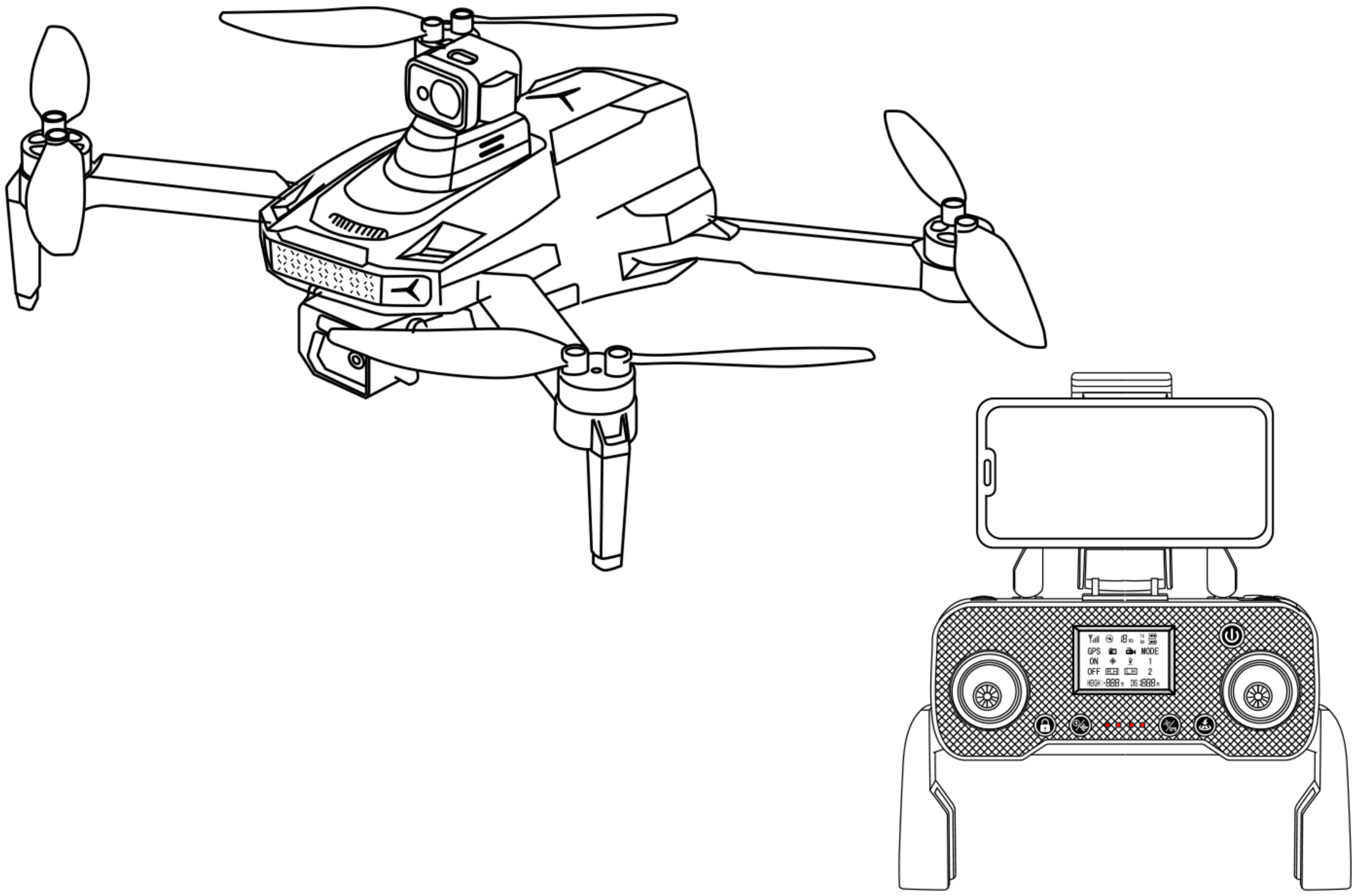
Suitable for ages 14 and older

GPS 4-Axis Aerial Photography Drone instruction manual



Security precautions:

1.In order to ensure the electromagnetic environment requirements of aviation radio stations, it is prohibited to use various model remote controllers in an area with a radius of 5000M and a center point of the airport runway. During the period when relevant national departments issue radio control orders and in regional areas, the use of model remote controls should be stopped as required. Choose warm, sunny and windless weather to fly, and do not fly in severe weather conditions such as overheating, supercooling, strong wind and rainstorm; Select an indoor or out-door open area, and maintain a safe distance from people, pets, empty power lines, and other obstacles. Confirm that no other use of the same frequency occurs; Do not let the aircraft out of sight;
2.After starting the aircraft, please do not touch the high-speed rotating part of the aircraft and keep a distance from the high-speed rotating propeller to avoid the risk of strangulation. (including gears, rotors, etc.).
3.During and after use of the aircraft, batteries and motors will generate high temperatures. Do not touch them to avoid the risk of scalding
4.Do not look directly at the light beam of the LED to avoid affecting your eyes.

