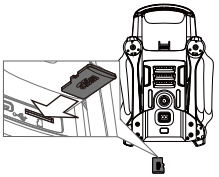
7.0 Preparing the Remote Control

1) Unfold the antennas and nufold the handles.
2) Remove the control sticks from the storage slots and mount them on the remote controller.
3) Pull out the mobile device holder and load the mobile device (data cable interface facing right), according to the mobile device interface type, select the corresponding remote control adapter cable (Lightning connector, Type-C connector) in the package to connect to the mobile device, and the other end of the Type-C connector is connected to the Type-C interface on the right side of the remote control.

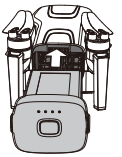


8.0 Prepare the Aircraft

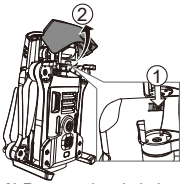
All aircraft arms are folded before the aircraft is packaged. Follow the steps below to prepare the aircraft.



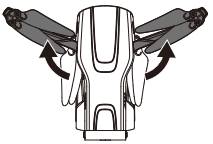
1) Install MicroSD card



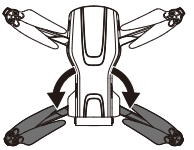
2) Install the battery



3) Remove the gimbal protection latch



4) Unfold the front arms



5) Unfold the back arms

6) Unfold the propellers

9.0 Ready to Fly

9.1 Power on and Connect

⚠ **Note:**

Before turning on the power of the aircraft, make sure that the gimbal protection cover has been removed and that both the front and rear arms are extended to avoid affecting the aircraft's self inspection.

(1) First press the power button once,and then press and hold the power button within two seconds until all four battery indicators are on and the remote controller is turned on.

(2) First shortly press the aircraft battery power button once, and then press and hold the power button within two seconds until all four indicators of the battery are on and the aircraft is turned on.

(3) Put the aircraft in a horizontal position, and wait until the aircraft status indicator lights flash from yellow light fast flashing to green light slow flashing to indicate that the connection is successful.

9.2 Enter the Flight Interface

※ **When running the app for the first time, after connecting to the aircraft, you need to register and log in to your account according to the interface prompts, and then activate the aircraft.**

After the remote controller is turned on, the WK Fly App will run automatically, click "Allow only while in use" in the prompt window→ click "Confirm" to run the App→ then follow the instructions on the App interface to register and activate the MINI SE Hi→ click " GO FLY " on the main interface to enter the flight interface.

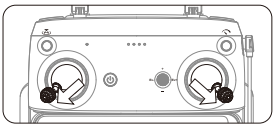
If you are flying without a network mirror, download an offline map of the planned flight area in advance(Please download the offline map while your mobile device is connected network).

9.3 Description of GPS(Satellite Positioning Navigation System Signal) Status

When the GPS(Satellite Positioning Navigation System) status icon is displayed in white and the number of stars is greater than 10, it means that the signal is good for takeoff. When the status icon is displayed as red or yellow, it means that the Global Satellite Positioning Navigation System is unhealthy.

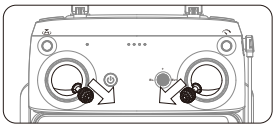
9.4 Unlock(starting) the Motors

After the remote control is successfully connected to the aircraft, put the left and right sticks at the lowest position simultaneously and put outward or inward, then hold until the motor rotates. Once unlocked,the motor will rotate, then, quickly release the stickers.



Remote control left and right sticks perform the action as shown in the above

Or



Remote control left and right sticks perform the action as shown in the above

9.5 Locking(stopping) Motors

After the aircraft lands on the ground, pull the throttle stick(mode 2 is left stick; modes 1 and 3 is right stick) to the lowest position and hold it for more than 2 seconds, and the motor will been locked(stop rotating).

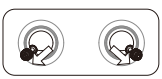
Pull down the throttle stick

10.0 Flight Control

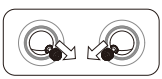
1. **Make sure the remote controller, aircraft battery and mobile phone are fully charged.**
2. **Make sure the aircraft has received the satellite positioning signal and the GPS status icon in the APP is white (the number of stars is greater than 10);**
3. **Please check and confirm the stick mode of the remote control before taking off (Check it in the APP control settings);**
4. **Before taking off, please set the control feel and switch flight mode;**
5. **Please unlock the motors before taking off.**

10.1 Manual(Use Stick) Take-off

Unlock the motors first, then slowly push the throttle stick upward(mode 2 is left stick; modes 1 and 3 is right stick) to takeoff.



Or



Remote control left and right sticks perform the action as shown in the above picture to unlock the motor

Push up the throttle stick

10.2 Manual(Use Stick) Landing

Slowly pull down the throttle stick down(mode 2 is left stick; modes 1 and 3 is right stick) until the aircraft touches the ground. After the aircraft touches the ground, pull the throttle stick to the lowest position and hold it for 2 seconds, then the motor stops.

Pull down the throttle stick

10.3 Automatic Take-off

When the takeoff conditions are reached (the device status window in the upper left corner of the App displays "Be Ready"), click the take-off icon in the App flight interface, and then press and hold the icon to confirm take-off,the aircraft will takeoff automatically and rise to 2~2.5 meters height to hover.

10.4 Automatic Landing

When the aircraft has takeoff, click the RTH icon in the App flight interface,and then press and hold the icon to confirm Landing,the aircraft will automatically land at the current position.

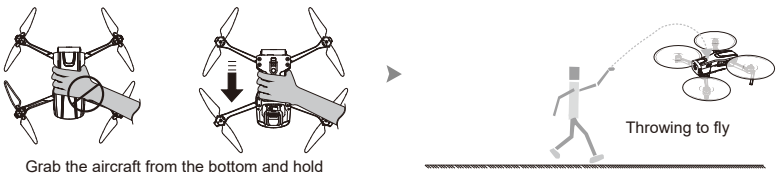
10.5 Throwing to Fly

(1) Click the system settings icon ••• on the upper right corner of the App flight interface → click the "Control" → scroll down in the control settings to find the throwing switch, click the switch icon on the right side of the throwing to enable the throwing function.

