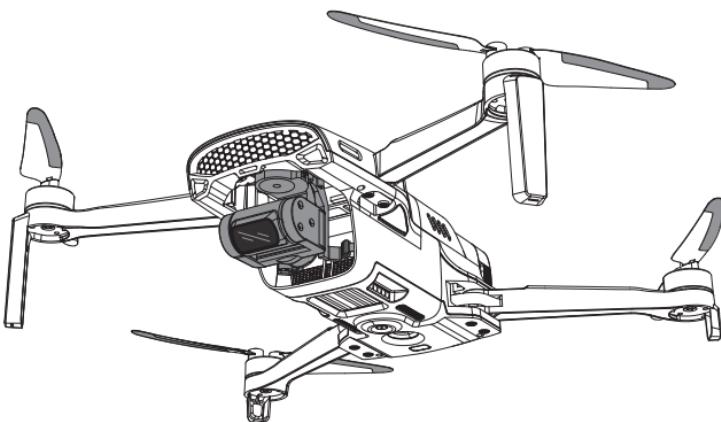


T210 MINI

(WKRC-H9)

Operation Guide v1.2 2023.2.10



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Understand the flight safety



Use of the product T210 Mini 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 Quick Start Guide carefully to avoid property damage or even personal injury due to improper operation.

- ★ This product uses 2.4GHz 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 signal, resulting in the positioning effect of the aircraft is worse or even impossible.
- ★ 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 use the throw to fly method to take-off the aircraft 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.

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Disclaimer & Warnings

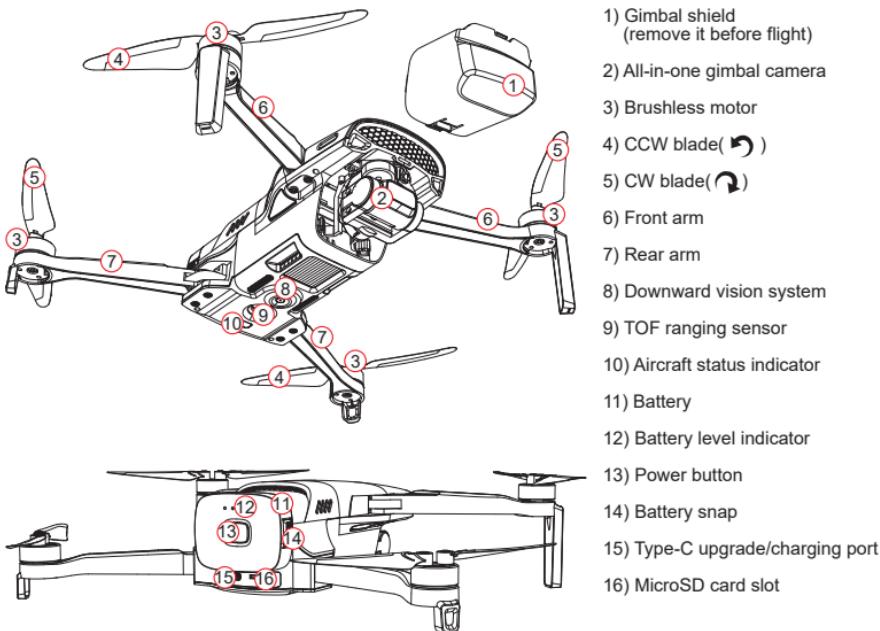
There are safety risks associated with the use of the aircraft, and is only suitable for people aged 14 and above who have experience in operating models, not for people under the age of 14. Keep children away from the aircraft, and special care must be taken when operating it in scenes where children 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. Walkera 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.

Know your aircraft

- The T210 MINI 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 downward vision system and TOF ranging system, it can achieve stable flight and hovering at ultra-low altitude or indoors.
- A self-developed leading flight control system is used, which provides agile, stable and safe flight performance, and can achieve various new intelligent flight modes such throwing flight, etc
- Using high-precision three-axis mechanical anti-shake and stabilized gimbal, the camera can steadily take 4K HD video and 48 megapixel photos.
- A new 2.4GHz long-distance digital encryption transmission technique provides stronger anti-interference ability and longer distance of video transmission.

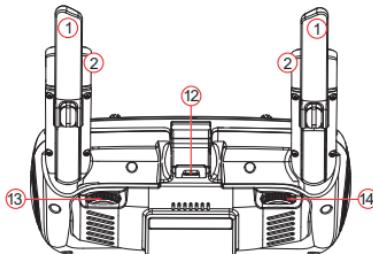
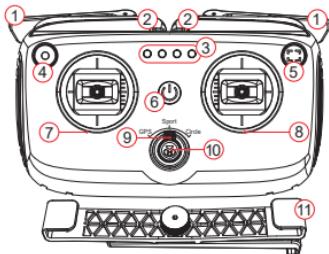


* 1) Before using T210 Mini, please watch the instructional video in WK Fly App to upgrade related firmware and calibration related items and read the "Operation Guide" carefully to avoid property damage or even personal injury caused by improper operation.

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.

Get to know your remote controller

This remote control has a built-in a ground receiving terminal of 2.4G 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 devices.



- | | | |
|------------------------|------------------------------|--|
| 1) Antenna | 6) Power Button | 11) Tablet Stand |
| 2) Mobile Phone Holder | 7) Left Stick | 12) Charging/Upgrade Port |
| 3) Power Indicator | 8) Right Stick | 13) Right dial (camera exposure compensation adjustment) |
| 4) Video Button | 9) Flight Mode toggle switch | 14) Left dial (control gimbal pitch) |
| 5) Photo Button | 10) Return To Home Button | |

The stick mode of the remote control is divided into American hand, Chinese hand and Japanese hand. The factory default stick mode is "American hand" (left-hand throttle), which can be switched in the APP settings. It is recommended that beginners use American hand as the control method.

American hand for left hand throttle:

The left stick (THRO/RUDD) controls the aircraft to ascend/descend and turn left/right; the right stick (ELEV/AILE) controls the aircraft to go forward/backward and fly left/right;

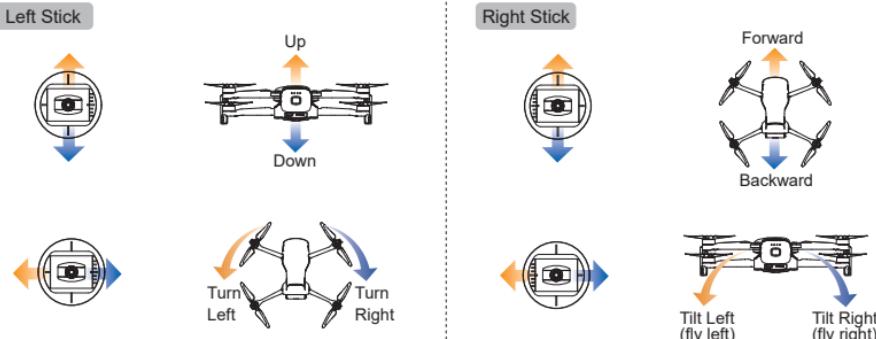
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Chinese hand for right hand throttle:

The left stick (ELEV/AILE) controls the aircraft to go forward/backward and fly left/right; the right stick (THRO/RUDD) controls the aircraft to ascend/descend and turn left/right;

Japanese hand for right hand throttle:

The left stick (ELEV/RUDD) controls the aircraft to go forward/backward and turn left/right; the right stick (THRO/AILE) controls the aircraft to ascend/descend and fly left/right;



Notice:

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

Parameters

Aircraft

Symmetric Motor Wheelbase:	241.6mm
Body Size:	167.4×217.8×57mm(Unfold); 143×82.8×57mm(Fold)
Mas Take-off Weight:	249g
Maximum Rise Speed:	8 m/s(adjustable)
Maximum Decline Speed:	5 m/s(adjustable)
Maximum Horizontal Flight Speed:	Loiter Mode: 5m/s, Sport Mode: 12m/s(adjustable), AltHold Mode: 25m/s (wind environment)
Maximum Tilt Angle:	Loiter Mode: 55°, Sport Mode: 55°, AltHold Mode: 55°
Maximum Rotation Angle Speed:	150°/s
Maximum Flight Altitude:	4500m
Maximum Withstand Wind Speed:	18m/s
Battery Specification:	7.7V, 2250mAh,LiPo 2S, 10C
Maximum Flight Time:	30 minutes(measured in a windless environment at sea level, 3m/s automatic cruise)
Working Ambient Temperature:	-10°C to + 45°C
Hoving Accuracy Range:	Vertical ±1.5 m, horizontal ±0.5m (GPS works)

Downward looking positioning system

Precise ranging range	0.25m~5m
Visual hover range	0.25m~10m

Camera

Image Sensor:	1/2.3-inch CMOS; 48 million effective pixels
Lens:	FOV83°; 4.49mm; f/2.6 aperture
ISO Range:	100-3200
Electronic Shutter:	1/2-1/4000
Photo Resolution:	8000*6000(48MP)/4000*3000(12MP)/3840*2160(8MP)
Video Resolution:	UHD:3840*2160 (4K 30fps) ;
Storage Maximum Code Rate:	100Mbps
Supported File System Format:	Fat32; exFat
EXFAT Image Format:	JPEG; RAW
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

Gimbal

Stability System:	3-axis (pitch, yaw, horizontal roll)
Controllable Rotation Range:	Pitch: -90° to 30°
Maximum Control Speed:	Pitch: 5°/s~100°/s adjustable;
Angle Control Accuracy:	static: ± 0.01°; dynamic: ± 0.02°; stabilization: ± 0.01°

Remote Sontroller

Dimensions (L x W x H):	173.37x100.85x70.6mm
Working frequency:	2.4G
Signal range:	About 5km (open without shelter, no electromagnetic interference)
Built-in battery:	7.4V 2200mAh Li-po 2S
Mobile device holder:	Applicable to tablet and phone

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Check Battery Level

Remote controller battery:

Short press the power switch to turn on the battery indicator light(displaying the battery level) to check the battery level.

Aircraft battery:

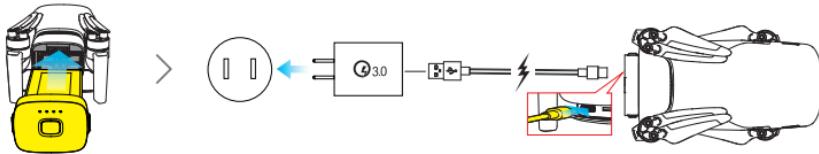
Short press the power switch to turn on the battery indicator light(displaying the battery level) to check the battery level.



Charge

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 QC3.0 protocol (such as mobile phones, cameras and other digital product USB chargers) for charging. If you encounter smoke, odor, or night leakage while charging the aircraft, do not continue charging, please transfer to our company for repair.



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

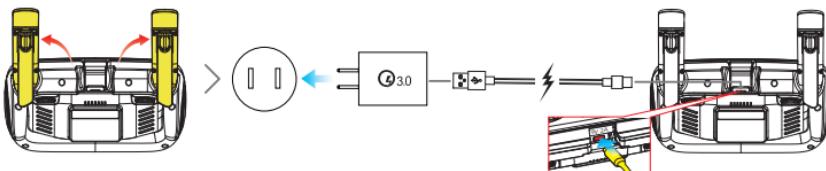
Note:

Charging is not supported in the boot state, and the aircraft cannot be turned on during charging.

After the flight, the aircraft battery temperature is high, and the aircraft battery must be charged after the aircraft battery drops to room temperature.

Remote control charging

Tip: This remote control uses a built-in integrated rechargeable lithium battery, which is compatible with the market standard Type-C interface. Please use a USB charger (such as a USB charger for digital products such as mobile phones and cameras) that meets QC3.0 protocol for charging. If there is smoke, peculiar smell or liquid leakage when charging the remote control, please do not continue to charge the remote control, please send it to our company for repair.



Battery indicator flashing green indicates that charging starts; the indicator is off when fully charged.

Caution:

Walker will not be responsible for any consequences of charging with a charger that is not officially designated by Walker.

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 mobile phones and tablets. For Android system or Hongmeng system mobile device, please open the browser and enter the URL (<https://fly.walkera.cn/a/>) or scan the QR code below to download and install the APP; for Apple iOS system, please go to the APP Store and search for WK Fly to download and install.