Warm reminder: It is recommended for beginners to practice flying at low altitude in an open and unmanned place for about 3 days, and then fly high after becoming familiar with flying

Preflight preparation:

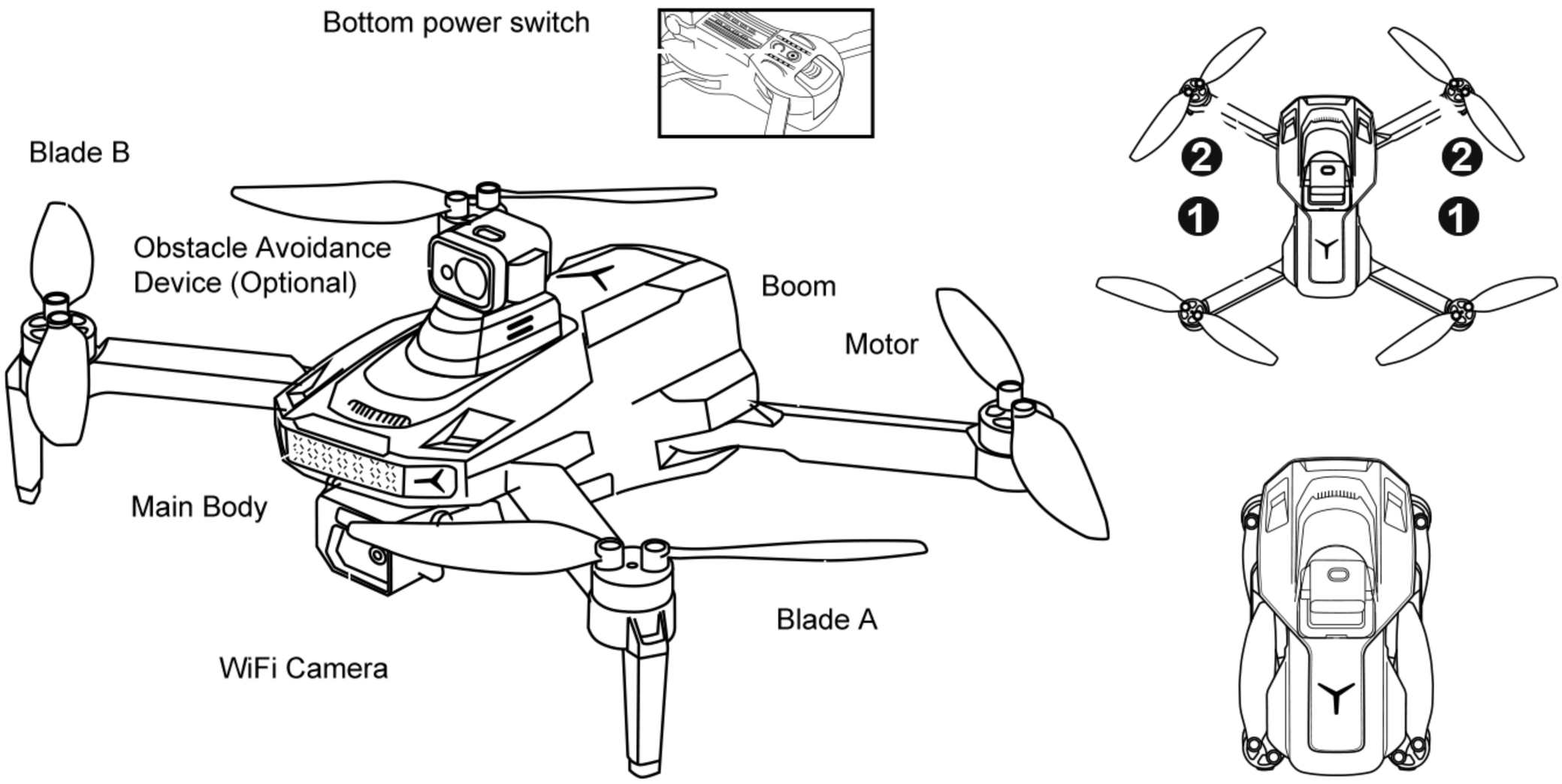
Flight environment

Indoor: Spacious space away from obstacles, crowds or pets are preferred.

Outdoor: Sunny, wind and sunny weather are preferred.

Please keep the drone within sight and away from obstacles, high-voltage cables, trees, and personnel during flight.

Do not fly in extreme environments, such as hot, cold, strong wind or rainstorm.



Replace the fan blade

1.The fan blades to be replaced must be replaced at corresponding positions on the machine. The fan blade A needs to be installed at the position A, and the fan blade B needs to be installed at the position B. If the fan blade is replaced incorrectly, it will not be able to be manipulated.
2.During flight, the wind blade A rotates clockwise and the wind blade B rotates counterclockwise.