(2) After GPS satellite positioning, grab the aircraft from the bottom of the aircraft and turn the nose of the aircraft vertically downward for about 2-3 seconds to trigger the throw to fly mode, the aircraft motor will make a "ding -dong" sound. After being thrown, the aircraft will fall freely for 0.5 seconds, the motor will be unlocked automatically, the aircraft will automatically adjust its attitude, and hover automatically (height 2~2.5 meters).

Note:

Each time it enters the throw to fly mode, the state will be automatically maintained for 10 seconds, the aircraft will stop the prompt tone and exit the throw to fly mode after 10 seconds. Please throw the aircraft within 10 seconds after it enters the throw to fly mode. If the time is exceeded, please re-enter the throw to fly mode again and then throw.



Grab the aircraft from the bottom and hold the nose straight down for three seconds.

Warning

(1) Please use the throwing function in an open environment and keep away from people or other objects.

(2) When take off the aircraft by throwing it, it is strictly forbidden to grab the aircraft from the top of the aircraft or grasp the propeller, otherwise you will bear the consequences.

(3) Only if the aircraft has received a GPS satellite positioning signal and the signal is good (the number of satellites is greater than 10) can the aircraft be taken off by throwing method.

(4) Please throw the aircraft within 10 seconds after the aircraft motor prompt sounds, otherwise it will time out and automatically exit the throwing mode.

(5) After entering the throwing mode, it is strictly forbidden to throw downwards or hold the aircraft downwards. When throwing, try to throw upwards or flatly forward.

(6) After take off by throwing, please switch the flight mode according to your needs.

(7) When not using the throw function, please turn off the throw unction in the App settings to avoid accidentally triggering the throwing mode.

10.6 Flight Mode Switching and Control Feel Settings

The aircraft supports three flight modes: "Stable", "Normal" and "Sport".

Switched by short press the flight mode switch button which on the upper right corner of the remote control, or switch and customize the control feel of the aircraft in the App control settings.

Normal:

Adopt satellite positioning navigation system module and bottom TOF system to realize the aircraft function of precise hovering, stable flight and intelligent flight ,etc. The maximum horizontal flight speed default 10m/s(adjustable), the maximum climb speed default 3m/s(adjustable), the maximum down speed default 2m/s(adjustable), the maximum steering speed default 70°/s(adjustable), the gimbal pitch speed default 50°/s (adjustable).

Stable:

Stable mode limits the maximum flight speed, climb, steering and gimbal pitch speed on the basis of normal mode, which makes the aircraft more stable during aerial photography. The maximum horizontal flight speed default 5m/s(default), The maximum climb speed default 2m/s(default), The maximum down speed default 2m/s (default), The maximum steering speed default 30°/s(default), and gimbal pitch speed default 50°/s(default).

Sport:

Adopt satellite positioning navigation system module and bottom TOF system to realize the aircraft function of precise hovering, stable flight and intelligent flight ,etc. The control sensitivity of the aircraft is fast, the maximum horizontal flight speed default 15m/s(adjustable), the maximum climb speed default 5m/s(adjustable), the maximum down speed default 5m/s(adjustable), the maximum steering speed default 130°/s(adjustable), the gimbal pitch speed default 70°/s(adjustable).

10.7 Auto RTH(Return to home)

The aircraft is equipped with auto RTH function, and the RTH triggering methods are mainly categorized into user-initiated triggering, aircraft low battery triggering, and uncontrolled triggering (loss of communication signals between the remote control and the aircraft). The aircraft has successfully recorded the Home point and in the case of good positioning service, when RTH is triggered, the aircraft will automatically back to the Home point and land.

Active Trigger:

In the flight process, click the RTH icon on the left side of the App flight interface, then press and hold the icon to confirm RTH or press and hold the Return(RTH) Button on upper left corner of the remote control.

Tips:

After the aircraft is turned on, when the GPS (positioning and navigation system signal) status icon is displayed white for the first time (the number of stars is greater than 10), the current position of the aircraft will be recorded as the home point. During takeoff, if the GPS (positioning and navigation system signal) status icon is displayed white again (the number of stars is greater than 10), the current position of the aircraft will be re-recorded as the home point, and the WK Fly App will voice remind that the home point has been refreshed. If the satellite positioning signal does not meet the conditions, the home point will not be refreshed. During the flight, if you need to change the home point (your location has been moved, such as the user is far away from the take-off point after following the flight), you can manually set the home point near the your. (Click icon > Enlarge map > Drag the map so that the location mark is pointed at the location you want the aircraft to return to> click "Set as a new home point" > click "Confirm").

The horizontal distance between aircraft and Home point >20m

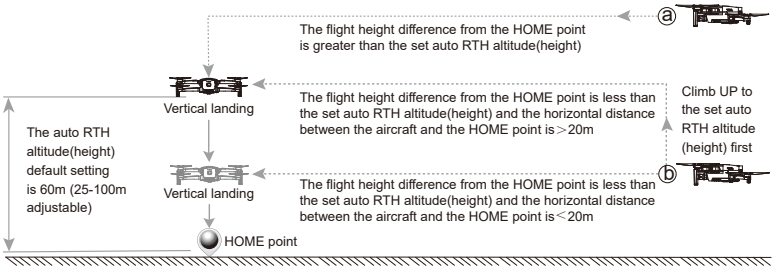
a. When the aircraft flight height is higher than the set auto RTH altitude(height), the aircraft will maintain the current height and fly back horizontally to the top of the HOME point, then landing vertically.

b. When the aircraft flight height is lower than the set auto RTH altitude(height), the aircraft will climb vertically to the set auto RTH altitude(height) and fly back horizontally to the top of the HOME point, and then landing vertically.