Android or HarmonyOS system
scan the code to download

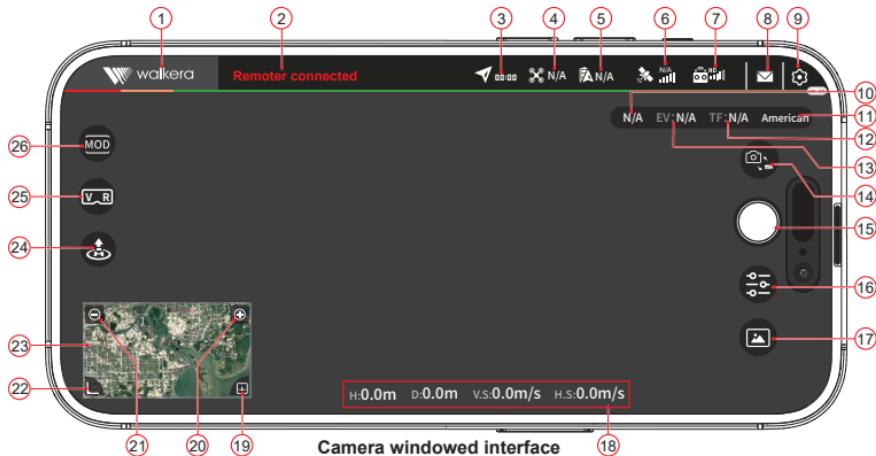
※ To ensure flight safety, the aircraft will be restricted to a height of 30 m and a distance of 50 m if the APP is not connected and logged in, and if the user in mainland China does not bind a cell phone to complete the registration information. Users using the aircraft in mainland China need to complete real name registration according to the relevant regulations of the Civil Aviation Administration of China (CAAC). Please register through the CAAC real name registration system for drones or directly in the WK Fly App.

For more information, please visit <https://uas.caac.gov.cn>

Introduction of the WK Fly APP interface

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In this interface, you can preview the real-time HD video and photos taken by the T210 Mini, as well as dynamically set the parameters such as the aircraft, voice controller, camera gimbal and battery.



- 1) Return:** Return to the previous level.
- 2) Device Status:** Display real-time status information of the device.
- 3) Time of flight:** the time of the aircraft flight.
- 4) Flight mode:** Click the icon to expand the list of flight modes. In the list, AltHold, Auto, Follow, Loiter, RTL, Land, Sport and other flight modes. Select the flight mode by selecting the intended flight mode in the list.
- 5) Aircraft battery information:** Click the icon to expand and view the current power and voltage information of the aircraft battery.
- 6) GPS status:** Click the icon to expand to view the number of GPS stars and GPS positioning mode received by the current aircraft.
- 7) HD signal intensity:** shows the intensity of the transmission signal between the aircraft and the Remote controller
- 8) Notification information:** Click the icon to view the list of notification information.
- 9) Settings:** Click the icon to expand the Settings menu: there are aircraft settings, battery information and settings, system settings.
- “” **aircraft setting:** RTL Height setting, Flight safety settings (Fly Speed, Steering sensitivity, Limit Height, Fence Enable, Limit Distance, Gimbal Roll, Follow Me Alt, Take Point, Lost Action) Sensor setting, New Model switch.
- “” **battery setting:** it has battery remaining power, current voltage, current temperature, series number, charge and discharge shield ring times; low power automatic return switch.
- “” **system setting:** equipped with map settings; Stick Mode, Trajectory switch, Live setting; firmware upgrade; Video Delayon setting and hardware Decodect.
- 10) Preview resolution:** The image preview quality of the camera window (i.e., image transmission quality).
- 11) Remote control joystick mode:** Displays the currently set remote control joystick mode.
- 12) Aircraft TF card capacity:** Display the current aircraft TF card capacity information in real time.
- 13) Exposure:** Displays the current exposure value of the aircraft camera.
- 14) Camera working mode switch:** with each click of the icon, the camera working mode will switch between the photo and the video.
- 15) Camera shutter icon:** In photo mode, click this icon to take a photo at a time; in video mode, click the shutter icon to start recording, click the shutter icon again to stop and save the video.
- 16) Camera Settings:** Click the icon to expand the camera Settings interface, which has professional Settings, photo settings, video settings and other settings.
-  **Profe ssional setting:** it can be set with ISO sensitivity, shutter speed, exposure compensation, white balance, etc.
-  **Photo Settings:** you can set the shooting mode, photo format, photo size (quality), etc.;
-  **Video setting:** you can set the preview resolution, preview code rate, video code rate, video resolution, video display mode. (With the same preview resolution, the greater the preview code rate, the better the picture quality and the transmission distance accordingly).
- ... **Other settings:** grid (grid setting); anti-flicker (on / off anti-flicker); defogging (on / off); formatting TF card (in-aircraft TF card), TF card capacity information; photo animation switch; photo sound switch, etc.
- 17) Media Library:** Click the icon to open the location of photos and videos taken by the aircraft, click on the pictures or videos to quickly share, download or manage media files.
- 18) Aircraft 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.
- 19) Posture thumbnail icon:** Click this icon to expand the attitude ball suspension window.
- 20) Map / camera picture small window:** Click the icon map window to swap with the camera picture window (the map switch to the full-screen large window, the camera screen switch to the small window).
- 21) Hide the small window:** Click on the icon to hide the map/camera picture small window.
- 22) Zoom in on the map:** Click on the icon to enlarge the map.
- 23) Scale down the map:** Click on the icon to narrow down the map.

24) Take-off/RTL mode icon: (when the aircraft is not taking off, the takeoff icon ④ is displayed; after the aircraft takes off, the RTL mode icon ⑤ is displayed): When the auto takeoff condition is reached, click the takeoff icon ④, and the aircraft will take off automatically and hover at a certain height; when the aircraft has taken off, click the RTL mode icon ⑤, and the aircraft will abort all flight missions and automatically return to home point landing.

25) VR mode icon: Click this icon, the camera window preview video will switch to display in SBS mode (side by side). With a pair of VR glasses, it allows users to enjoy an immersive first person view (FPV) flight experience, and relying on the gyroscope of mobile phone, achieve head tracking function to control the flight gimbal camera pitch and yaw angle.

In VR mode, the information displayed on the interface includes aircraft battery information, flight mode, real-time status parameters, etc.

Dragging up or down on the left side of the VR mode display interface can switch the video display mode; Dragging up or down on the right side of the VR mode display interface can adjust the video display window size.

26) Intelligent Flight Function Icon: Click the icon to expand the intelligent flight mode selection interface, which includes various intelligent flight modes such as TimeLapse(Time-Lapse), and Lock Assist(auxiliary) functions.

27) Position display switch: Click the icon to select the aircraft position or remote control(mobile device) position:

click the icon "▲" to display the aircraft position;
Click the icon "◎" to display the remote control (mobile device) location.

28) Map lock: Click the icon to lock / unlock the north (upper, north, south, south, west, right, east);
"↖" to lock the north state;
"↗" to unlock the map status;

29) Erase the flight track: Erase the flight track displayed on the map interface.

30) Map switching: Click the icon to expand the map type switching options.

31) Clear the route: clear Except for the points that have been up to the aircraft.

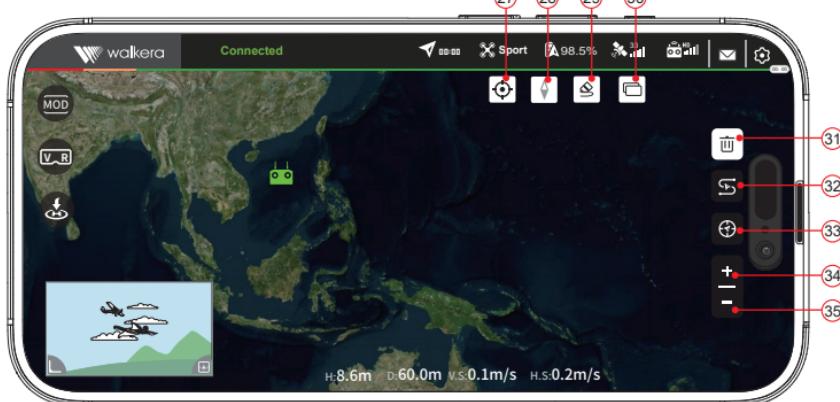
32) Show/hide traces: Click the icon to display/hide the flight track of the aircraft on the map window.

33) 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.

34) Amplify: Click on the icon to enlarge the map.

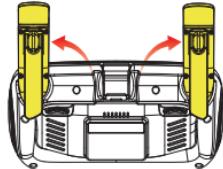
35) Shrink: Click the icon to shrink the map.

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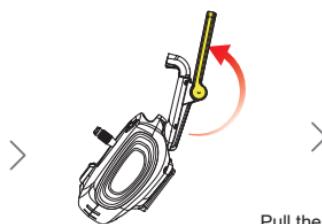


Map window interface

Preparing the remote control



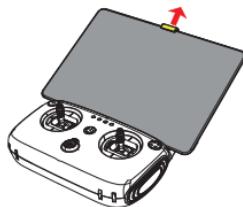
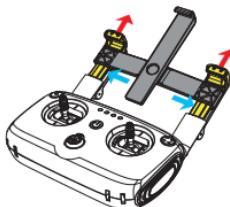
Expand the mobile phone holder



Expand the antenna

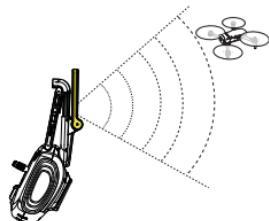


Pull the mobile phone holder upwards and hold it, and after placing the mobile phone, release the hand pulling the mobile phone holder to clamp the mobile phone.



Pull the mobile phone bracket upwards in turn and hold it, insert the mobile phone bracket into the tablet bracket after placing it in the tablet bracket, and finally release the hand that pulls the mobile phone bracket.

Pull the tablet stand up and hold, and after placing the tablet, release the hand that pulls the tablet stand to clamp the tablet.



Always keep the antenna upright

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Precautions:

- 1) Before using the aircraft, please check whether the antenna is placed as required (the antenna is vertically upward when the remote controller is held).
- 2) Adjust the azimuth and distance between the controller, the remote control and the aircraft in time, and ensure that the antenna of the remote control is always upright to obtain the best communication;
- 3) Do not use other communication devices of the same frequency band at the same time to avoid interference to the remote control signal.



Prepare the aircraft

The aircraft is shipped in a stowed state, please follow the steps below to unfold the aircraft.

- 1) Install the battery and MicroSD card.
- 2) Remove the gimbal protection latch
- 3) Unfold the front arms and front propellers.
- 4) Unfold the back arms and back propellers.

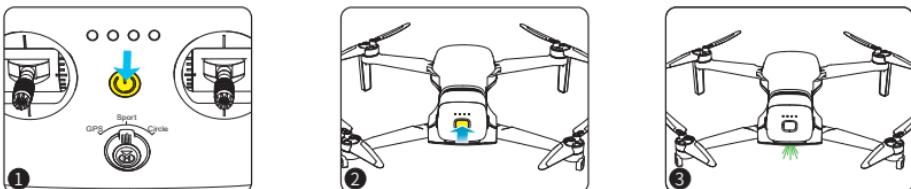


Ready to fly

Power on and connect

⚠ Note: Before the aircraft is powered on, make sure the Camera shield is removed to affect the aircraft self-test.

- 1) Long press the power switch to turn on the remote control.
- 2) Short press the battery power switch once, then long press the power switch for 3~5 seconds to turn on the aircraft.
- 3) Put the aircraft in the horizontal position, wait until the aircraft status indicator turns from yellow light flashing fast to green light flashing slow, and the buzzer turns to not beeping, which indicates the success of connection and pairing.



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Connect mobile devices

Open the WLAN setting item of the mobile device, wait for about 30 seconds, when WK-GRD-XXXXXX appears in the available WLAN list, click "WK-GRD-XXXXXX" and enter the password "12345678" to connect, exit the setting after successful connection interface.

Download offline maps

Find the "WK Fly" icon on the desktop of the mobile device system and click Run WK Fly APP → Click "Offline Map" → Drag and zoom the map on the screen with two fingers, place the map area to be downloaded in the yellow box, then click "Download" to download the offline map of the area, click "X" in the upper left corner of the APP to return to the main interface after the download is completed.

Activate and fly the aircraft and bind the device

The brand new T210 MINI must be activated and bound to the device by the WK Fly App, please turn on the power of the aircraft and the remote control respectively, run the WK Fly App after connecting the mobile phone, and operate according to the interface prompts. An internet connection is required during activation.

Click "**CONNECTION GUIDANCE**" → on the main interface Activate the aircraft and bind the device according to the interface prompts → Swipe left or right to find "T210 MINI" → Then click "**GO FLY**" to enter the flight interface.