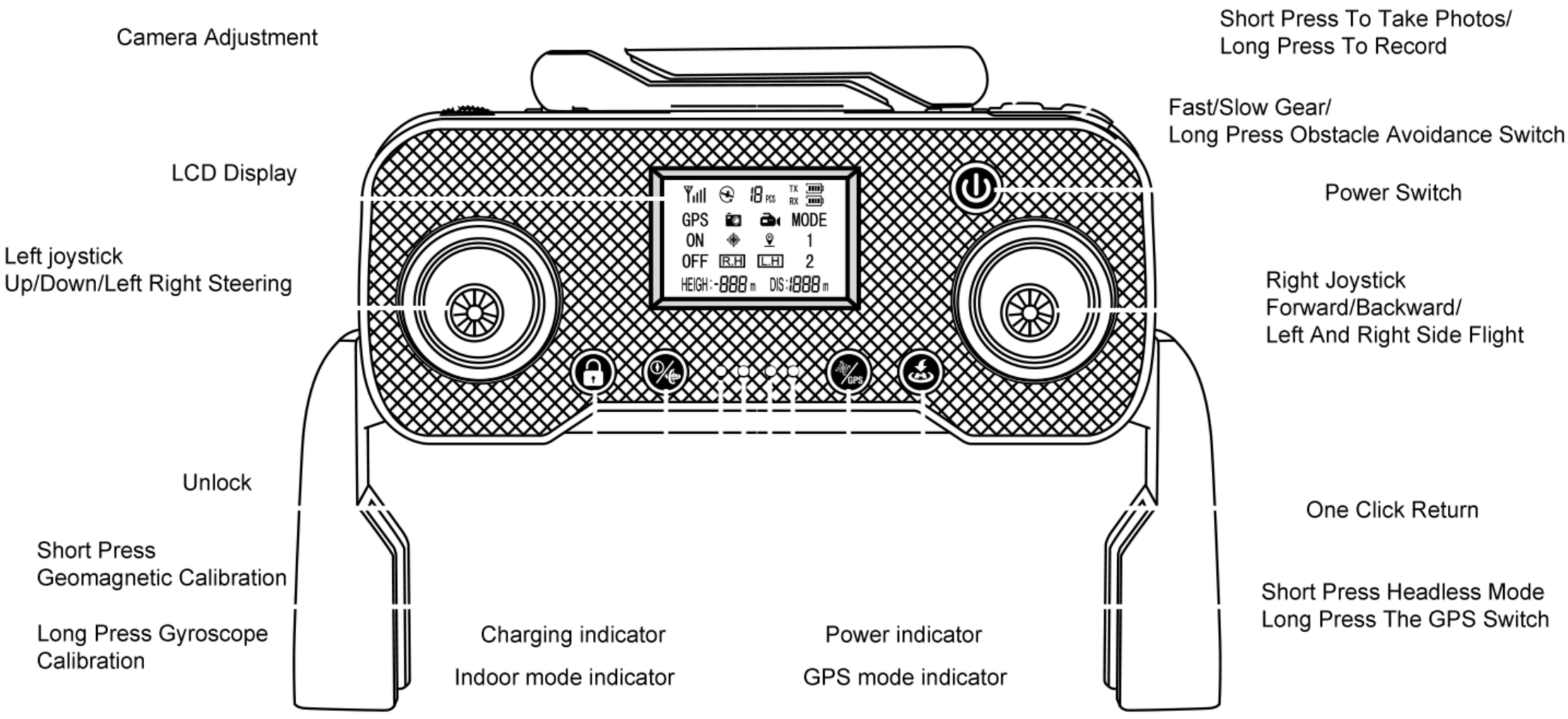
1.Important Notes

This product is not a toy. Damage caused by incorrect use.
Please follow the instructions before using this product. Do not disassemble this product yourself. Otherwise, the manufacturer is not responsible for any damage caused.

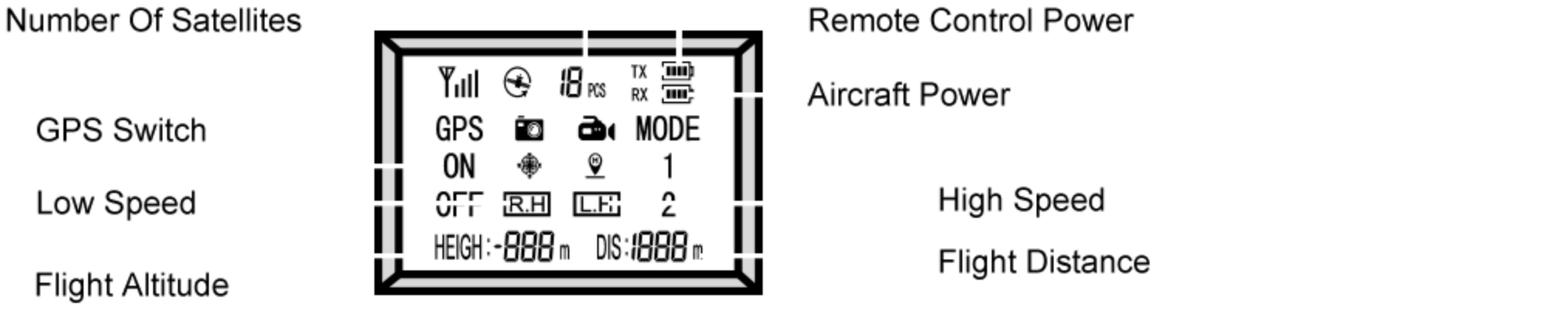
2.Safety instructions

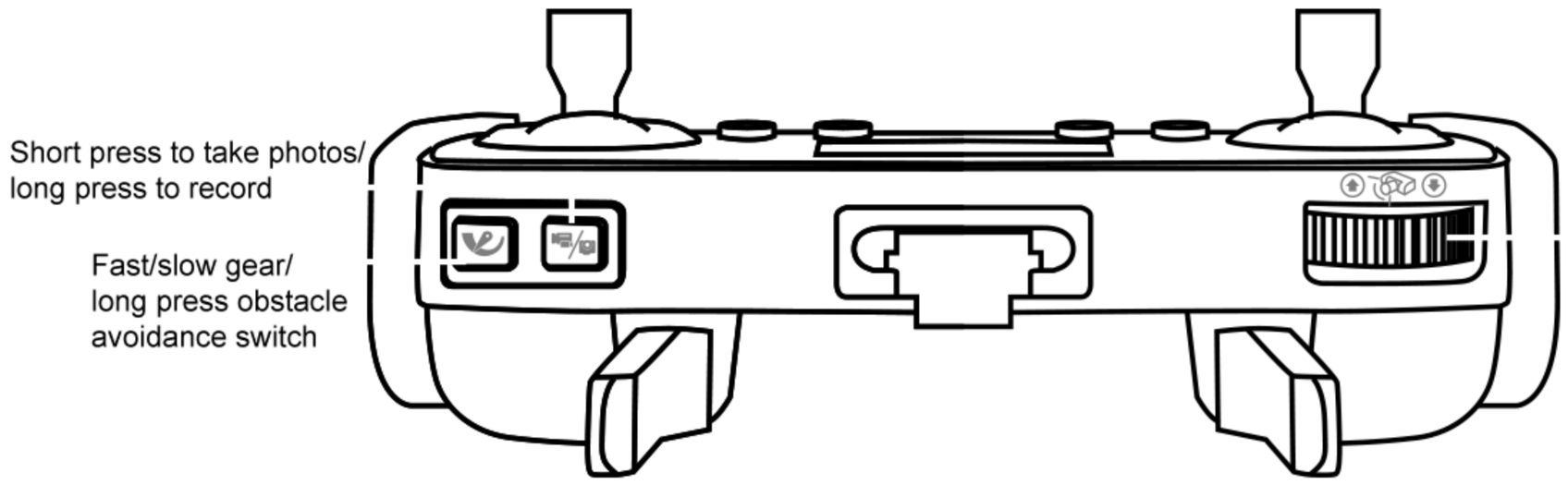
Warning: Fly in a safe area or away from others. Do not operate the aircraft over dense crowds. When piloting a remotely piloted aircraft, accidents and malfunctions can easily occur due to operational errors or wireless interference during pilot operation, which can easily cause damage or injury to the crowd.
Prohibited: During special indoor and outdoor flights, please stay away from obstacles. This product is suitable for indoor and outdoor flights (wind level does not exceed Level 4). Please choose one without obstacles, crowds, and pets. Places where passersby, such as heating sources, heat sources, electric wires, or electronic power supplies, will not be subject to collision, landing, entanglement, resulting in fire, electric shock, and loss of life and property.
Warning: Please ask a pilot with rich flight experience to help. The product is mainly suitable for children over 14 years old and has certain difficulties in starting learning. It is recommended to ask a pilot with rich flight experience for guidance.