The horizontal distance between aircraft and Home point <20m

a. When the aircraft flight height is higher than the set auto RTH altitude(height), the aircraft will maintain the current height and fly back horizontally to the top of the HOME point, then landing vertically.

b. When the aircraft flight height is lower than the set auto RTH altitude(height), the aircraft will maintain its current height and fly back horizontally to the top of the HOME point, then landing vertically.



Notes:

(1) The default setting of the auto RTH altitude(height) is 60m (25-100m adjustable, please set reasonably according to the actual flight environment).

(2) When the user's location is moved, such as the user is far away from the take-off point after following flight, it is recommended to manually set the home point near the user.

(3) When the aircraft enters auto RTH mode (return flight), please do not perform any other operations.

(4) When the aircraft loses the remote control communication signal, it will automatically enter a out-of-control return home state.

(5) If the GPS(positioning and navigation system) signal is abnormal or the GPS(positioning and navigation system) module does not work, return to Home is impossible. Please operate the aircraft to land manually.

(6) During the actively-triggered return flight(auto RTH mode) process, switching the flight mode can cancel the return flight(auto RTH mode).

(7) During the out-of-control return to home process, after the remote control communication signal returns to normal, the return flight process will continue, but switching the flight mode or click the icon ⊗ on the right side of the App flight interface can cancel the return flight.

(8) If you find that the aircraft is landing too fast when the altitude is lower than 15 meters during the return flight(auto RTH mode) process,you must manually drag the throttle up slightly to slow down the aircraft's descent speed and ensure the aircraft's safe landing.

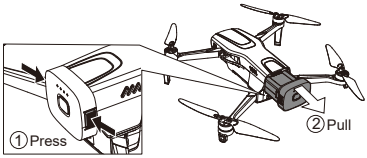
11.0 To End The Flight

1) Manual landing, low battery protection automatic landing or auto RTH mode landing, lock the motor after landing on the ground.

2) Turn off the power of the aircraft first(First shortly press the battery power button once, and then press and hold the power on button within two seconds until all four indicators of the battery are off and the battery is turned off), and then turn off the power of the remote control (long press the power button of the remote control).

3) Take the flight battery out of the aircraft.

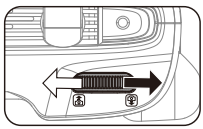
Remove the battery:
After pressing and holding the textured part of the snaps on both sides of the battery, pull it toward the rear of the aircraft to remove the battery.



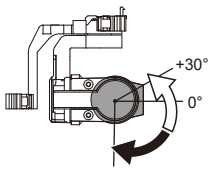
12.0 Gimbal Control

The three-axis stable gimbal provides a stable platform for the camera, so that the camera can also take a stable picture while the aircraft is flying at high speed.
You can control the pitch angle (PIT) of the gimbal through the left dial of the remote control.

1) Gimbal camera pitch angle adjustment



The left dial of the remote control dials right or left



Pitch angle (PIT)

Tips:
The radiance of the left dial determines the speed of change of the gimbal,and the speed is 0 when returning to the midpoint, the greater the radiance of the toggle, the faster the gimbal changes, and vice versa.

2) Gimbal camera Center/Down

Method 1:
Short press the custom function button in the upper right corner of the remote control to quickly switch between the gimbal camera back to the center/down.

Method 2: In the system settings of the WK Fly App flight interface> on the camera settings interface, press the Gimbal Center/Down button to quickly switch between the gimbal camera back to the center/down.

13.0 Camera Control

13.1 Shooting screen brightness adjustment

1) Set in APP interface

When the image is too dark or too bright, you can click the icon " " in the lower right corner of the app → click the icon " " to enter speciality settings of the camera, and adjust the brightness of the image by adjusting the ISO sensitivity, shutter speed, and exposure value.

Click on the icon "Auto" for automatic mode,the camera will automatically adjust the ISO sensitivity and shutter speed according to different environments, and only EV(exposure value) and WB(white balance) can be set manually.

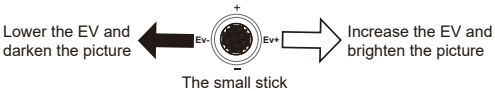
Click on the icon "PRO" for professional mode, professional mode can manually adjust ISO sensitivity, shutter speed, EV(exposure value) to adjust the brightness of the screen.

Notes:

(1) In video recording, no automatic or professional mode switching can be made; in automatic mode recording, burst dimming compensation can be adjusted; in professional mode recording, light sensitivity ISO and burst dimming compensation can only be adjusted, and the shutter speed value cannot be adjusted.

(2) In professional mode, when the shutter speed value and the sensitivity ISO value are increased. If the camera lens hits the light, the shutter speed or sensitivity ISO is needed to readjust the image brightness. When the camera lens targets the light, adjust the shutter speed or sensitivity ISO to adjust the scene.

2) Quickly adjust the camera EV via the small joystick of the remote control



13.2 Take Photos and Record Video

Take photos and record videos can be operated by remote control take photo button, start/stop record button or in the camera window of the mobile device App interface.

1) Operate on the remote control button

(1) Take a photo:
Press the take photo button on the upper right side of the remote controller once, and the camera will take a photo and save it to the aircraft micro SD card.

(2) Recording:
Short press the start/stop record button on the upper left side of the remote control once, the camera will start recording, and the start/stop record button again to stop the camera recording and save the video to the aircraft micro SD card.

2) Operate in APP interface

Tip:
The camera w of APP interface the aircraft return screen display,you can use the touch screen control.

(1) Select the working mode:
Click the camera working mode switch icon or to switch the working mode to take photos mode or record videos mode.

(2) Zoom ratio adjustment:
adjust the digital zoom ratio to change the size of the screen(the maximum digital zoom ratio is 4x) by using two fingers to make a zoom gesture on the screen displayed in the camera window or clicking on the zoom ratio icon .

(3) Taking photos: Click the icon to take a photo.