Note: Before flying, please download an offline map of the planned flight area (download the offline map when your mobile device is connected to the Internet).

Description of GPS satellite positioning signals

Click the GPS status icon of the aircraft in the status bar at the top of the mobile device APP to display the GPS status window of the aircraft to view the GPS status.

Number of satellites received by aircraft



Motor Unlock

After the code is successfully matched, move the left & right sticks down and toggle them outward simultaneously and hold still until the motor rotates. Once unlocked, the motor will rotate. then , quickly release the stickers .



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Motor Lock

When the aircraft is landed, move the throttle stick down and hold for 2 seconds. The motors will then stop.



Flight Control

⚠ Notes:

1. Make sure the remote controller, aircraft battery and mobile device are fully charged;
2. Make sure the aircraft has received the satellite positioning signal and the GPS status icon in the APP is green (the number of stars is greater than 10);
3. Please check and confirm the stick mode of the remote control before taking off (check in the upper right corner of the APP);
4. Please switch the flight mode before taking off (check the current flight mode on the mobile device APP interface);
5. Please unlock the motors before taking off.

Manual take-off

Perform the following stick movements to start the motor, then slowly push the throttle stick upward to take off.



Manual landing

Slowly pull down the throttle 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.



Automatic take-off

First, perform the following stick movements to start the motor, then toggle the Flight Mode toggle switch of the remote control to the "GPS" position on the left, and finally click the take-off icon on the APP interface, and the aircraft will take off automatically (the default height is 3m).



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Takeoff in Throwing Mode

After GPS 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 throwing mode, the aircraft will make a "beep" sound and the WK-V8 controller voice broadcasts "You are ready to fly, please perform the throwing action within ten seconds". 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 throwing mode, the state will be automatically maintained for 10 seconds, and the buzzer will stop beeping after 10 seconds. Please throw the aircraft within 10 seconds after it enters the throwing mode. If the time is exceeded, please re-enter the throwing mode and throw again.



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

The ground

Throw out

Warning

- 1) Do not release the aircraft in a crowded place by taking off.

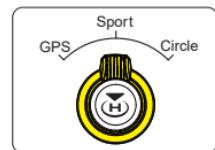
- 2) When the aircraft is released by throwing, it is strictly forbidden to grab the aircraft or the propeller from the top of the aircraft, otherwise the consequences will be at your own risk.
- 3) Only when the aircraft has received the GPS satellite positioning signal and the signal is good (the number of stars is greater than 10) and can be used to fly.
- 4) After the aircraft buzzer sounds, please throw the aircraft out within 10 seconds, otherwise it will automatically exit the throwing mode after timeout.
- 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 tossing, please switch the flight mode according to your needs.

Sport Mode

After the aircraft is powered on for the first time, unlocking and taking off will default to sports mode; When the aircraft is in the air, toggle the Flight Mode toggle switch of the remote control to the "Sport" position, the aircraft will be in sports mode.

Attentions:

- 1) The aircraft will default to sport mode for the first flight after each power-on.
- 2) In sports mode, it has the functions of altitude, fixed point and brake, and the flight speed is faster.
- 3) If the GPS signal is poor or there is no signal, only the height can be fixed, not the point.



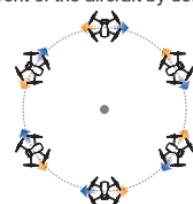
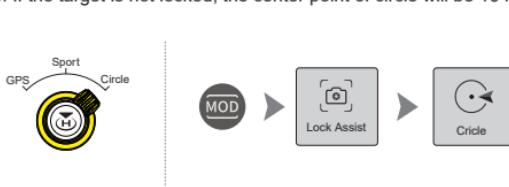
Circle Mode

When the aircraft is in the air and the flight mode is in GPS(Loiter) mode, Toggle the Flight Mode toggle switch of the remote control to the "Circle" position on the right end or click the icon in the APP interface → and then click the "Lock Assist" button → Finally, click the "Circle" button in the pop-up floating window, and the aircraft will enter the circle mode.

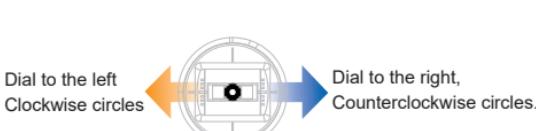
Note:

The center point of circle flight can be determined by clicking the lock button. You can turn on the waypoint marking function in the right column of the main interface of the App to check the location of the center point of circle on the map. If the target is not locked, the center point of circle will be 10 meters in front of the aircraft by default.

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- 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.

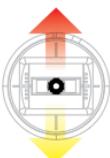


Speed: the larger volatility toggling and longer holding time, the faster circling. The slower on the contrary.

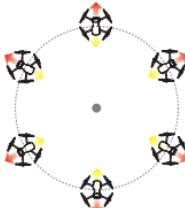


- 2) Move the tilt stick (ELEV) up or down to change the radius of the circle to control the aircraft to approach or move away from the target (5~50m, the default circle radius is 5m).

Pull up to increase the circle radius.



Pull down to reduce the circle radius.



★Note: Before operation, please check and confirm the current joystick mode of the remote control (check in the upper right corner of the APP).

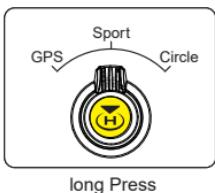
★Adjust the surround direction (roll rocker AILE): For American hands or Japanese hands, move the right stick to the left or right; for Chinese hands, move the left stick to the left or right.

★Adjust the surround radius (pitch rocker ELEV): For Chinese hands or Japanese hands, move the left stick up or down; for American hands, move the right stick up or down.

RTL Mode

During the flight, long press the return button “” on the remote control or click the return icon “” on the left side of the mobile device APP interface, the aircraft will enter the return mode and automatically fly to the take-off point and land; after the automatic return, it will automatically exit the return mode.

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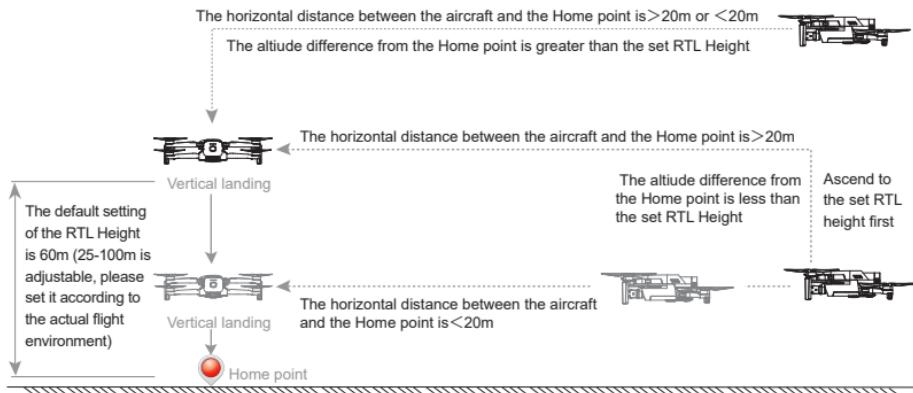


Horizontal distance between aircraft and Home point >20m

- When the aircraft flight altitude is higher than the set RTL Height, the aircraft will maintain the current altitude and fly back horizontally to the top of the Home point , then landing vertically.
- When the aircraft flight altitude is lower than the set RTL Height, he aircraft will climb vertically to the set RTL 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

- When the aircraft flight altitude is higher than the set RTL Height, the aircraft will maintain the current altitude and fly back horizontally to the top of the Home point , then landing vertically.
- When the aircraft flight altitude is lower than the set RTL Height, the aircraft will maintain its current altitude and fly back horizontally to the top of the Home point , then landing vertically.



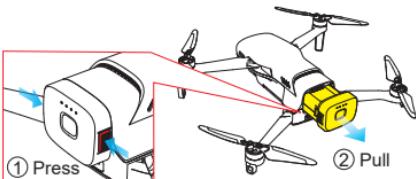
Attentions:

- 1) Do not operate other switches, buttons or click any other icon after long press the return button “” on the remote control or click the return icon “” on the left side of the mobile device APP interface
- 2) When the aircraft loses the signal of the remote control, it will automatically enter the Uncontrolled RTL mode.
- 3) If the GPS signal is abnormal or the GPS does not work, Return to Home is impossible. Please operate the aircraft to land manually.
- 4) During the RTL mode process, press and hold the return key “” again to cancel the RTL mode.
- 5) During the Uncontrolled RTL process, after the remote control signal returns to normal, the Uncontrolled RTL process will continue, but the RTL mode can be canceled by switching the flight mode switch to switch the flight mode.
- 6) If you find that the aircraft is landing too fast when the altitude is lower than 15 meters during the RTL mode landing process, you must manually push the throttle stick slightly to slow down the aircraft's descent speed and ensure the aircraft's safe landing.

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To End The Flight

- 1) Manual landing, low battery protection automatic landing or RTL mode landing, lock the motor after landing on the ground.
- 2) Turn off the power of the aircraft first, and then turn off the power of the remote control.
- 3) Take the flight battery out of the aircraft.



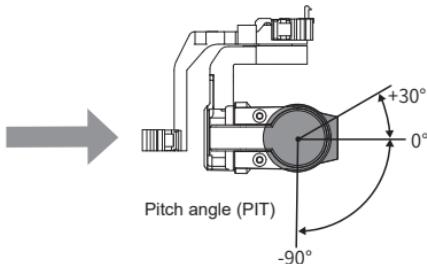
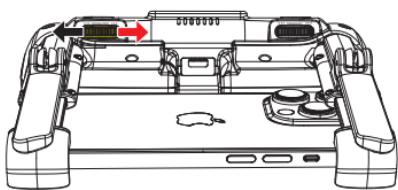
Remove the battery:

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.

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 tilt angle (PIT) of the gimbal through left dial of the remote control.

The left dial of the remote control is dialed right or left



Camera control

Shooting screen brightness adjustment

Method 1: Set in the APP

When the image is too dark or too bright, you can click the icon “” → click the icon “” to enter the camera's professional settings, and adjust the brightness of the image by adjusting the ISO sensitivity, shutter speed, and exposure value.

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Light up the icon “” into automatic mode: the camera will automatically adjust the ISO sensitivity and shutter speed according to different environments, and only the white balance can be adjusted manually in the automatic mode.

Light up the icon “” into "Manual gear: Manual mode can manually adjust ISO sensitivity, shutter speed, exposure value to adjust the brightness of the screen



In automatic mode, only the white balance can be adjusted.



Manual ISO sensitivity, shutter speed, exposure value, white balance can be adjusted.

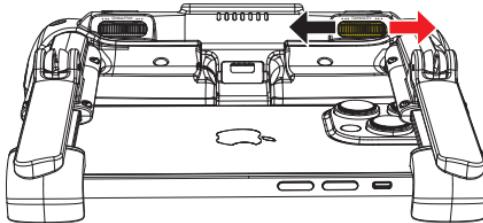
Attentions:

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

Method 2: Quickly adjust the camera exposure value through the right dial of the remote control

When the camera image is too bright, turn the right dial of the remote control to the left to quickly reduce the exposure value to darken the image;

When the camera image is dark, turn the right dial of the remote control to the right to quickly increase the exposure value to brighten the image.

**Take photos and video**

Taking pictures and videos can be done by taking pictures on the remote control, pressing the video button or operating in the camera window of the mobile device APP.

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1) Control in the mobile device APP interface

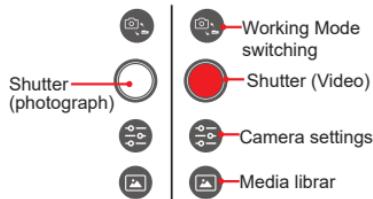
Tip: The camera window of the mobile device APP interface has received the picture transmitted by the aircraft camera, so that it can be controlled on the APP interface.

①Select the working mode:

Click the camera working mode change icon " " to switch the working mode to photo or video.

②Photo: Click the photo icon " " to take a photo.**③Recording:**

Click the recording icon " " to start recording. After recording, click the recording icon " " again to stop recording and save the recording to the aircraft TF card.

**2) Remote control physical buttons to control photo or video**

①Photo: Short press the photo button " " on the upper right of the remote controller once, the camera will take a photo and save it to the aircraft TF card.

②Recording: Short press the record button " " on the upper left of the remote controller once, the camera starts to record, short press the record button " " again, the camera stops and saves the record to the aircraft TF card.