Description of remote control function keys and names:



Note: When satellites cannot be found indoors or outdoors, if you want to start the aircraft, you need to turn off GPS. Press and hold the "GPS" button for 3 seconds, and the remote control will "drip". The display screen of the remote control will display "GPS OFF". At this time, press the unlock button again, and the aircraft wings will start rotating and ready to fly.





Instructions for use of remote control handle/mobile phone rack:

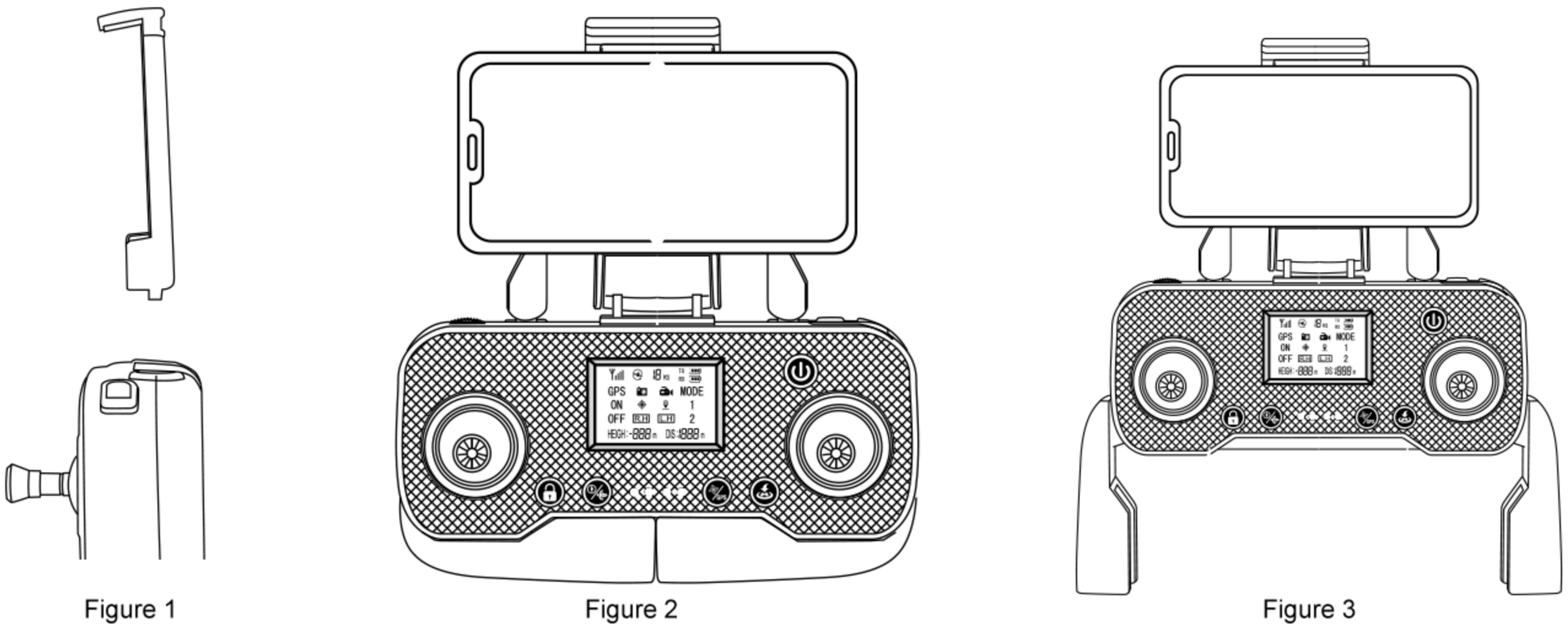
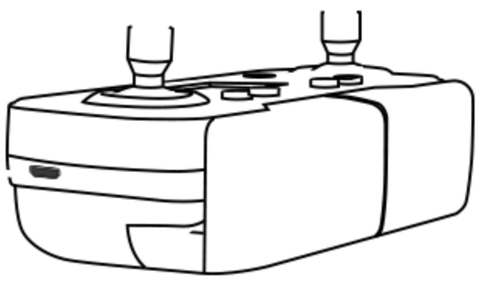