(4) Recording videos:
Click icon to start recording. After recording, click the icon again to stop recording and save the video to the aircraft aircraft micro SD card.

14.0 Intelligent Flight Function Description

Intelligent flight function provides different preset auxiliary shooting intelligent flight modes such as Assist Camera Movement(Auxiliary Shoot), Automatic Short Film(Short Film), Time-Lapse, Intelligent Following(Smart Follow), etc. The aircraft can automatically follow the set auxiliary shooting flight mode to achieve a variety of classic aerial photography.

Warning

1) **Please use the intelligent flight function in an open, unobstructed and obstacle-free environment, and always pay attention to whether there are obstacles such as people, animals, buildings, etc. on the path of the aircraft.**
2) **Always pay attention to the blocking of the aircraft by objects from around the aircraft, and at the same time can avoid accidents (such as collisions) through manual operation.**
3) **Please do not use the intelligent flight function in places with poor GPS satellite positioning signals, such as close to buildings and shelters, otherwise it may cause unexpected situations such as unstable flight trajectory of the aircraft.**
4) **When using the intelligent flight function, users must abide by the local laws and regulations on privacy.**

14.1 Assist Camera Movement(Auxiliary Shoot)

Assist camera movement(Auxiliary Shoot) include soaring mode(Soaring),circle mode(Circle),drift mode(Drift), gradual retreat mode(Gradual Retreat), etc. The aircraft can automatically follow the selected mode to fly.

Notes:

(1) When using the assist camera movement(Auxiliary Shoot), the aircraft will not shoot automatically, and the user needs to manually control the aircraft to take photos or videos.

(2) Before using the camera assist function, you need to set the auxiliary function time, select the target, and lock the target.

Assist camera movement(Auxiliary Shoot) time(action time) setting: During the flight, click the system settings icon ••• in the App flight interface → click the "Camera" button, → scroll down the camera settings menu to find the “Action Time” column → drag the adjustment slider to set the assist camera movement(Auxiliary Shoot) time limit you want.

Lock: In the flight process, click the Intelligent Flight function button in the App flight interface→ click the assist camera movement function button , adjust the position, heading of the aircraft and the tilt angle of the gimbal camera so that the "+" in the camera window of the App interface is aimed at the target object, and then click the "+" in the camera window to lock the target.

Soaring

After locking the target, click the “Soaring” button in floating window of auxiliary shoot on the flight interface of the App, and then click the "Go" button, the aircraft will start to soaring until the time limit is reached(the aircraft camera will always be focused at the target during the whole process). You can click the "End" button during the process to cancel the soaring flight.

Drift

After locking the target, click the “ Drift ” button in floating window of auxiliary shoot on the flight interface of the App, and then click the "Go" button, the aircraft will aim at the target and automatically perform the drift flight action until the time limit is reached(the aircraft camera will always be focused at the target during the whole process). You can click the "End" button during the process to cancel the drift flight.

Gradual Retreat

After locking the target, click the “Gradual Retreat” button in floating window of auxiliary shoot on the flight interface of the App, and then click the "Go" button, the aircraft will be aimed at the target and will automatically fly away from the target while rising until the time limit is reached(the aircraft camera will always be focused at the target during the whole process). You can click the "End" button during the process to cancel the gradual retreat flight.

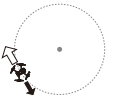
Circle

After locking the target, click the “Circle” button in floating window of auxiliary shoot on the flight interface of the App, and then click the "Go" button, the aircraft will aim at the target and continue to circle flight until the time limit is reached(the aircraft camera will always be focused at the target during the whole process). You can click the "End" button during the process to cancel the circle flight.

1) When entering the automatic circle flight, the aircraft is in a hovering state, and the roll stick (AILE) is toggled left or right to set the speed and direction of the circle (-5m/s~+5m/s, the default is 0m/s) to fly in circles.

Dial to the left
Clockwise circles

Dial to the right,
Counterclockwise circles.



Speed: the larger volatility toggling and longer holding time, the faster circling.The slower on the contrary.

2) Move the tilt stick (ELEV) up or down to change the radius of the circle to control the aircraft to approach or move away from the target (5~50m, the default circle radius is 5m).

Push up to reduce the circle radius.

Pull downto increase the circle radius.

Notes:

★ When flying in circle mode, check the current stick operation mode (joystick mode) of the remote controller before operation (check it in the APP system settings > control, > joystick mode settings).

☆ Adjust the surround direction (roll rocker AILE): For Mode 1 or Mode 2, move the right stick to the left or right; for Mode 3, move the left stick to the left or right.

☆ Adjust the surround radius (pitch rocker ELEV): For Mode 1 or Mode 3, move the left stick up or down; for Mode 2, move the right stick up or down.

14.2 Automatic Short Film(Short Film)

Automatic short film(Short Film) is similar to the Assist camera movement(Auxiliary Shoot) include soaring mode (Soaring), circle mode(Circle), gradual retreat mode(Gradual Retreat), etc. The aircraft can automatically follow the selected mode to fly and continuously shoot, thus automatically generate a short video.

Note:

Automatic short film(Short Film) function is the same as the assist camera movement(Auxiliary Shoot) function, you need to select the target and lock the target before using.

Soaring

In the flight process, click the “Soaring” button in floating window of “short film” on the flight interface of the App → set the flight altitude(height) you want to soaring → adjust the position, heading of the aircraft and the tilt camera pitch angle so that the "+" in the camera window of the App interface is aimed at the target object, and then click the "+" in the camera window to lock the target or directly select the target object in the camera window of the App interface to lock the target → click the "Go" button, the aircraft will start to soaring until the altitude (height) limit is reached(the aircraft camera will always be focused at the target during the whole process). You can click the "End" button during the process to cancel the soaring flight.