Intelligent flight function description

Intelligent flight function provides different preset auxiliary shooting intelligent flight modes such as TimeLapse(Time-Lapse), and Lock Assist(auxiliary) functions. The aircraft can automatically follow the set auxiliary shooting flight mode to shoot 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 objects from around the aircraft and manually operate to avoid accidents (such as collisions) and blockage of the aircraft.
- 3) Please do not use the intelligent flight function in places with poor GNSS 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.

⌚ TimeLapse

⌚ Free(FreeTime-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 user can freely control the aircraft through the left/right joystick on the remote control and control the pitch angle of the gimbal through the left dial.

Steps to use:

- ① Set shooting parameters, including shooting interval and composite video duration. The screen will display the number of shots and the shooting time.
- ② Click the shooting button to start shooting.

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⌚ Lock Assist: The Lock Assist functions include Cruise Control Mode, Target Lock Mode, Circle Mode, Rise(Soaring to the Sky) Mode, Far Away(Fading) Mode, Drift(Tail Flick) Mode, etc.

⌚ Cruise

Automatically maintain three-dimensional movement and spin speed, click the Cruise button on the App interface while manually flying the aircraft, and the flight control will automatically maintain the current climb speed, horizontal flight speed, and spin angle speed, and maintain the movement of manual flying at a constant speed, bringing a new play of camera movement. Click the Cruise button again or push the throttle joystick to the highest, to cancel the Cruise flight.

⌚ Target lock (target waypoint marking assisted camera movement):

In the flight process, adjust the gimbal to be aligned with the ground target, click the Target Lock button on the App interface, to open the target waypoint marking function, and view the target's latitude, longitude and height coordinates and distance. The gimbal is automatically and continuously aligned to lock the target, then the gimbal pitch and aircraft heading turn to automatic control state. At this point, it cannot be manually adjusted, instead, you can operate the joysticks to adjust the height and horizontal position of the aircraft. The gimbal can automatically lock the target while the position changes. To mark the waypoints for targets above the ground such as buildings, it is required to fly the aircraft to the top of the target, control the gimbal pitch towards the bottom, adjust the height of the aircraft to be 20 meters above the top of the building, then press the Target Lock button, and the gimbal will lock the position 20 meters right below the aircraft. Click the Target Lock button again, to cancel the gimbal lock.

Circle:

After locking the target, click the Circle button on the App interface, and the aircraft will be aligned with the target and keep circling. When it reaches the time limit or the Circle button is clicked again, the Circle flight will be canceled.

▲ Rise(Soaring to the Sky):

After locking the target, click the Soaring to the Sky button on the App interface, and the aircraft will be aligned with the target and automatically fly right above the target, start to ascend while slowly rotating its heading. When it reaches the time limit or the Soaring to the Sky button is clicked again, the Soaring to the Sky flight will be canceled.

↗ Far Away(Fading):

After locking the target, click the Fading button on the App interface, and the aircraft will be aligned with the target and automatically fly up and away from the target. When it reaches the time limit or the Fading button is clicked again, the Fading flight will be canceled.

○Drift(Tail Flicker):

After locking the target, manually fly the aircraft backward away from the marked target, click the Tail Flicker button on the App interface, the drone will be aligned with the target and automatically perform the Tail Flicker shooting flight action. When it reaches the time limit or the Tail Flicker button is clicked again, the Tail Flicker flight will be canceled.

Additional instructions

Description of downward vision system and TOF ranging system

The T210 MINI downward vision system and TOF time-of-flight ranging sensing system are both located at the bottom of the aircraft. The downward vision system consists of a camera; the TOF ranging sensing system consists of a TOF detection light pulse sensor module, which can provide a reference for the height of the aircraft to ground and calculate the aircraft position information with the downward vision system.

Scope of application

The positioning function of the downward vision system is suitable for environments with no GPS signal or poor GPS signal but rich surface texture and sufficient light conditions, and the optimal working altitude range is 0.5~10 m. When flying beyond this range, the visual positioning performance may be degraded, so please fly with caution.

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Steps to use

- 1) Turn on the aircraft.
- 2) After takeoff, the aircraft status indicator double flashes green, and the visual positioning function will be turned on automatically.

Attentions

- 1) The maximum hovering height of the aircraft is 5 m when using the downward vision system in an open and flat field without GPS.
- 2) The downward vision system may not work properly on the water surface. It is recommended that the user maintains full control of the flight.
- 3) The vision system is not suitable for use in scenarios where the speed of the aircraft is too fast. For example, the flight speed shall not exceed 5 m/s at 1 m above the ground, and not exceed 10 m/s at 2 m above the ground.

- 4) The vision system cannot recognize surfaces without textural features, and cannot work properly in environments with insufficient or excessive light intensity.
- 5) Do not block or interfere with the vision system in any way, and avoid using it in an environment with too much dust and water mist, so as not to affect the clarity of the camera. Please do not block the TOF detection light pulse transceiver sensor in any way.
- 6) Avoid flying in rainy and foggy weather or in other scenarios with low visibility (visibility below 100 m).

The vision system does not work properly in the following scenarios:

- a) Solid color surfaces (e.g. solid black, solid white, solid red, solid green).
- b) Surfaces with strong reflections (e.g. ice surface).
- c) Surface of water or transparent objects.
- d) Surfaces of moving objects (e.g. above stream of people, above shrubs or grass blown by high winds).
- e) Scenarios with dramatic and rapid changes in lighting.
- f) Surfaces that are particularly dark (less than 10lux) or particularly bright (greater than 40,000lux).
- g) Material surfaces that have a strong absorption or reflection effect on square wave pulses (e.g. mirrors).
- h) Surfaces with particularly sparse texture.
- i) surfaces of objects with a high degree of texture repetition (e.g. small checkered tiles of the same color).
- j) Tiny obstructions (e.g. tree branches, wires, etc.)

Calibrating the Aircraft Compass

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⚠️ Notice:

- 1) The WK Fly App on the mobile device indicates that the magnetic compass of the aircraft is seriously interfered, or circles when hovering, or when the flying straight line deviates from the route, land in time to calibrate the compass. (The motor must be locked).
- 2)Please perform calibration in an open place outdoors and away from strong electromagnetic field interference.

Open the aircraft compass calibration

Method 1: When the mobile device, aircraft and remote control are all connected, open the compass calibration in the WK Fly APP settings of the mobile device (path: → → click the icon "▶" on the right side of the sensor → click the icon " Calib" on the right side of the compass → click the icon "[Start Calibration]" in the pop-up window);

Method 2: When the motor is locked and connected to the remote control, directly place the aircraft nose vertically upward for more than 6 seconds. The aircraft status indicator flashes quickly to indicate that it has entered the compass calibration state.

The compass calibration method is as follows:

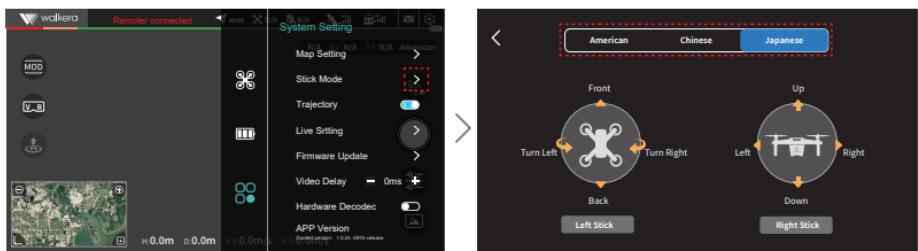
- 1) Hold the aircraft head vertically upward for more than 6 seconds for the aircraft status indicator to enter the flash, and then rotate the aircraft for 720° in the horizontal direction, and the aircraft indicator turns off.
- 2) Put the aircraft flat, then rotate 720° in the horizontal direction, the aircraft indicator light will be on, and then rest the aircraft in the horizontal position.



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

Remote control joystick modes switching

When the remote control and mobile device are connected, first click the icon "⚙️" in the upper right corner of the WK Fly APP interface to expand the setting pop-up window → then light the icon "⚙️" to expand the system setting menu → click "❯" on the right side of the "Stick Mode" to enter the stick mode switch Interface → On the stick mode switching interface, select the stick mode option "American Hand", "Chinese Hand" or "Japanese Hand" at the endpoint → click the "❮" icon in the upper left corner of the stick mode switching interface to exit the stick mode switching interface.



Pair the frequency

- The whole set of aircraft has been paired frequency before leaving the factory, under normal circumstances, there is no need to pair the frequency again, and it will be automatically connected after booting;
- If you have replaced a new aircraft or a new WKRC-H9/WK-V8 remote control after sales, you need to pair the frequency before connecting the new aircraft or new WKRC-H9/WK-V8 remote control, otherwise you will not be able to connect.

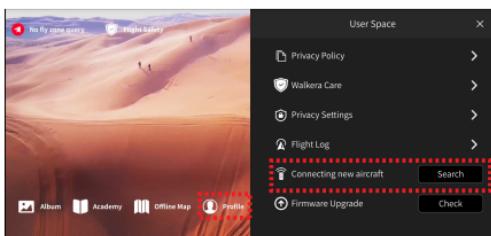
The operation is as follows

1) Turn on the remote control → the mobile device to connect the remote control wifi → Open the app;

2) Install the battery on the aircraft → Power on →

Press and hold the battery button for more than 3 seconds, and the aircraft buzzer will sound;

3) Click "Profile" on the main interface of the App → Click the "Search" button on the right side of "Connecting new aircraft" in the pop-up window, the aircraft and the remote controller will automatically pair the frequency until the buzzer prompt tone ends, indicating that the pairing frequency has been successful.



Battery usage instructions and storage safety



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

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 vehicle. 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.
- EN 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.

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.

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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

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Product name: Sport Aerial Aircraft T210 MINI

Manufacturer: Guangzhou Walkera Technology Co.,Ltd

Add: No.48 Wangtai Rd ,Taishi industrial Park,Dongyong Town,Nansha Dist Guangzhou,China.

Service hotline: +86 20-84915115

Subject to updates without notice.

You can check the latest version on the official website.

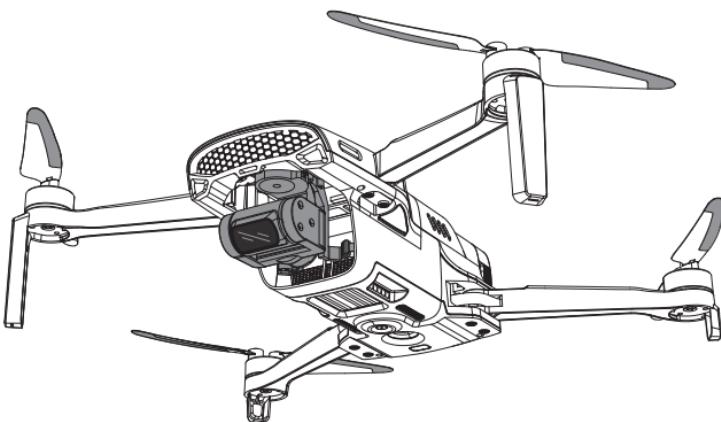


Wechat ID: WALKERA-CHINA

T210 MINI

(WK-V8)

Operation Guide v1.2 February.10. 2023



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Understand the flight safety



Use of the product T210 Mini 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 Quick Start Guide carefully to avoid property damage or even personal injury due to improper operation.

- ★ This product uses 2.4GHz 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 signal, resulting in the positioning effect of the aircraft is worse or even impossible.
- ★ 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 use the throw to fly method to take-off the aircraft 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

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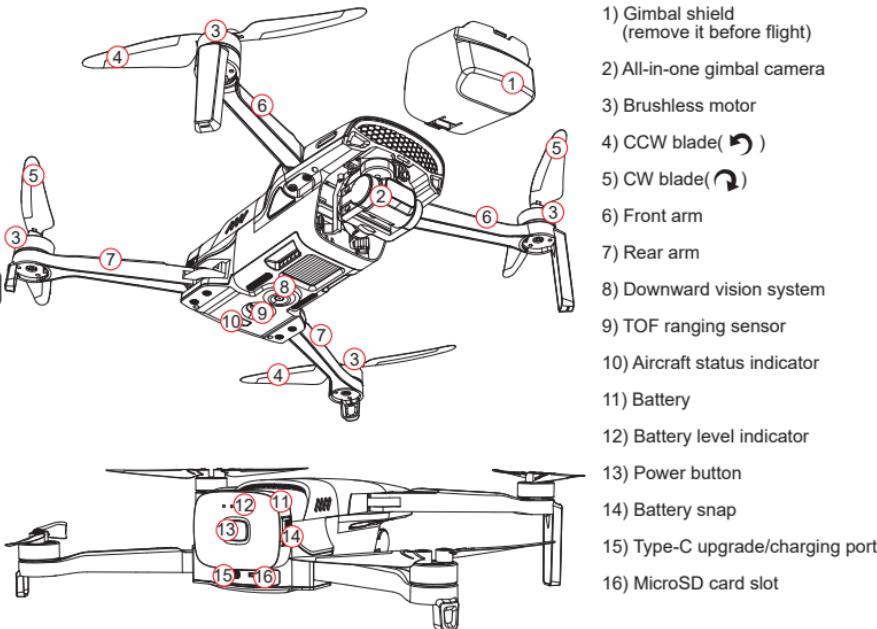
There are safety risks associated with the use of the aircraft, and is only suitable for people aged 14 and above who have experience in operating models, not for people under the age of 14. Keep children away from the aircraft, and special care must be taken when operating it in scenes where children 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. Walkera 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.