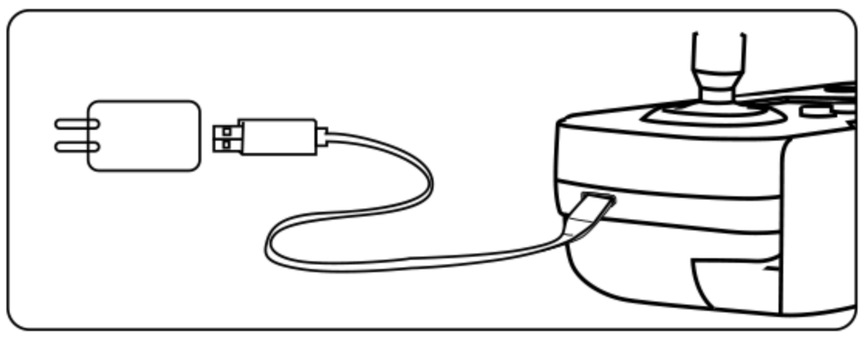
Figure 1 Figure 2 Figure 3

Mobile phone rack: Install the mobile phone rack into the remote control (Figure 1), and stretch upward to place the mobile phone (Figure 2).
Remote control handle: Pull down the bottom handle of the remote control from the middle position and rotate it to the correct position.

Remote Control Charging Instructions:

Charging Socket

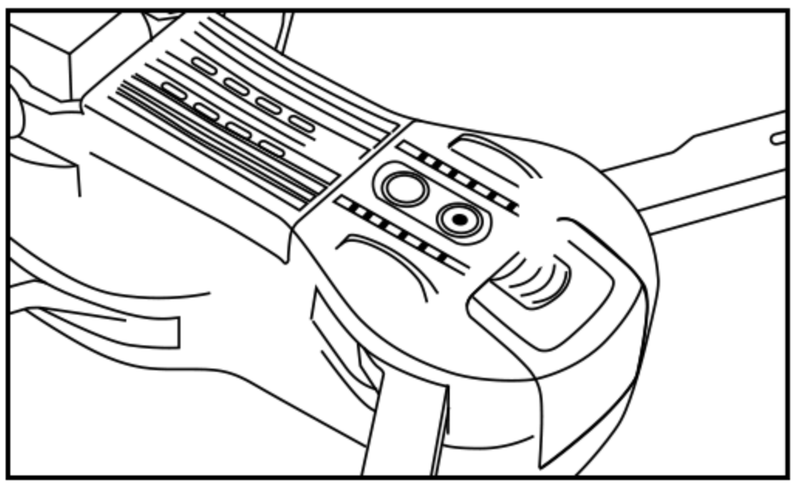


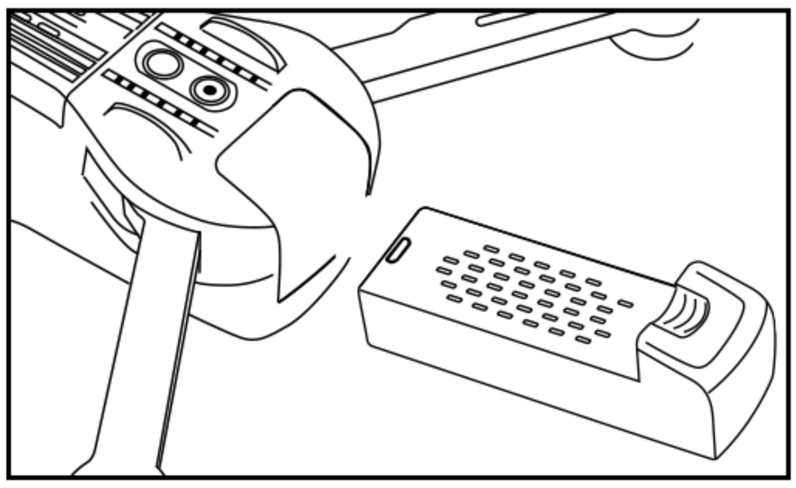


Insert the charging cable charging plug into the remote control charging jack, and then connect the USB charger plug to a computer or mobile phone charger to charge. The green charging indicator light lights up when charging, and turns off when fully charged. (Charging time is about 30 minutes)

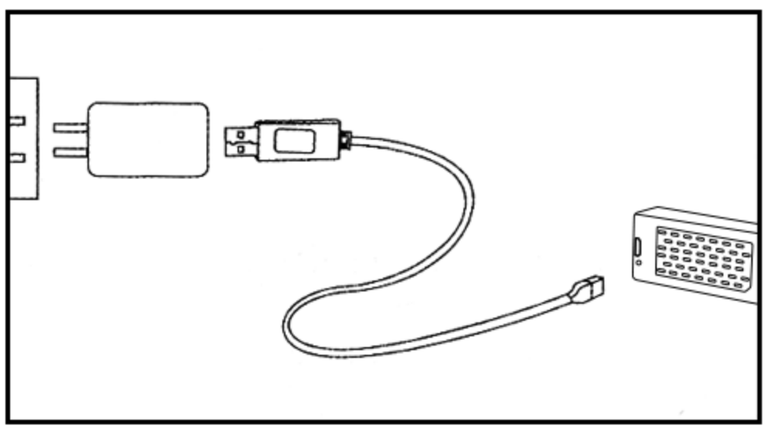
Note: If the charging indicator does not change during charging, it indicates that the battery is fully charged and does not need to be recharged.

Instructions for charging lithium batteries for drones:





Remove the drone battery: Press and hold the position shown by the arrow in Figure 1, and pull back to remove the battery.