Circle

In the flight process, click the “Circle” button in floating window of “short film” on the flight interface of the App, → click the " ↖ " or " ↗ " button of rotation direction you want the aircraft to circle, and set the number of laps you want the aircraft to circle → adjust the position, heading of the aircraft and the tilt camera pitch angle so that the "+" in the camera window of the App interface is aimed at the target object, and then click the "+" in the camera window to lock the target or directly select the target object in the camera window of the App interface to lock the target → click the "Go" button, the aircraft will aim at the target and continue to circle flight until the laps limit is reached(the aircraft camera will always be focused at the target during the whole process). You can click the "End" button during the process to cancel the circle flight.

Gradual Retreat

In the flight process, click the “Gradual Retreat” button in floating window of auxiliary shoot on the flight interface of the App → set the distance you want the aircraft to gradual retreat fly → adjust the position, heading of the aircraft and the tilt camera pitch angle so that the "+" in the camera window of the App interface is aimed at the target object, and then click the "+" in the camera window to lock the target or directly select the target object in the camera window of the App interface to lock the target → click the "Go" button, the aircraft will be aimed at the target and will automatically fly away from the target while rising until the distance limit is reached(the

aircraft camera will always be focused at the target during the whole process). You can click the "End" button during the process to cancel the gradual retreat flight.

14.3 Time-Lapse

By setting parameters, the aircraft will automatically take a certain number of photos within the set time and generate time-lapse video. When not taking off, it can shoot on the ground; when taking off; the users can freely control the posture of aircraft and the pitch angle of gimbal through the App and remote control.

Steps to use:

Click the intelligent flight function button in the App flight interface→ click time-lapse button → set the interval time and video length you want to shoot → click " Start " button to shoot.

14.4 Intelligent Following(Smart Follow)

The aircraft maintains a certain distance and height from the target to follow, which is categorized into two modes: following(Follow) and parallel following(follow parallel).

Following(Follow) :

The aircraft follows the movement of the target and moves the same direction as the target, and the aircraft camera lens always aligned with the target. The relative distance and height between the aircraft and the target are always maintained.

Parallel Following(Follow Parallel) :

The aircraft maintains a certain distance from the target and follows the movement of the target in parallel, and the aircraft camera lens always aligned with the target. The relative position, relative distance, relative height and the heading (nose direction) between the aircraft and target are always maintained.

Notice:

When starting to follow,the flight height of the aircraft must be greater than 5 meters, and the downward angle of the gimbal is greater than 10°. The horizontal distance or height between the aircraft and the target is not within the range of support, the aircraft will autonomously fly to the range of support.

Steps to use:

In the flight process, click the Intelligent Flight function button in the App flight interface → click the intelligent following(Smart Follow) button → click the intelligent following(Smart Follow) mode following button or the parallel following button you want → adjust position, heading,the flight height (flight height must be more than 5 meters) and gimbal camera angle (gimbal angle must be less than -10°) so that the camera align with the target to be followed → select the target to be followed in the camera window of the App interface → click the "Go" button, and the aircraft will be aligned with the target to start the following flight. Click the "End" button, the following flight will be canceled.

Tip: When using the intelligent following(Smart Follow), the aircraft will not shoot automatically, and the user needs to manually control the aircraft to take photos or videos.

14.5 Cruise control

The cruise control function enables the aircraft to lock the current control stick input of the remote controller when conditions permit, and to automatically fly, automatically maintain three-dimensional movement and spin speedat the speed corresponding to the current control stick input. Without the need to continually move the control sticks,long-distance flights become more effortless, and image shaking which often happens during manual operatingcan be avoided. and support different personalized creative camera movements.

Set the cruise control switch:

Users can set the double-press function of the custom buttons of the remote controller to cruise control switch in the flight interface of WK Fly App > System Settings > Control > Button Customization,and the function of the remote control small joystick dial up/down can be customized to the cruising speedadjustment.

Using Cruise Control:

Operate the custom cruise control switch while pushing the control stick(s), and the aircraft will fly at the speed corresponding to the current stick amount, and operate the custom cruise speed adjustment switch to adjust the speed of the cruise flight. During the cruise flight, you can operate the custom cruise control switch again to exit the cruise control, and the aircraft will automatically hover after exiting.

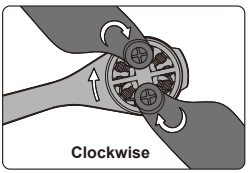
15.0 Additional Instructions

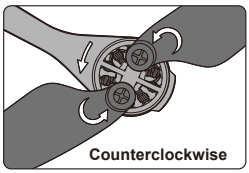
15.1 Replace propellers

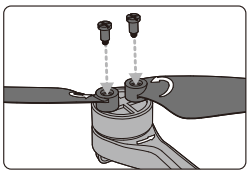
The propellers on adjacent motors of the aircraft rotate clockwise and counterclockwise, respectively. The two propellers on the same motor are the same, and the propeller and motor mounting seat have rotation direction markings.

(1) Use a screwdriver to remove the propeller screw, and then remove the propeller.

(2) Replace the propeller with a new one and tighten the screws.



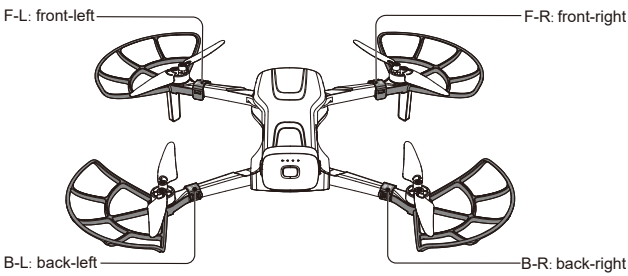




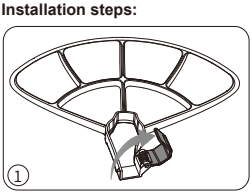
Attention:
Ensure that the rotation direction markings on the propeller are consistent with the rotation direction markings on the motor mounting bracket

15.2 Install the propellers guard

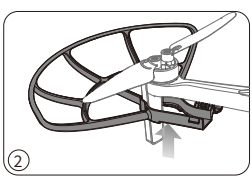
Propellers Guard consists of four parts: front-left(F-L) , front-right(F-R) , back-left(B-L) and back-right(B-R), please install it correctly according to the figure below.