Know your aircraft

- The T210 MINI features a mainstream lightweight, foldable design that is unprecedently 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 downward vision system and TOF ranging system, it can achieve stable flight and hovering at ultra-low altitude or indoors.
- A self-developed leading flight control system is used, which provides agile, stable and safe flight performance, and can achieve various new intelligent flight modes such intelligent voice control, Somatosensory control, throwing flight, follow flight, etc.
- Using high-precision three-axis mechanical anti-shake and stabilized gimbal, the camera can steadily take 4K HD video and 48 megapixel photos.
- A new 2.4GHz long-distance digital encryption transmission technique provides stronger anti-interference ability and longer distance of video transmission.

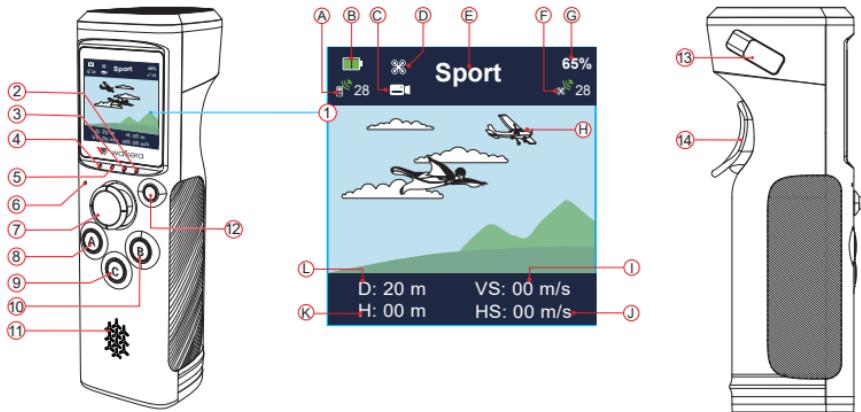


* 1) Before using T210 Mini, please watch the instructional video in WK Fly App to upgrade related firmware and calibration related items and read the "Operation Guide" carefully to avoid property damage or even personal injury caused by improper operation.

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.

Know your WK-V8 Controller

The WK-V8 controller uses 2.4GHz long-distance digital encryption transmission technology, which can display high-definition pictures and flying device related parameters in real time through the voice handle display or connected mobile device. The new ergonomic shape design is more comfortable and simple to control, and can achieve one-handed operation.



- 1)Interactive Information LCD display screen
 - A) Satellites received by the voice handle
 - B) Voice handle battery volume
 - C) Display the current working mode of the camera (" " is take pictures , " " is video record)
 - D) Display the current somatosensory control object (" " is aircraft , " " is gimbal)
 - E) Displays the current flight mode
 - F) Number of satellites that the aircraft receives
 - G) Aircraft battery volume
 - H) Displays the real-time return picture of the aircraft camera
 - I) V.S vertical of aircraft
 - J) H.S horizontal velocity of aircraft
 - K) Current altitude of the aircraft(current position and distance from the vertical direction of the departure point)
 - L) Distance between the current position of the aircraft and the horizontal direction of the departure point
- 2) Charging status indicator lamp
- 3) Idle
- 4) Power supply indicator lamp.
- 5) Status lamp (green light is normally available)
- 6) MIC

- 7) Five-dimensional joystick: Press the joystick directly at the center to enter the main menu of the voice handle; after the aircraft is unlocked, move the joystick upwards —manual take-off; when the aircraft is in flight, move the joystick up/down to control the aircraft to rise/descend. Move the joystick left/right to control the aircraft to turn left/right; After the aircraft has landed, hold the joystick at the bottom for more than 2 seconds, the aircraft will automatically lock
- 8) Button A: Double-click the button---unlock and start the aircraft motor; After the aircraft is unlocked, long press the button---auto take off; The aircraft has taken off and long press the button---automatic landing
- 9) Button C: Long press---Switch the camera working mode (" " take pictures or " " video record); When the camera is in photo mode, short press the key to take a photo; When the camera is in video recording mode, short press the key---start or end video recording;
- 10) Button B: After the aircraft is unlocked, short press the button---sport mode, double-click the B button ---follow mode; When the aircraft has entered the follow mode, short press the key---exit the follow mode; The aircraft has taken off and long press the key---RTL (Return to home point landing) mode
- 11) Trumpet

12) Power button

13) Upgrad/charging port

14) Somatosensory control switch: Double-click to switch the somatosensory control object (switch between "  " aircraft and "  " gimbal); press and hold to turn on the somatosensory control; release to turn off the somatosensory control;

1) Somatosensory Control/Button Control

Control up / down

After the aircraft is unlocked and taken off, dial the joystick upwards to control the aircraft to fly upwards, and dial the joystick downwards to control the aircraft to fly downwards.



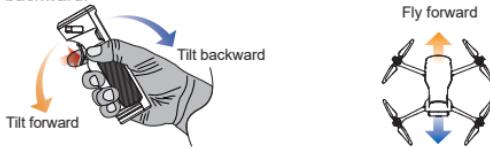
Control heading

After the aircraft is unlocked and taken off, dial the joystick to the left to turn the aircraft to the left, and dial the joystick to the right to turn the aircraft to the right.



Control fly forward/ fly backward

After the aircraft is unlocked and taken off, double-click the somatosensory control switch to switch the somatosensory control object to "  " aircraft, press and hold the somatosensory control switch and tilt the voice handle forward to control the aircraft to fly forward, press and hold the somatosensory control switch and tilt the voice handle back to control the aircraft to fly backward.



Control to fly left/fly right

Double-click the somatosensory control switch to switch the somatosensory control object to "  " aircraft, (after the aircraft is unlocked and take off) press and hold the somatosensory control switch while tilting the voice handle to the left to control the aircraft to tilt left (fly to the left), press and hold the somatosensory control switch and tilt the voice handle to the right to control the aircraft to tilt right (fly to the right).



* Notice:

- 1) After the WK-V8 controller is powered on for the first time, the somatosensory control object used for the first time is "  " aircraft by default. Please switch the somatosensory control object according to your needs;
- 2) Please fly in an open environment without shielding and electromagnetic interference.

2) Voice control

Turn on the power supply of the WK-V8, and turn on the power supply of the aircraft. After the aircraft is successfully connected with the WK-V8, call "Hello Drone" to wake up the voice control function of the the WK-V8, and then speak the voice command you want the aircraft to execute to the voice controller. (For detailed voice commands, please refer to the 19.0 Voice Command Set of WK-V8 Controller).

Parameters

- Aircraft

Symmetric Motor Wheelbase:	241.6mm
Body Size:	167.4×217.8×57mm(Unfold); 143×82.8×57mm(Fold)
Mas Take-off Weight:	249g
Maximum Rise Speed:	8 m/s(adjustable)
Maximum Decline Speed:	5 m/s(adjustable)
Maximum Horizontal Flight Speed:	Loiter Mode: 5m/s, Sport Mode: 12m/s(adjustable), AltHold Mode: 25m/s (wind environment)
Maximum Tilt Angle:	Loiter Mode: 55°, Sport Mode: 55°, AltHold Mode: 55°
Maximum Rotation Angle Speed:	150°/s
Maximum Flight Altitude:	4500m
Maximum Withstand Wind Speed:	18m/s
Battery Specification:	7.7V, 2250mAh,LiPo 2S, 10C
Maximum Flight Time:	30 minutes(measured in a windless environment at sea level, 3m/s automatic cruise)
Working Ambient Temperature:	-10°C to + 45°C
Hovering Accuracy Range:	Vertical ±1.5 m, horizontal ±0.5m (GPS works)

- Downward looking positioning system

Precise ranging range	0.25m~5m
Visual hover range	0.25m~10m

EN

- Camera

Image Sensor:	1/2.3-inch CMOS; 48 million effective pixels
Lens:	FOV83°; 4.49mm; f/2.6 aperture
ISO Range:	100-3200
Electronic Shutter:	1/2-1/4000
Photo Resolution:	8000*6000(48MP)/4000*3000(12MP)/3840*2160(8MP)
Video Resolution:	UHD:3840*2160 (4K 30fps) ;
Storage Maximum Code Rate:	100Mbps
Supported File System Format:	Fat32; exFat
EXFAT Image Format:	JPEG; RAW
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

- Gimbal

Stability System:	3-axis (pitch, yaw, horizontal roll)
Controllable Rotation Range:	Pitch: -90° to 30°
Maximum Control Speed:	Pitch: 5°/s~100°/s adjustable;
Angle Control Accuracy:	static: ± 0.01°; dynamic: ± 0.02°; stabilization: ± 0.01°

•WK-V8 Controller

Operating Frequency:	2.400~2.4835GHz
Maximum Communication Distance:	3~4 km (open without shielding, no electromagnetic interference)
Display Screen:	1.54-inch LCD screen; Resolution: 240 * 240
Battery:	3.7V 5000mAh 21700 LiPo
Maximum Follow Speed:	70 km/h
Operating Ambient Temperature:	-10°C to +45°C
Charging Ambient Temperature:	5°C to 40°C

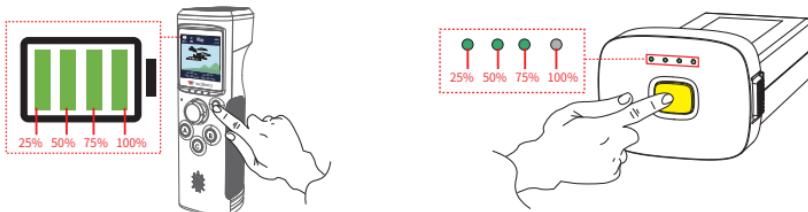
Check Battery Level

WK-V8 Controller battery:

Press and hold the power switch for 2~3 seconds to turn on the WK-V8 controller power (repeat this operation to turn off the WK-V8 controller), and check the battery level on the LCD display.

Aircraft battery:

Short press the power switch to turn on the battery to check the battery level, the battery indicator light is always on (displaying the battery level).

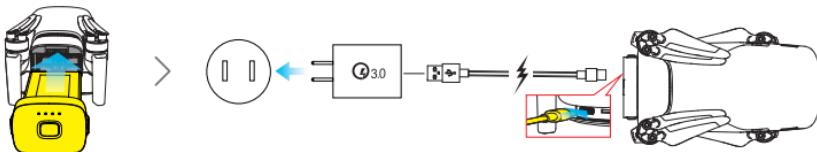


EN

Charge

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 QC3.0 protocol (such as mobile phones, cameras and other digital product USB chargers) for charging. If you encounter smoke, odor, or night leakage while charging the aircraft, do not continue charging, please transfer to our company for repair.



Battery indicator flashing green indicates that charging starts; the indicator is off when fully charged.

Note:

Charging is not supported in the boot state, and the aircraft cannot be turned on during charging.

After the flight, the aircraft battery temperature is high, and the aircraft battery must be charged after the aircraft battery drops to room temperature.

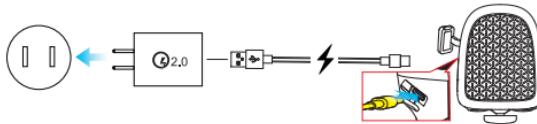
WK-V8 Controller battery charge

Tips:

The WK-V8 controller uses a 21700 rechargeable lithium battery, which can be installed in the voice handle to charge, or you can take out the battery and charge it with a 21700 lithium battery charger.

Charging method 1:

Without removing the battery voice handle Type-C interface for charging, it is recommended to use the original charger for charging or use a USB charger that meets the QC2.0 and above protocols directly connected to the Type-C upgrade charging port of the voice handle for charging.