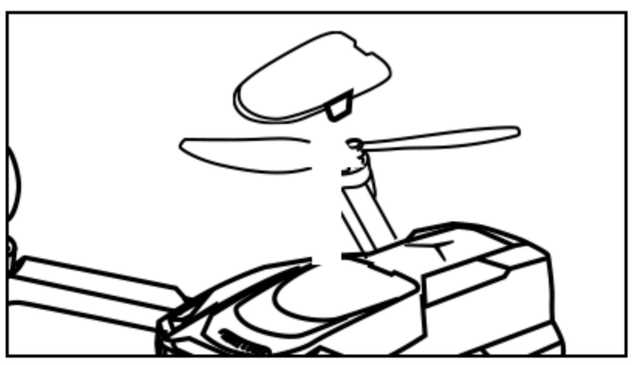
Battery charging steps:

Plug the USB Android head into the battery and connect the USB charger plug to a computer or mobile phone charger to charge. The red indicator light on the battery will remain on during charging, and the light will turn off when fully charged. (Charging time is about 200 minutes)

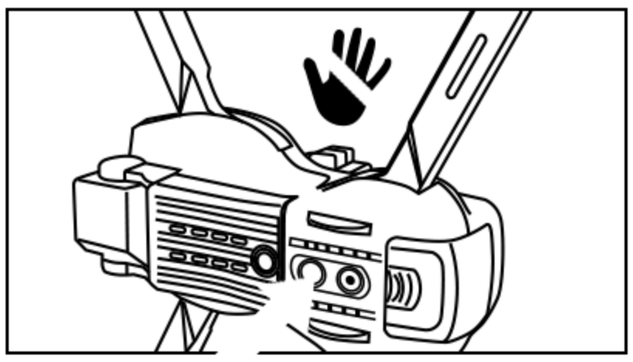
Note: If the battery is plugged into the charger, the red indicator light of the battery does not light up, and there is no need to recharge it.

Guide for Installation and Use of Obstacle Avoidance

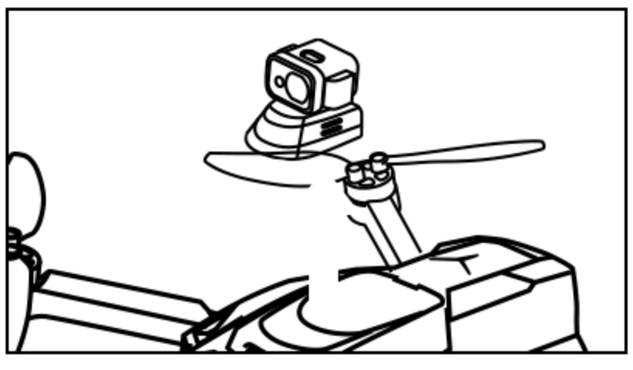
1. Remove the cover plate at the installation position of obstacle avoidance equipment



A. The obstacle avoidance equipment must be installed before turning on the drone power supply, otherwise it may damage the obstacle avoidance equipment and affect its normal use.



B. When opening this product, do not touch the obstacle avoidance device, as the obstacle avoidance device is in a power-on state. Unauthorized touching may cause the obstacle avoidance device to fail to work properly, and it is highly likely to damage the function of the obstacle avoidance device.

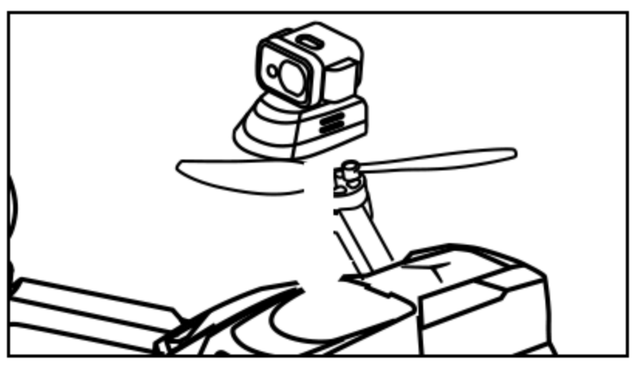


C. When removing obstacle avoidance equipment, the drone must be powered off before removing it, otherwise it may damage the obstacle avoidance equipment and affect its normal use.

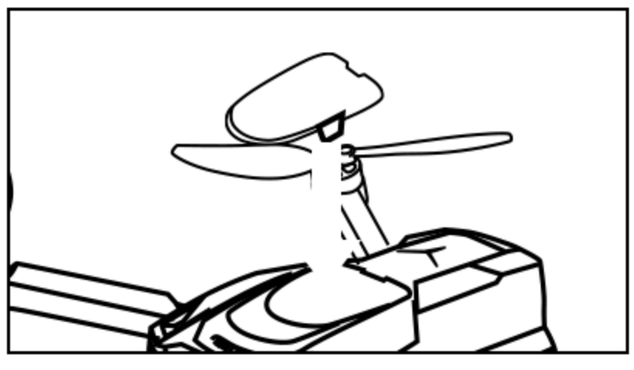
1.Remove the obstacle avoidance equipment as shown in the figure

Precautions for installation and use of obstacle avoidance equipment:

1.Insert the obstacle avoidance device as shown in the figure



Operation of obstacle avoidance equipment: When rotating, do not prevent it from rotating, otherwise it may cause equipment damage.