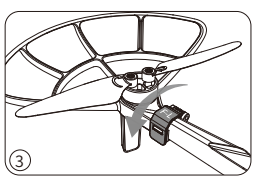
Installation steps:



(1) Open the latch and allow the latch to expand fully.



(2) Insert the propeller guard from bottom to top onto the arm.



(3) Buckle the latch and make sure the installation is secure.

15.3 The remote controller paired with the aircraft frequency

- **The whole set of aircraft has been paired frequency before leaving the factory, and can be used directly after booting and activation.**
- **If you have replaced a new aircraft or a new remote controller after the sale, you need to paired frequency the new aircraft or new remote controller before connecting it, otherwise it will not be connected.**

The Operation is as follows:

1) Power on the remote control→ Connect the mobile phone to the remote control→ Run the WK Fly App;
2) Click " Profile " on the main interface of the App→ click the" Settings " button→ click the" Connecting to new drone" button;
3) Install the battery on the aircraft→ Power on→ Press and hold the power on button until all indications of the aircraft start flashing;
4) Click the "Ready to connect" button in the pop-up window of connecting new aircraft, the remote controller will automatically pairing frequency with the aircraft until the app interface prompts that the pairing successful, it means that the paired frequency has been successful.

15.4 Calibrating aircraft magnetometer

Notice:

(1) When the App prompts that the aircraft's magnetometer has serious interference, or appears to be circling when hovering, or flying straight off course, please land in time to calibrate the magnetometer.

(2) Please perform calibration in an open place outdoors and away from strong electromagnetic field interference (the motor must be locked during calibration).

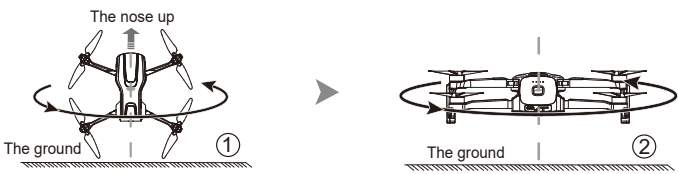
Open the Aircraft magnetometer(Compass) Calibration:

The mobile phone, aircraft and remote controller are connected, open the magnetometer calibration in the system settings of the WK Fly App flight interface(Path: click the system settings icon∘∘∘→ click on the "Safety" button → scroll down to find the sensor column → click on the status indicator "Normal" or "Abnormal" on the right side of the magnetometer(Compass) → click " Start Calibration" in the pop-up window, the aircraft status indicator turns blue to indicate that the magnetometer(Compass) calibration state has been entered.

The magnetometer(Compass) Calibration Method is as follows:

(1) Hold the aircraft head vertically upward and rotate the aircraft for 720° in the horizontal direction, the aircraft indicator will change from a constant blue to alternately flashing red and blue.

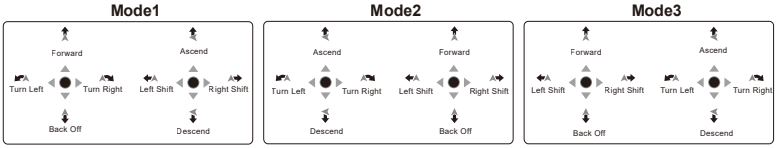
(2) Put the aircraft flat, then rotate 720° in the horizontal direction, the aircraft indicator will turn green light blinking, and then rest the aircraft in the horizontal position.



If the calibration is unsuccessful, please recalibrate as described above.

15.5 Remote Control Stick Operation Modes Switching

When the remote control and the mobile device are connected, first click the system settings icon∘∘∘in the upper right corner of the WK Fly APP flight interface to expand the setting pop-up window → then select the " Control " button → click the icon ❯ on the right side of the stick mode to enter the stick operation mode switching interface → select the stick operation mode option "Mode2", "Mode3" or "Mode1" on the stick operation mode switching interface that you want → click the " OK " button icon in the pop-up dialog window.



15.6 Emergency paddle stop Setting

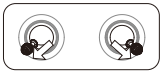
Emergency paddle stop will cause the aircraft to crash. When the aircraft detects a serious fault in the air(e.g. impact in the air, uncontrolled rapid climb or down of the aircraft, uncontrolled continuous roll of the aircraft posture, motor blockage, etc.), the user can stop the motor by executing the lever break action for 2 seconds. In WK Fly App, the default setting of mergency paddle stop is"Close(disable)", you can modify the setting to "Fault only" or "Anytime", please choose carefully.

Emergency Paddle Stop Function Setting:

Click the system settings icon ••• in the upper right corner of the WK Fly APP flight interface to expand the settings pop-up window → click the "Safety" button → scroll down to find the “missing action and emergency behavior ” column→ click the icon〉 on the right of the “missing action and emergency behavior column” → click the icon〉 on the right of the “emergency paddle stop” column → click on the option you want to set: "Close(disable)" or "Fault only(Please enable it with caution)" or "Anytime(Please enable it with caution)".

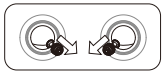
The Operation of Emergency Paddle Stop:

When the aircraft has a serious malfunction in the air(e.g. impact in the air, uncontrolled rapid climb or down of the aircraft, uncontrolled continuous roll of the aircraft posture, motor blockage, etc.), the user can stop the motor by performing the action of bending the rod(put the left and right sticks at the lowest position simultaneously and put outward or inward) for 2 seconds.



Remote control left and right sticks perform the action as shown in the above

Or



Remote control left and right sticks perform the action as shown in the above

15.7 Description of Downward Vision System and TOF Ranging System

The MINI SE (Hi) is equipped with a down-facing TOF sensor system for stable flight and hovering at ultra-low altitudes or indoors. The TOF sensing system at the bottom of the fuselage consists of a camera, an infrared laser emitter and an infrared laser receiver. The infrared sensing system can judge the distance of obstacles, and can also provide a reference for the aircraft's altitude to the ground, and cooperate with the downward-looking vision system to calculate the aircraft's position information. Among them, the infrared laser emitter meets Class 1 eye safety requirements.