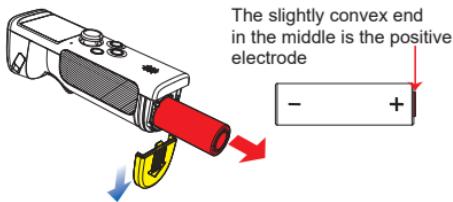
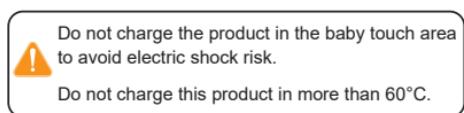
Note:

Please charge with the WK-V8 controller power off, and the WK-V8 controller charging indicator turns from red to green to indicate that it is full.

Charging method 2:

Charge with a 21700 lithium battery charger (the charger must be purchased separately).

- 1) Remove the 21700 lithium battery from the WK-V8 controller, as shown below.
- 2) Install the 21700 lithium battery charger for charging (pay attention to the positive and negative poles, do not install the reverse).



Download and install the WK Fly Application

WK Fly APP supports Android 5.1 and above, HarmonyOS 2.0 and above, and Apple iOS9.0 and above mobile phones and tablets. For Android system or Hongmeng system mobile device, please open the browser and enter the URL (<https://fly.walkera.cn/a/>) or scan the QR code below to download and install the APP; for Apple iOS system, please go to the APP Store and search for WK Fly to download and install.



Android or HarmonyOS system
scan the code to download

※To ensure flight safety, the aircraft will be restricted to a height of 30 m and a distance of 50 m if the APP is not connected and logged in, and if the user in mainland China does not bind a cell phone to complete the registration information. Users using the aircraft in mainland China need to complete real name registration according to the relevant regulations of the Civil Aviation Administration of China (CAAC). Please register through the CAAC real name registration system for drones or directly in the WK Fly App.
For more information, please visit <https://uas.caac.gov.cn>

Introduction of the WK Fly APP interface

In this interface, you can preview the real-time HD video and photos taken by the T210 MINI, as well as dynamically set the parameters such as the aircraft, voice controller, camera gimbal and battery.



1) Return: Return to the previous level.

2) Device Status: Display real-time status information of the device.

EN 3) Time of flight: the time of the aircraft flight.

4) Flight mode: Click the icon to expand the list of flight modes. In the list, AltHold, Auto, Follow, Loiter, RTL, Land, Sport and other flight modes. Select the flight mode by selecting the intended flight mode in the list.

5) Aircraft battery information: Click the icon to expand and view the current power and voltage information of the aircraft battery.

6) GPS status: Click the icon to expand to view the number of GPS stars and GPS positioning mode received by the current aircraft.

7) HD signal intensity: shows the intensity of the transmission signal between the aircraft and the WK-V8 controller.

8) Notification information: Click the icon to view the list of notification information.

9) Settings: Click the icon to expand the Settings menu: there are aircraft settings, battery information and settings, system settings.

***X*aircraft setting:** RTL Height setting, Flight safety settings (Fly Speed, Steering sensitivity, Limit Height,

Fence Enable, Limit Distance, Gimbal Roll, Follow Me Alt, Take Point, Lost Action) Sensor setting, New Model switch.

***Battery setting:** it has battery remaining power, current voltage, current temperature, series number, charge and discharge shield ring times; low power automatic return switch.

***System setting:** equipped with map settings; Stick Mode, Trajectory switch, Live setting; firmware upgrade; Video Delay setting and hardware Decoding.

10) Preview resolution: The image preview quality of the camera window (i.e., image transmission quality).

11) Aircraft TF card capacity: Display the current aircraft TF card capacity information in real time.

12) Exposure: Displays the current exposure value of the aircraft camera.

13) Camera working mode switch: with each click of the icon, the camera working mode will switch between the photo and the video.

14) Camera shutter icon: In photo mode, click this icon to take a photo at a time; in video mode, click the shutter icon to start recording, click the shutter icon again to stop and save the video.

- 15) Camera Settings:** Click the icon to expand the camera Settings interface, which has professional Settings, photo settings, video settings and other settings.
- Professional setting:** it can be set with ISO sensitivity, shutter speed, exposure compensation, white balance, etc.
- Photo Settings:** you can set the shooting mode, photo format, photo size (quality), etc.;
- Video setting:** you can set the preview resolution, preview code rate, video code rate, video resolution, video display mode.(With the same preview resolution, the greater the preview code rate, the better the picture quality and the transmission distance accordingly).
- ... Other settings: grid (grid setting); anti-flicker (on / off anti-flicker); defogging (on / off); formatting TF card (in-aircraft TF card), TF card capacity information; photo animation switch; photo sound switch, etc.
- 16) Media Library:** Click the icon to open the location where photos and videos taken by the aircraft are stored, click on a photo or video to quickly share, download or manage media files.
- 17) Aircraft 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.

18) Posture thumbnail icon: Click this icon to expand the attitude ball suspension window.

19) Map / camera picture small window: Click the icon map window to swap with the camera picture window (the map switch to the full-screen large window, the camera screen switch to the small window).

20) Hide the small window: Click on the icon to hide the map/camera picture small window.

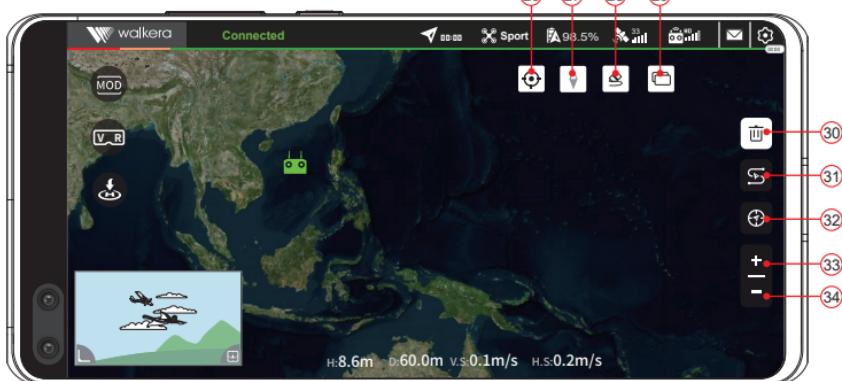
21) Zoom in on the map: Click on the icon to enlarge the map.

22) Scale down the map: Click on the icon to narrow down the map.

23) Take-off/RTL mode icon (when the aircraft is not taking off, the takeoff icon is displayed; after the aircraft takes off, the RTL mode icon is displayed): When the auto takeoff condition is reached, click the takeoff icon , and the aircraft will take off automatically and hover at a certain height; when the aircraft has taken off, click the RTL mode icon , and the aircraft will abort all flight missions and automatically return to home point landing.

24) VR mode icon: Click this icon, the camera window preview video will switch to display in SBS mode (side by side). With a pair of VR glasses, it allows users to enjoy an immersive first person view (FPV) flight experience, and relying on the gyroscope of mobile phone, achieve head tracking function to control the flight gimbal camera pitch and yaw angle.

In VR mode, the information displayed on the interface includes aircraft battery information, flight mode, real-time status parameters, etc.



Map window interface

Dragging up or down on the left side of the VR mode display interface can switch the video display mode; Dragging up or down on the right side of the VR mode display interface can adjust the video display window size.

25) Intelligent Flight Function Icon: Click the icon to expand the intelligent flight mode selection interface, which includes various intelligent flight modes such as Follow, TimeLapse(Time-Lapse), and Lock Assist (auxiliary) functions.

26) Position display switch: Click the icon to select the aircraft position or WK-V8 controller position:
Click the icon "A" to display the aircraft position;
Click the icon "(④)" to display the WK-V8 controller location.

27) Map lock: Click the icon to lock / unlock the north (upper, north, south, south, west, right, east);
"↖" to lock the north state;
"↗" to unlock the map status;

28) Erase the flight track: Erase the flight track displayed on the map interface.

29) Map switching: Click the icon to expand the map type switching options.

30) Clear the route: clear Except for the points that have been up to the aircraft.

31) Show/hide traces: Click the icon to display/hide the flight track of the aircraft on the map window.

32) 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.

33) Amplify: Click on the icon to enlarge the map.

34) Shrink: Click the icon to shrink the map.

Prepare the WK-V8 controller

When using the 21700 lithium battery charger to charge, please put the fully charged battery with the negative pole (the flat end) facing inward and the positive pole (the slightly convex side in the middle) facing outward, as shown in the figure on the right, into the WK-V8 controller battery compartment.



When operating the aircraft, make sure that the aircraft is within the optimal communication range. Adjust the bearing or distance between the operator and the aircraft in time to ensure that the aircraft is always within the best communication range.



When installing the battery, make sure that the positive and negative directions of the battery are in the same direction as the positive and negative directions of the WK-V8 controller battery compartment, and do not install it in reverse; do not use other communication devices of the same frequency band at the same time to avoid interference to the remote control signal.

Prepare the aircraft

The aircraft is shipped in a stowed state, please follow the steps below to unfold the aircraft.

- 1) Install the battery and MicroSD card.
- 2) Remove the gimbal protection latch
- 3) Unfold the front arms and front propellers.
- 4) Unfold the back arms and back propellers.



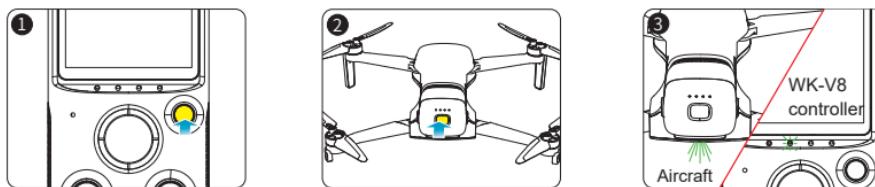


Ready to fly

Power on and connect

⚠ Note: Before the aircraft is powered on, make sure the Camera shield is removed to affect the aircraft self-test.

- 1) Long press the power button to open the WK-V8 controller, and rest in the horizontal position until the GPS signal is successfully received.
- 2) Short press the battery power switch once, then long press the power switch for 3~5 seconds to turn on the aircraft.
- 3) Put the aircraft in the horizontal position, wait until the aircraft status indicator turns from yellow light flashing fast to green light flashing slow, and the buzzer turns to not beeping, which indicates the success of connection and pairing.



Connect mobile devices

Open the WLAN setting item of the mobile device, wait for about 30 seconds, when WK-GRD-XXXXXX appears in the available WLAN list, click "WK-GRD-XXXXXX" and enter the password "12345678" to connect, exit the setting after successful connection interface. EN

Download offline maps

Find the "WK Fly" icon on the desktop of the mobile device system and click Run WK Fly APP → Click "Offline Map" → Drag and zoom the map on the screen with two fingers, place the map area to be downloaded in the yellow box, then click "Download" to download the offline map of the area, click "C" in the upper left corner of the APP to return to the main interface after the download is completed.

Activate and fly the aircraft and bind the device

The brand new T210 MINI must be activated and bound to the device by the WK Fly App, please turn on the power of the aircraft and the remote control respectively, run the WK Fly App after connecting the mobile phone, and operate according to the interface prompts. An internet connection is required during activation.

Click "CONNECTION GUIDANCE" → on the main interface Activate the aircraft and bind the device according to the interface prompts → Swipe left or right to find "T210 MINI" → Then click "GO FLY" to enter the flight interface.



Note: Before flying, please download an offline map of the planned flight area (download the offline map when your mobile device is connected to the Internet).



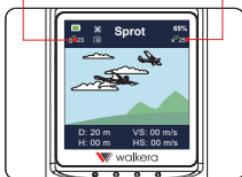
Satellite positioning signal indication and description

- The status bar at the top of the WK-V8 controller display shows that the voice handle and the GPS status icon of the aircraft are all green, and the number of received satellites is high, indicating that the current satellite positioning signal is strong.
- Click the GPS status icon of the aircraft in the status bar at the top of the mobile device APP to view the detailed GPS status of the aircraft.

Number of voice receiving satellites with Voice handle

Number of satellites received by aircraft

Number of satellites received by aircraft



Unlock the motor

After the code matching is successful, double-click button A on the WK-V8 controller to unlock(start) the aircraft motor.



Double-click button A

Lock the motor

After the aircraft touches the ground, move the voice handle joystick to the lower end and hold for 2 seconds to lock the aircraft motor.



Dial on the lower end and hold for 2 seconds

Flight Control

Notes:

- Make sure the WK-V8 controller, aircraft battery and mobile device are fully charged;
- Make sure that both the aircraft and the WK-V8 controller have received satellite positioning signals and the GPS status icons are all green (the number of stars is greater than or equal to 10);
- Please switch the flight mode before taking off (check the current flight mode on the WK-V8 controller display or mobile device APP interface);
- Before taking off, please make sure that the somatosensory control object of the WK-V8 controller has been switched to the "aircraft" (check the status bar of the WK-V8 controller screen);
- Please unlock the motors before taking off.