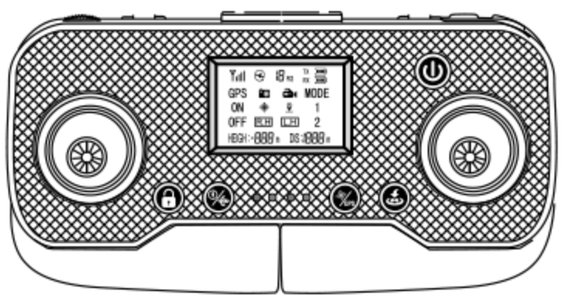
2.Insert the obstacle avoidance device as shown in the figure

Detailed introduction to obstacle avoidance function and working principle:

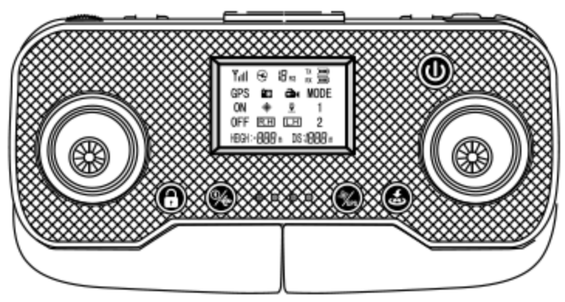
A. Operating conditions of obstacle avoidance:

The default low gear mode for startup is 360 ° obstacle avoidance. If you switch to high speed mode, the system may not receive a stop flight command due to the aircraft's fast flight speed. The drone may have hit an obstacle and the obstacle avoidance function will automatically fail.

Short press speed switch



Low gear mode has obstacle avoidance function



High speed mode has obstacle avoidance function

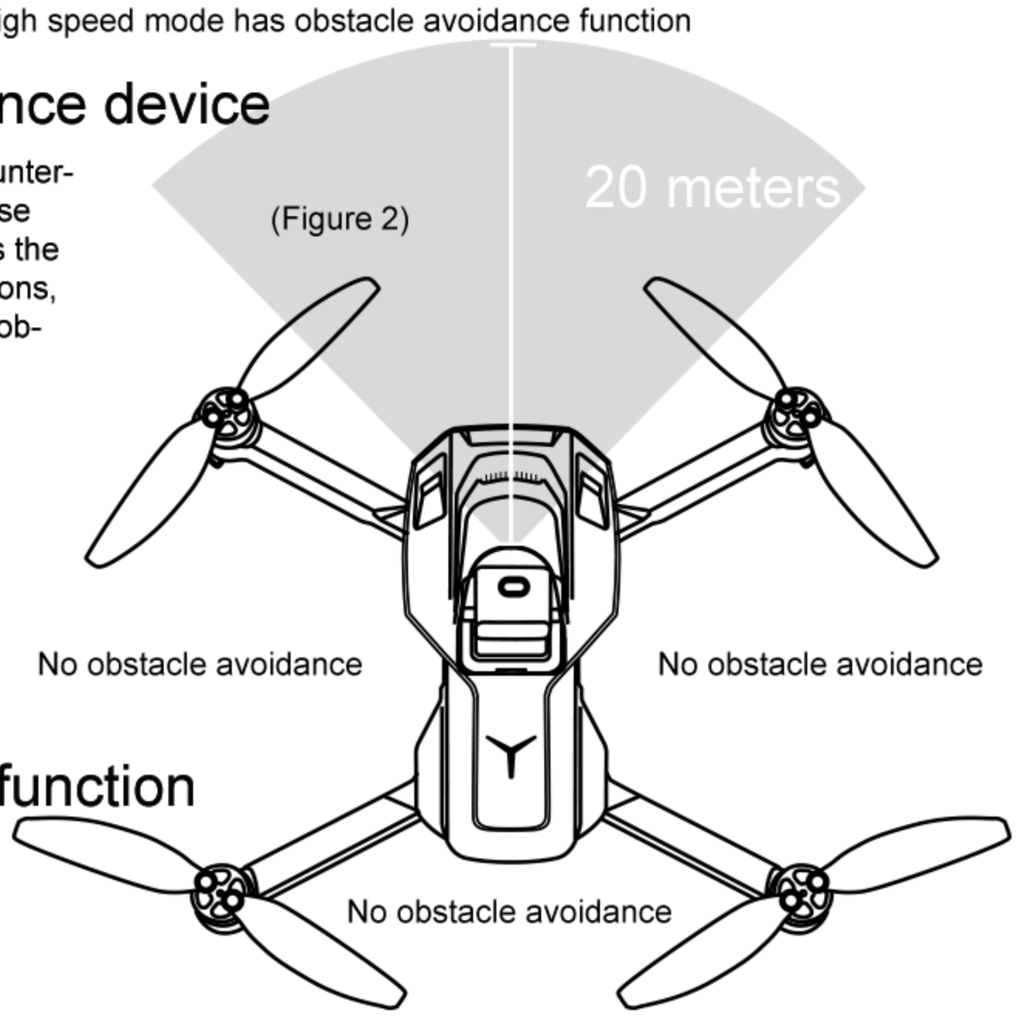
Press and hold this key, and the remote control will emit a "Di" sound to turn off the obstacle avoidance function. Press and hold this key again, and the remote control will emit a "Di" sound to activate the obstacle avoidance function.

B. Operating principle of obstacle avoidance device

(Figure 1) The transmitting port sends out a pulse signal, and when encountering obstacles within the scanning range, the receiving port returns the pulse signal. After receiving the return pulse signal, the receiving port calculates the distance between the drone and the obstacle through a series of calculations, and sends a stop advance command to the drone, thereby achieving the obstacle avoidance effect!