Usage Scenarios:

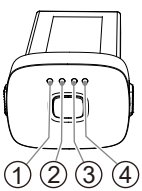
The positioning function of the downward TOF system is suitable for environments with no satellite positioning signal or poor satellite positioning signal but rich surface texture and sufficient lighting conditions, and the optimal working height range is 0.25 - 5m. When flying beyond this range, the visual positioning performance may be reduced, so please fly with caution.

⚠ Notes:

1) Please pay attention to the flight environment, the vision system and 3D infrared sensing system only play a safety auxiliary role under limited conditions, and cannot replace human judgment and control. Users should pay attention to the surrounding environment and app-related warnings at all times during the flight, maintain control of the aircraft throughout the flight, and be responsible for the control behavior.
2) In the case of no satellite positioning, when using the vision system in an open and flat field, the optimal working altitude range of the vision positioning system is 0.25-4m, and when flying beyond this range, the visual positioning performance may be reduced, please fly with caution.

3) When the ambient light is insufficient, the visual positioning cannot achieve optimal performance. At this time, if the satellite positioning signal is not good, please fly with caution.
4) The TOF sensing system may not work properly on the water. Therefore, when the landing function is triggered, the aircraft may not be able to actively avoid the water below. It is recommended that the user maintain full control of the flight, make reasonable judgments based on the surrounding environment, and not rely too much on the TOF sensing system.
5) The downward-looking vision system is not suitable for use in scenarios where the aircraft is too fast. For example, the flight speed should not exceed 5 m/s when 1 m above the ground, and 8 m/s when 2 m above the ground.
6) The vision system is unable to recognize surfaces without textured features, and does not work properly in environments with insufficient or excessive light intensity. The vision system does not work properly in the following scenarios:
   a. Solid color surfaces (e.g. pure black, pure white, pure red, pure green).
   b. Surfaces with strong reflections or reflections (e.g. ice surfaces).
   c. Water or transparent surfaces.
   d. Moving surfaces (e.g., above pedestrian traffic, windswept bushes, or grass).
   e. Scenes where lighting changes drastically and rapidly.
   f. Surfaces that are particularly dark (less than 15 lux) or very bright (more than 40,000 lux).
   g. Surfaces of materials (e.g. mirrors) that have a strong absorption or reflection of infrared.
   h. Surfaces with particularly sparse textures.
   i. Surfaces with high texture repetition (e.g. small checkered tiles of the same color).
   j. Small obstructions (e.g. tree branches, power lines, etc).
7) Do not interfere with the vision system in any way, and make sure that the lens is clear and free of stains and scratches.
8) After long-term storage, the vision system may need to be calibrated, and the App will prompt and the aircraft will be automatically calibrated.
9) Avoid flying in rainy and foggy weather or in other scenes with low visibility (visibility less than 100 m).
10) Check the surface glass of the vision camera and infrared sensor before take-off:
    a. Remove the film, stickers and other obstructions on the surface.
    b. If there are water droplets, fingerprints, dirt, etc., please wipe them clean first (please use a dust-free cloth to wipe them, and do not use organic solvents such as alcohol).
    c. If the surface glass is dropped, broken, scratched, worn, etc., please return it to the factory for repair.
11) Do not block the vision camera and infrared sensor in any way.

15.8 Description of Aircraft Battery Status and Indicator Lights



1) The indicator lights up one by one from left to right, and the cycle is continuous, indicating that it is charging.
2) The four indicators have a partial constant, or a partial constant flashes, indicating the normal power display status.
3) When the battery is on, do not install it on the aircraft. When it is not n the process of charging, quickly press the battery power button 5 times, and the No. 1 indicator light and No. 4 indicator light will blink. At this time, the battery electric calibration function will be entered, and it will automatically exit after 3 seconds.
4) In order to ensure the accuracy of battery power measurement, please use the battery for several times, when the battery is less than 20%, start non-stop charging until the battery is full of automatic light off charging operation.
5) The battery will automatically turns off if the aircraft does not take off after 5 minutes of turned up.
6) Disconnect the charger in the middle of charging, and the battery automatically turns off after 5 minutes, or it can be manually turn off immediately.

7) When the battery voltage is greater than 7.6V, the battery enters the standby state, and starts to discharge automatically after 5 days, until the voltage reaches 7.6V (45% power) storage voltage, the battery automatically turns off.

16.0 Battery Usage Instructions and Storage Safety

⚠ Warning

1) Always store batteries in a cool, dry place.
2) Incorrectly use, charging or storage batteries can lead to fire and personal injury. Always use the battery according to the following safety guidelines.