Manual take-off

Double-click button A on the WK-V8 controller to unlock and start the aircraft motor, and then push the joystick up slowly.



Manual landing

Slowly pull down the joystick, after the aircraft touches the ground, pull the joystick to the lowest position and hold for 2 seconds, the motor will stop and lock.



Automatic take-off

Click the take-off icon on the APP interface or double-click the button A on the WK-V8 controller to unlock and start the aircraft motor, and then press and hold the A button, the aircraft will automatically take off (the default height is 2~2.5m).



Automatic landing

During the flight, press and hold the A button of the WK-V8 controller, and the aircraft will automatically land.



Takeoff in Throwing Mode

After GPS 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 throwing mode, the aircraft will make a "beep"sound and the WK-V8 controller voice broadcasts "You are ready to fly, please perform the throwing action within ten seconds". 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 throwing mode, the state will be automatically maintained for 10 seconds, and the buzzer will stop beeping after 10 seconds. Please throw the aircraft within 10 seconds after it enters the throwing mode. If the time is exceeded, please re-enter the throwing mode and throw again.



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

The ground

Throw out

⚠ Warning

- 1) Do not release the aircraft in a crowded place by taking off.
- 2) When the aircraft is released by throwing, it is strictly forbidden to grab the aircraft or the propeller from the top of the aircraft, otherwise the consequences will be at your own risk.
- 3) Only when the aircraft has received the GPS satellite positioning signal and the signal is good (the number of stars is greater than 10) and can be used to fly.
- 4) After the aircraft buzzer sounds, please throw the aircraft out within 10 seconds, otherwise it will automatically exit the throwing mode after timeout.
- 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 tossing, please switch the flight mode according to your needs.

Voice control for take-off / landing

Voice call "Hello Drone" to wake up the WK-V8 controller voice control function.

Take-off: Double-click the button A on the WK-V8 controller to unlock and start the aircraft motor, and then with the voice command spoken to the WK-V8 controller, the aircraft will automatically take-off in several seconds (the default altitude is 3m).

Landing: aircraft in the process of flight, the WK-V8 controller (wake up voice operation function) say "landing" voice command, the aircraft will automatically land locally (During landing, you can operate the aircraft forward, backward, rightward and leftward).Please short press the B button on the WK-V8 controller to switch the flight mode if landing needs to be cancelled).

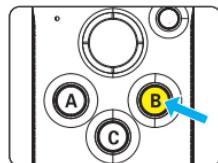
Note: Before voice control, wake up the voice control function, and please stay away from the aircraft.

Sport Mode

After the aircraft is powered on for the first time, unlocking and taking off will default to sports mode; when the aircraft is in other flight modes, short press (click) button B on the WK-V8 controller switch the flight mode to sports mode.

Attentions:

- 1) The aircraft will default to sport mode for the first flight after each power-on.
- 2) In sports mode, it has the functions of altitude, fixed point and brake, and the flight speed is faster.
- 3) If the GPS signal is poor or there is no signal, only the height can be fixed, not the point.



Follow Mode

After the aircraft is unlocked and takes off, double-click button B on the WK-V8 controller to switch the flight mode to follow mode, or use the voice command "Hello Drone" to wake up the voice control and then say the voice command "follow" or click the icon on the APP interface→ and then click the follow mode icon , and the aircraft will enter the following mode.



Double-click B button



Click the icon



Click the icon

Attentions:

- 1) In Follow Mode, the aircraft will always remain in the relative position above the person holding the voice handle on the ground. At this time, the height of the aircraft, the horizontal position relative to the handle, and the heading are all controllable.
- 2) Follow Mode is only possible when the aircraft and the WK-V8 controller have received GPS satellite positioning signals and the signals are good (the number of stars is greater than 10).
- 3) It is recommended that the maximum movement speed of the person holding the WK-V8 controller should not exceed 20m/s.

RTL Mode

The process by which the aircraft automatically returns to the last recorded home point is called returnback. Press and hold the B button on the WK-V8 controller to switch the flight mode to RTL Mode, or use the voice command "Hello Drone" to wake up the voice control and then say the voice command "return home", the aircraft will automatically return to the take-off point and land; Automatically exit the RTL mode at the end of the return home.



Long press the B button

Attentions:

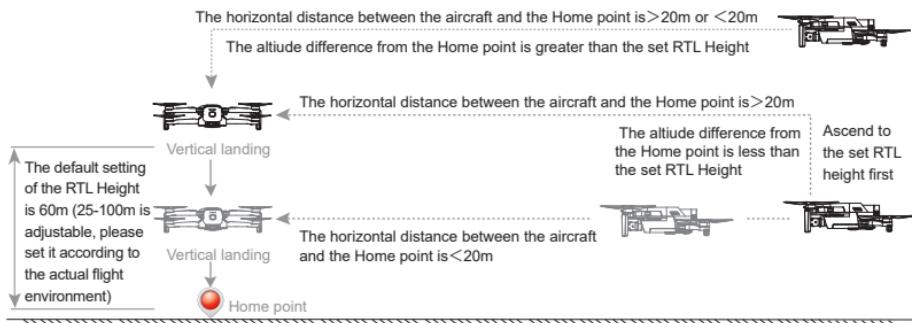
- 1) Do not operate other switches, buttons or click any other icon after long press the button B or say the voice command.
- 2) When the aircraft loses the signal of the WK-V8 controller, it will automatically enter the Uncontrolled RTL mode.
- EN 3) If the GPS signal is abnormal or the GPS does not work, Return to Home is impossible. Please operate the aircraft to land manually.
- 4) Press the button B during the RTL Mode to cancel the RTL Mode.
- 5) During the the Uncontrolled RTL mode, after the WK-V8 controller signal returns to normal, the return home process will continue, but the RTL mode can be canceled by press the B button.
- 6) If you find that the aircraft is landing too fast when the altitude is lower than 15 meters during the RTL mode landing process,you must manually push the stick slightly to slow down the aircraft's descent speed and ensure the aircraft's safe landing.

Horizontal distance between aircraft and Home point >20m

- a. When the aircraft flight altitude is higher than the set RTL Height, the aircraft will maintain the current altitude and fly back horizontally to the top of the Home point , then landing vertically.
- b. When the aircraft flight altitude is lower than the set RTL Height, he aircraft will climb vertically to the set RTL hight and fly back horizontally to the top of the Home point , and then landing vertically.

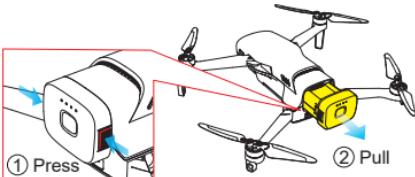
Horizontal distance between aircraft and Home point <20m

- a. When the aircraft flight altitude is higher than the set RTL Height, the aircraft will maintain the current altitude and fly back horizontally to the top of the Home point , then landing vertically.
- b. When the aircraft flight altitude is lower than the set RTL Height, the aircraft will maintain its current altitude and fly back horizontally to the top of the Home point , then landing vertically.



To End The Flight

- 1) Manual landing, low battery protection automatic landing or RTL mode landing, lock the motor after landing on the ground.
- 2) Turn off the power of the aircraft first, and then turn off the power of the WK-V8 controller.
- 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.

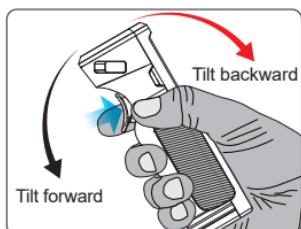
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Gimbal control

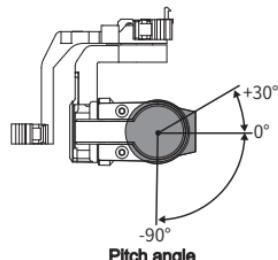
The three-axis stable gimbal provides a stable platform for the camera, so that the camera can also take a stable picture while the aircraft is flying at high speed. You can control the tilt angle (PIT) of the gimbal by the somatosensory control of the WK-V8 controller.

Attention:

Before using the WK-V8 controller for somatosensory control, double-click the somatosensory control switch (quick short press twice) to switch the control object to the gimbal (the current somatosensory control object icon displayed on the WK-V8 controller screen is " Gimbal").



Press and hold the somatosensory control switch while tilting the WK-V8 controller forward or backward.



Take photos and videos

You can press the C button or wake up the voice control function of the WK-V8 controller ,and speak the voice command to realize the remote control aircraft camera to take pictures or videos; You can also click the shutter icons in the APP interface of the mobile device to take pictures or videos.

Voice control

Take photos: first voice call "Hello Drone" to wake up the voice control function of the WK-V8 controller, and then say the voice command "take a photo" the aircraft will automatically take a picture.

Video: First voice call "Hello Drone" to wake up the voice control function of the WK-V8 controller, then speak the voice command "Start recording" and the aircraft will start recording; after the recording is completed, speak the voice command "Stop recording" and the aircraft will automatically stop recording And automatically save the video.

Button C control

Select the working mode: long press the C button to switch the working mode to photo or video.

Taking pictures: Long press the C button to switch the working mode to taking pictures (the WK-V8 controller screen displays the current camera working mode icon as " ", and the Photo icon" ", appears in the middle right of the camera window of the mobile device APP interface), then short press the C button, the aircraft will automatically Take a photo (the aircraft will take a photo every time you press the C button).

Video recording: long press the C key to switch the working mode to video recording (the voice controller screen displays the current camera working mode icon as " ", and the Video icon " " appears in the middle right of the camera window of the mobile device APP interface), then short press the C key The aircraft will automatically Start recording, after recording, short press the C button again, the aircraft will automatically stop recording and save the recording automatically.

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Control in the mobile device APP interface

Tip: The camera window of the mobile device APP interface has received the picture transmitted by the aircraft camera, so that it can be controlled on the APP interface.

①Select the working mode:

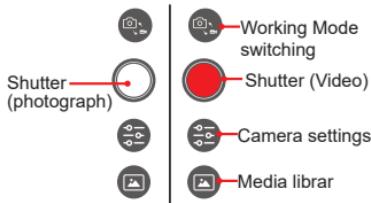
Click the camera working mode change icon " " to switch the working mode to photo or video.

②Photo:

Click the photo icon " " to take a photo.

③Recording:

Click the recording icon" " to start recording. After recording, click the recording icon" " again to stop recording and save the recording to the aircraft TF card.



Intelligent flight function description

Intelligent flight function provides different preset auxiliary shooting intelligent flight modes such as Follow, TimeLapse(Time-Lapse), and Lock Assist(auxiliary) functions. The aircraft can automatically follow the set auxiliary shooting flight mode to shoot 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 objects from around the aircraft and manually operate to avoid accidents (such as collisions) and blockage of the aircraft.
- 3) Please do not use the intelligent flight function in places with poor GNSS 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.

Follow(Intelligent Accompany Flight)

For the aircraft using the WK-V8 controller, after switching into the follow mode, the aircraft will enter an Intelligent Accompany Flight state. At this point, the aircraft will maintain the relative position to the target and continuously follow the target, and in the follow process, the joystick can be manipulated to adjust the Gimbal pitch, the height of the drone, heading, horizontal position to change the relative position of the drone to the target

Quick Follow

Make sure the number of WK-V8 controller satellites and the number of aircraft satellites have been greater than 10, after unlocking and takeoff, double click button B to switch to the Follow Mode, → click the "Quick Follow button" on the App interface to enter the Quick Follow function.

God View(God-mode shoot)

After entering the Follow Mode, manually adjust the aircraft position and gimbal pitch, the recommended height is 20 meters, and the distance to the WK-V8 controller is 40 meters. Select an open place without obstacles and click the "God-mode shoot(God View)" button on the App interface. The aircraft will fly in a straight line to the top of the WK-V8 controller during Intelligent Accompany Flight, with the WK-V8 controller as the center and the gimbal automatically aligned with the target. When it reaches the top, the aircraft automatically adjusts the angle of the gimbal to be vertically downward, while rotating slowly and climbing. After the execution is completed, the gimbal will automatically return to the center, and keep the Follow Mode flight. Press the B button on the WK-V8 controller, and the aircraft hovers in place, which can interrupt the "God-mode shoot(God View)" flight.