16.1 Battery Usage Notice

1) Do not expose the battery to any liquid, do not dip the battery in water or wet it.Do not use batteries in rain or wet conditions. When the battery comes into contact with water, it may decompose with reactions, causing spontaneous combustion and even an explosion.
2) Using batteries not officially supplied by WALKERA are strictly prohibited.For replacement, please go to the WALKERA official website for the relevant purchase information.walkera is not responsible for battery accidents and flight failures caused by the use of batteries not officially provided by WALKERA.
3) It is strictly prohibited to use bulging, leaky and packaged damaged batteries.If the above situation occurs, please contact WALKERA or its designated agent for further processing.
4) Keep the battery off before installing or pulling it out of the aircraft.Do not unplug the battery when the battery power is on, otherwise the power interface may be damaged.
5) The battery shall be used at ambient temperatures of between -10°C and 45°C. Too high the temperature (above 50°C)can cause the battery to catch fire, or even explode. Too low temperature (below -10°C) can severely damage your battery life.
6) No use of batteries in strong electrostatic or magnetic field environments.Otherwise, the battery protection panel will fail, causing a serious failure of the aircraft.
7) Do not dismantle or puncture the battery with sharp objects in any way.Otherwise, it will cause the battery to catch fire or even explode.
8) The liquid inside the battery is highly corrosive, please stay away.If internal fluid sputters the skin or eyes, rinse with water for at least 15 minutes and seek medical attention immediately.
9) The battery shall not be used again if falling from the vehicle or hit by external forces.
10) If the battery accidentally falls into water during flight or otherwise, pull the battery immediately and place it in a safe open area away from the battery until the battery is completely dry.The dried batteries should not be used again and should be discarded and properly disposed of.
11) Do not place the battery in a microwave oven or in a pressure cooker.
12) Do not place the battery cell on the conductor plane.
13) Do not use wires or other metal objects to cause the battery short circuit to positive or negative electrodes.
14) Do not impact the battery.Do not place heavy objects on the battery or on the charger.
15) If the battery interface is dirty, wipe it clean with a dry cloth.Otherwise, it will cause poor contact, thus causing energy loss or an inability to charge.

16.2 Battery Storage Safety Warning

1) Do not bring the battery close to an open fire or a heater.
2) Please keep the battery out of the child's reach.
3) Ensure that the battery is kept at room temperature: around 25 ° C.
4) For a long-term unused battery, save the voltage should be controlled between 14.8V ~15.8V.
5) When not in use for a long time, the battery should be checked every two weeks for any abnormality, and the battery should be activated by charging and discharging every two months to maintain the activity of the battery.

17.0 Specifications

Aircraft

Symmetric Motor Wheelbase	241.6mm
Body Size(L*W*H)	167.4mm*217.8mm*62mm(Unfold)；143mm*82.8mm*62mm(Fold)
Max. Take-off Weight	249g
Max. Ascent(climb) Speed	5m/s
Max. Descent(down) Speed	5m/s
Maximum Horizontal Flight Speed	15m/s
Max. Tilt Angle	40°
Max. Flight Altitude	4500m
Max. Withstand Wind Speed	15m/s
Battery Specification	7.7V，2250mAh, LiPo 2S，10C
Max. Flight Time	29 minutes(measured in a windless environment at sea level, 3m/s automatic cruise)
Working Ambient Temperature	-10°C to + 45°C
Hovering Accuracy Range	Horizontal ±0.5m , Vertical ±1.5 m(GPS working normally)

Downward-looking positioning system

Accurate ranging range	0.25m~5m
Visual hovering range	0.25m~5m
Effective usage environment	Rich texture on the surface, sufficient lighting conditions (>15lux, normal indoor fluorescent lighting environment)

Gimbal

Stability System	3-axis (pitch, yaw, roll)
Controllable Rotation Range	Pitch: -90° to +30°
Max. Control Speed	Pitch: 100°/s
Angle Control Accuracy	static: ± 0.01°; dynamic: ± 0.02°; stabilization: ± 0.01°

Camera

Image Sensor	1/2.3-inch CMOS; 48 million effective pixels
Lens	FOV83°; 4.49mm; f/2.6 aperture
ISO Range	100-1600
Electronic Shutter	1/30-1/10000
Photo Resolution	8192*4608/3840*2160
Video Resolution	FHD: 1920*1080 (60fps) / UHD: 3840*2160 (4K 30fps)
Zoom	4x digital zoom
Storage Maximum Code Rate	80Mbps
Supported File System Format	Fat32; exFat
Image Format	JPEG
Video Format	MP4
Support Memory Card Type	Micro SD card, maximum support of 128G, Fat32 file system format, transmission speed of Class10 or above or UH S-1 rating

Remote Controller

Dimensions (L x W x H)	152.5x47x82mm(Fold)
Working frequency	4.9GHz-5.9GHz
Signal range	About 4 km (open and unobstructed, no electromagnetic interference)
Battery	Built-in lithium battery 3.7V 3900mAh LiPo

18. Common fault diagnosis methods

Fault Description	Reasons	Solutions
Unable to take off normally	1. Disconnect the battery	Check the battery connectionsand reconnect
	2. Low voltage of battery	Check voltage, recharge
	3. Battery is damaged	Replace power battery
	4. Incorrect installation of propeller	Check the direction of propeller rotation and reinstall correctly
Unstable flight attitude	1. Propellers are damaged	Replace propeller
	2. Motor collision or damage	Replace motor
	3. Poor GPS(Satellite positioning) signal	Observe the surrounding environment to confirm if there is any interference source, choose an open and interference free place to fly
	4. GPS(Satellite positioning) module is damaged	Replace GPS(Satellite positioning) module
	5. Sensors Calibration errors	Rrecalibration of sensors (suchas gyroscopes, accelerometers, compasses, etc.)
	6. Sensors damaged (such as gyroscopes, accelerometers, compasses, etc.)	Replace sensors or replace main controller
Image not connected	1. Transmission signal continuity abnormality	Restart the remote control andaircraft power
	2. Camera gimbal wires loose, false connection	Carefully unplug the camera gimbal cable and plug it back in properly
The camera cannot capture clear images or videos	Camera or lens malfunction	Rrepair or replacement camera

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For Remote:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0cm between the radiator and your body.

For Aircraft:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

walkera

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Service hotline: +86 20-84915115

Wechat ID: WALKERA-CHINA

Douyin ID:walkera168

The schematic diagram in this manual is for reference only, and the actual product shall prevail.

This manual is subject to change without notice.

ISED Statement

- English: This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

- French:Cet appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux CNR exempts de licence d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes :

(1) Cet appareil ne doit pas causer d'interférences.

(2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé.

For Remote:

This equipment should be installed and operated with minimum distance 0cm between the radiator & your body.

Cet équipement doit être installé et utilisé avec une distance minimale de 0 cm entre leradiateur et votre corps.

For Aircraft:

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre leradiateur et votre corps.