Straight Shoot

After entering the Follow Mode, manually adjust the aircraft position and gimbal pitch, the recommended height is 20 meters and distance to the WK-V8 controller is 40 meters. Select an open place without obstacles and click the "Straight Shoot" button on the App interface. The aircraft will fly away in a straight line to the right rear while in the Intelligent Accompany Flight mode, with the gimbal automatically aligned with the target. After the execution is completed, the gimbal will automatically return to the center, and keep the Follow Mode flight. Press the B button on the WK-V8 controller, and the aircraft hovers in place, which can interrupt the "Straight Shoot" flight.

Broad shoot(Across /Fly Over Top)

After entering the Follow Mode, manually adjust the aircraft position and gimbal pitch, the recommended height is 20 meters and distance to the WK-V8 controller is 40 meters. Select an open place without obstacles and click the "Broad shoot(Across /Fly Over Top)" button on the App interface. The aircraft will fly in a straight line to the top of the WK-V8 controller during Intelligent Accompany Flight, with the WK-V8 controller as the center, record the direction of flight at this time, automatically adjust the angle of gimbal to be downward when reaching the top, rotate the nose 180 degrees and continue to climb towards the recorded direction while flying after completing the tail flick. After the execution is completed, the gimbal will automatically return to the center, and keep the Follow Mode flight. Press the B button, and the aircraft hovers in place, which can interrupt the "Broad shoot(Across /Fly Over Top)" flight.

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Circle Follow

After entering the Follow Mode, manually adjust the aircraft position and gimbal pitch, the recommended height is 20 meters, and the distance to the WK-V8 controller is 40 meters. Select an open place without obstacles and click the Circle Follow button on the App interface. The aircraft will fly in a Circle Follow mode during Intelligent Accompany Flight, with the WK-V8 controller as the center and the gimbal automatically aligned with the target. Press the B button on the WK-V8 controller, and the aircraft hovers in place, which can interrupt the Circle Follow flight.

Four-Corner Follow(Quadrangle follow)

After entering the Follow Mode, manually adjust the aircraft position and gimbal pitch, the recommended height is 20 meters, and the distance to the WK-V8 controller is 40 meters. Select an open place without obstacles and click the "Four-Corner Follow(Quadrangle follow)" button on the App interface. The aircraft will hover and shoot at the front left, front right, rear right, and rear left of the WK-V8 controller while doing follow flying, with the WK-V8 controller as the center and the gimbal automatically aligned with the target. After the execution is completed, it will keep the Follow Mode. Press the B button on the WK-V8 controller, and the aircraft hovers in place, which can interrupt the Four-Corner Follow flight.

TimeLapse

Free(FreeTime-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, users can freely control the aircraft and gimbal angle with joystick and somatosensory control.

Steps to use:

- ① Set shooting parameters, including shooting interval and composite video duration. The screen will display the number of shots and the shooting time.
- ② Click the shooting button to start shooting.

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Lock Assist: The Lock Assist functions include Cruise Control Mode, Target Lock Mode, Circle Mode, Rise(Soaring to the Sky) Mode, Far Away(Fading) Mode, Drift(Tail Flick) Mode, etc.

Cruise

Automatically maintain three-dimensional movement and spin speed, click the Cruise button on the App interface while manually flying the aircraft, and the flight control will automatically maintain the current climb speed, horizontal flight speed, and spin angle speed, and maintain the movement of manual flying at a constant speed, bringing a new play of camera movement. Click the Cruise button again or push the throttle joystick to the highest, to cancel the Cruise flight.

Target lock (target waypoint marking assisted camera movement):

In the flight process, adjust the gimbal to be aligned with the ground target, click the Target Lock button on the App interface, to open the target waypoint marking function, and view the target's latitude, longitude and height coordinates and distance. The gimbal is automatically and continuously aligned to lock the target, then the gimbal pitch and aircraft heading turn to automatic control state. At this point, it cannot be manually adjusted, instead, you can operate the joysticks to adjust the height and horizontal position of the aircraft. The gimbal can automatically lock the target while the position changes. To mark the waypoints for targets above the ground such as buildings, it is required to fly the aircraft to the top of the target, control the gimbal pitch towards the bottom, adjust the height of the aircraft to be 20 meters above the top of the building, then press the Target Lock button, and the gimbal will lock the position 20 meters right below the aircraft. Click the Target Lock button again, to cancel the gimbal lock.

Circle:

After locking the target, click the Circle button on the App interface, and the aircraft will be aligned with the target and keep circling. When it reaches the time limit or the Circle button is clicked again, the Circle flight will be canceled.

▲ Rise(Soaring to the Sky):

After locking the target, click the Soaring to the Sky button on the App interface, and the aircraft will be aligned with the target and automatically fly right above the target, start to ascend while slowly rotating its heading. When it reaches the time limit or the Soaring to the Sky button is clicked again, the Soaring to the Sky flight will be canceled.

△ Far Away(Fading):

After locking the target, click the Fading button on the App interface, and the aircraft will be aligned with the target and automatically fly up and away from the target. When it reaches the time limit or the Fading button is clicked again, the Fading flight will be canceled.

○ Drift(Tail Flicker):

After locking the target, manually fly the aircraft backward away from the marked target, click the Tail Flicker button on the App interface, the drone will be aligned with the target and automatically perform the Tail Flicker shooting flight action. When it reaches the time limit or the Tail Flicker button is clicked again, the Tail Flicker flight will be canceled.

Additional instructions

Description of downward vision system and TOF ranging system

The T210 MINI downward vision system and TOF time-of-flight ranging sensing system are both located at the bottom of the aircraft. The downward vision system consists of a camera; the TOF ranging sensing system consists of a TOF detection light pulse sensor module, which can provide a reference for the height of the aircraft to ground and calculate the aircraft position information with the downward vision system.

Scope of application

The positioning function of the downward vision system is suitable for environments with no GPS signal or poor GPS signal but rich surface texture and sufficient light conditions, and the optimal working altitude range is 0.5~10 m. When flying beyond this range, the visual positioning performance may be degraded, so please fly with caution.



Steps to use

- 1) Turn on the aircraft.
- 2) After takeoff, the aircraft status indicator double flashes green, and the visual positioning function will be turned on automatically.

Attentions

- 1) The maximum hovering height of the aircraft is 5 m when using the downward vision system in an open and flat field without GPS.
- 2) The downward vision system may not work properly on the water surface. It is recommended that the user maintains full control of the flight.
- 3) The vision system is not suitable for use in scenarios where the speed of the aircraft is too fast. For example, the flight speed shall not exceed 5 m/s at 1 m above the ground, and not exceed 10 m/s at 2 m above the ground.
- 4) The vision system cannot recognize surfaces without textural features, and cannot work properly in environments with insufficient or excessive light intensity.

- 5) Do not block or interfere with the vision system in any way, and avoid using it in an environment with too much dust and water mist, so as not to affect the clarity of the camera. Please do not block the TOF detection light pulse transceiver sensor in any way.
- 6) Avoid flying in rainy and foggy weather or in other scenarios with low visibility (visibility below 100 m).

Calibrating the Aircraft Compass

Notice:

- 1) The WK Fly App on the mobile device indicates that the magnetic compass of the aircraft is seriously interfered, or circles when hovering, or when the flying straight line deviates from the route, land in time to calibrate the compass. (The motor must be locked).
- 2) Please perform calibration in an open place outdoors and away from strong electromagnetic field interference.

Open the aircraft compass calibration

Method 1: When the mobile device, aircraft and remote control are all connected, open the compass calibration in the WK Fly APP settings of the mobile device (path:  →  → click the icon " > " on the right side of the sensor → click the icon "  " on the right side of the compass → click the icon " (Start Calibration) " in the pop-up window);

Method 2: When the motor is locked and connected to the remote control, directly place the aircraft nose vertically upward for more than 6 seconds. The aircraft status indicator flashes quickly to indicate that it has entered the compass calibration state.

The compass calibration method is as follows:

- 1) Hold the aircraft head vertically upward for more than 6 seconds for the aircraft status indicator to enter the flash, and then rotate the aircraft for 720° in the horizontal direction, and the aircraft indicator turns off.
- 2) Put the aircraft flat, then rotate 720° in the horizontal direction, the aircraft indicator light will be on, and then rest the aircraft in the horizontal position.



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

Calibrate the WK-V8 controller joystick

-  • The calibration of voice handle lever has been set, please follow the following methods;
- Turn Off the aircraft power or lock the motor before operation.

The operation method is as follows

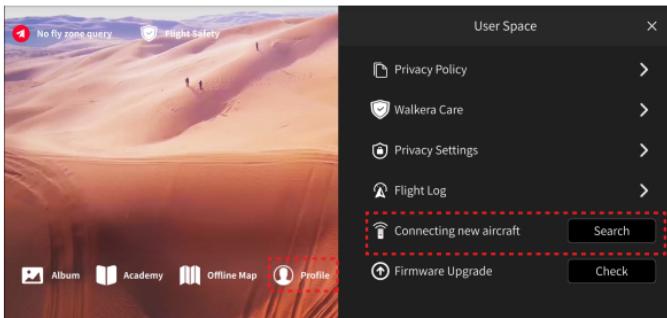
- 1) Press the five-dimensional joystick in the middle to open the voice handle setting menu → move the joystick down until the cursor selects "Calibrate" → press the joystick in the middle to enter the joystick calibration;
- 2) Rotate the joystick once in a circle with the maximum mechanical stroke, and then keep the joystick back to the center;
- 3) After waiting for the voice prompt "Joystick calibration successful", press the joystick in the middle to exit the joystick calibration → move the joystick up until the cursor selects "⬅" → then press the joystick in the middle to exit the voice controller setting menu and return to the standby main interface.

Pair the frequency

-  • The whole set of aircraft has been paired frequency before leaving the factory, under normal circumstances, there is no need to pair the frequency again, and it will be automatically connected after booting;
- If you have replaced a new aircraft or a new WKRC-H9/WK-V8 remote control after sales, you need to pair the frequency before connecting the new aircraft or new WKRC-H9/WK-V8 remote control, otherwise you will not be able to connect.

The operation is as follows

- 1) Turn on the remote control → the mobile device to connect the remote control wifi → Open the app;
- 2) Install the battery on the aircraft → Power on → Press and hold the battery button for more than 3 seconds, and the aircraft buzzer will sound;
- 3) Click "Profile" on the main interface of the App → Click the "Search" button on the right side of "Connecting new aircraft" in the pop-up window, the aircraft and the remote controller will automatically pair the frequency until the buzzer prompt tone ends, indicating that the pairing frequency has been successful.



Safety use instructions for the flight battery



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

Battery use

- 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. Walker 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 vehicle. 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.

Battery storage

- 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.

Voice Handle Voice Command Set

The Wake Up Word: Hello Drone

Voice Command Word	Voice Handle Reply Word	Aircraft Performing Actions
Start takeoff/ Takeoff the drone	About to take off, please stay away from the plane	Take off
Landing/ Landing the drone	Start landing	Perform landing
Return home	Start return	Perform a return flight
Follow flying/Follow me/ Go with me	Start to accompany/ Start to follow/ Follow mode	Switch to Follow mode
Hover/Hover mode	Start hover	Switch to sport mode, and hover in place
Take a photo/ Take a picture	Take a photo	Photograph
Start recording/ Start video recording	Start video recording	Start video recording
Stop recording	Stop recording	End the video recording and save the recording

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Voice Command Word	Voice Handle Reply Word	Aircraft Performing Actions
Lens down	Camera starts down	Camera tilts down
Lens up	Camera starts up	Camera tilts up
Target lock	Start target lock	Lock to follow target
Fly back/Return	Start flying back/ Start returning	Perform a return flight
1m up/2m up/3m up/... /10m up	1m up/2m up/3m up/... /10m up	Hover after rising 1m/2m/ 3m/.../10m
1m down/2m down/3m down/... /10m down	1m down/2m down/3m down/... /10m down	Hover after descending 1m /2m/3m/.../10m
1m forward/2m forward/3m forward/... /10m forward	1m forward/2m forward/3m forward/... /10m forward	Fly forward 1m/2m/3m/.../ 10m and then hover
1m back/2m back/3m back/... /10m backward	1m back/2m back/3m back/... /10m back	Fly backward 1m/2m/3m/.../ 10m and then hover
1m left/2m left/3m left/... /10m left	1m left/2m left/3m left/... /10m left	Fly 1m/2m/3m/.../10m to the left and then hover
1m right/2m right/3m right/... /10m right	1m right/2m right/3m right/... /10m right	Fly 1m/2m/3m/.../10m to the right and then hover

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

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Subject to updates without notice.

You can check the latest version on the official website.



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