(Figure 1)

(Figure 2)



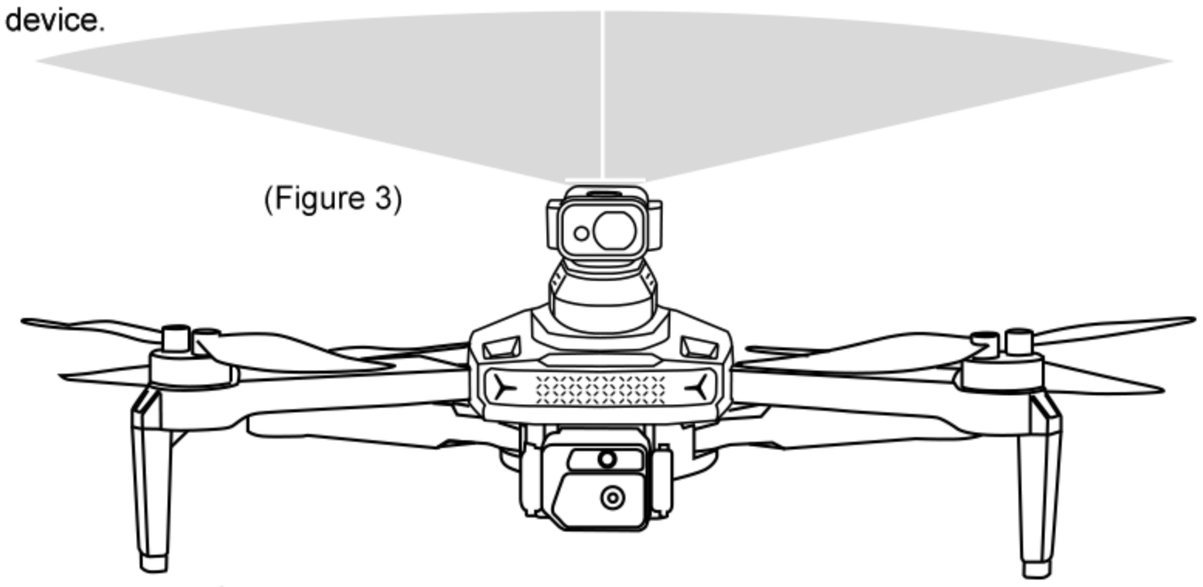
C. Use and effect of obstacle avoidance function

1. (Figure 2) When the UAV is flying, as shown in Figure 3, the effective scanning range of the obstacle avoidance device is 20 meters directly ahead of the UAV's flight, and the scanning path is scanned from about 90 ° between the two arms in the flight direction!

Use and effect of obstacle avoidance function

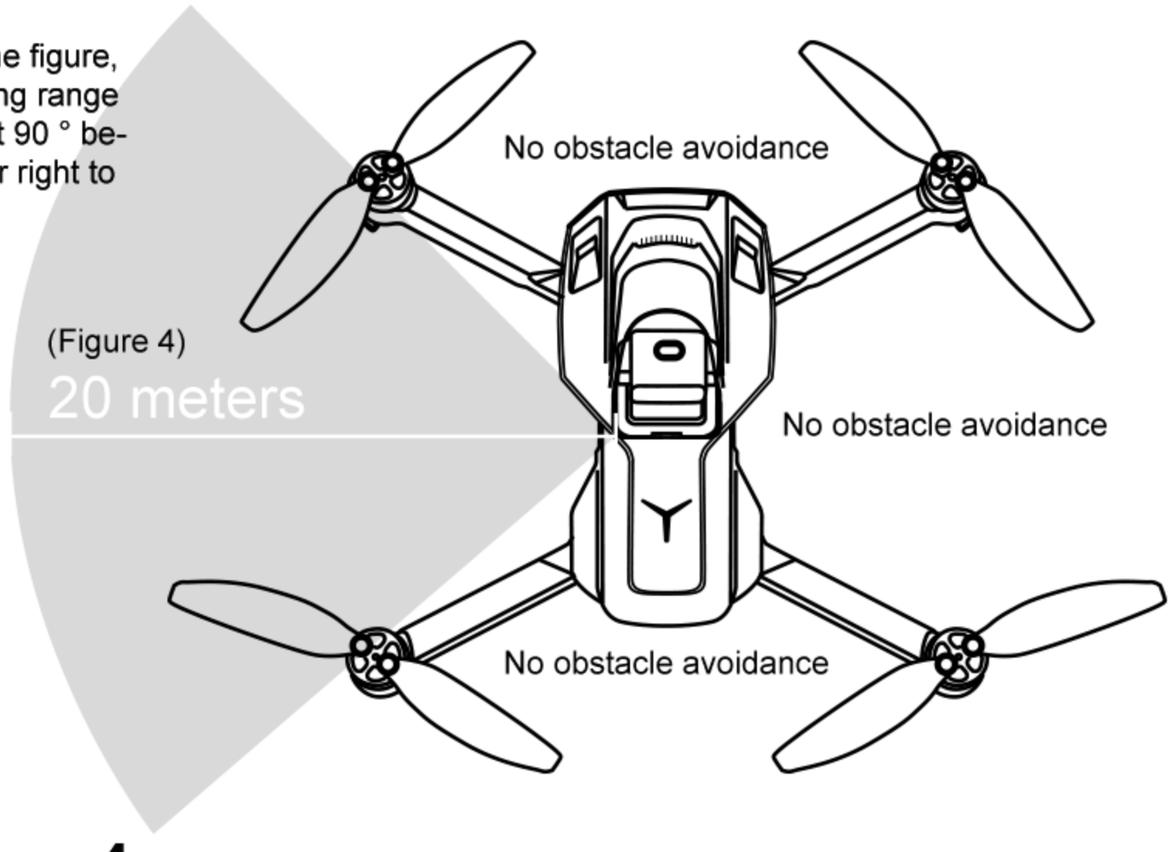
2.When the UAV takes off, as shown in the figure, 1.5 meters above the UAV is the effective scanning range of the obstacle avoidance device.

(Figure 3)

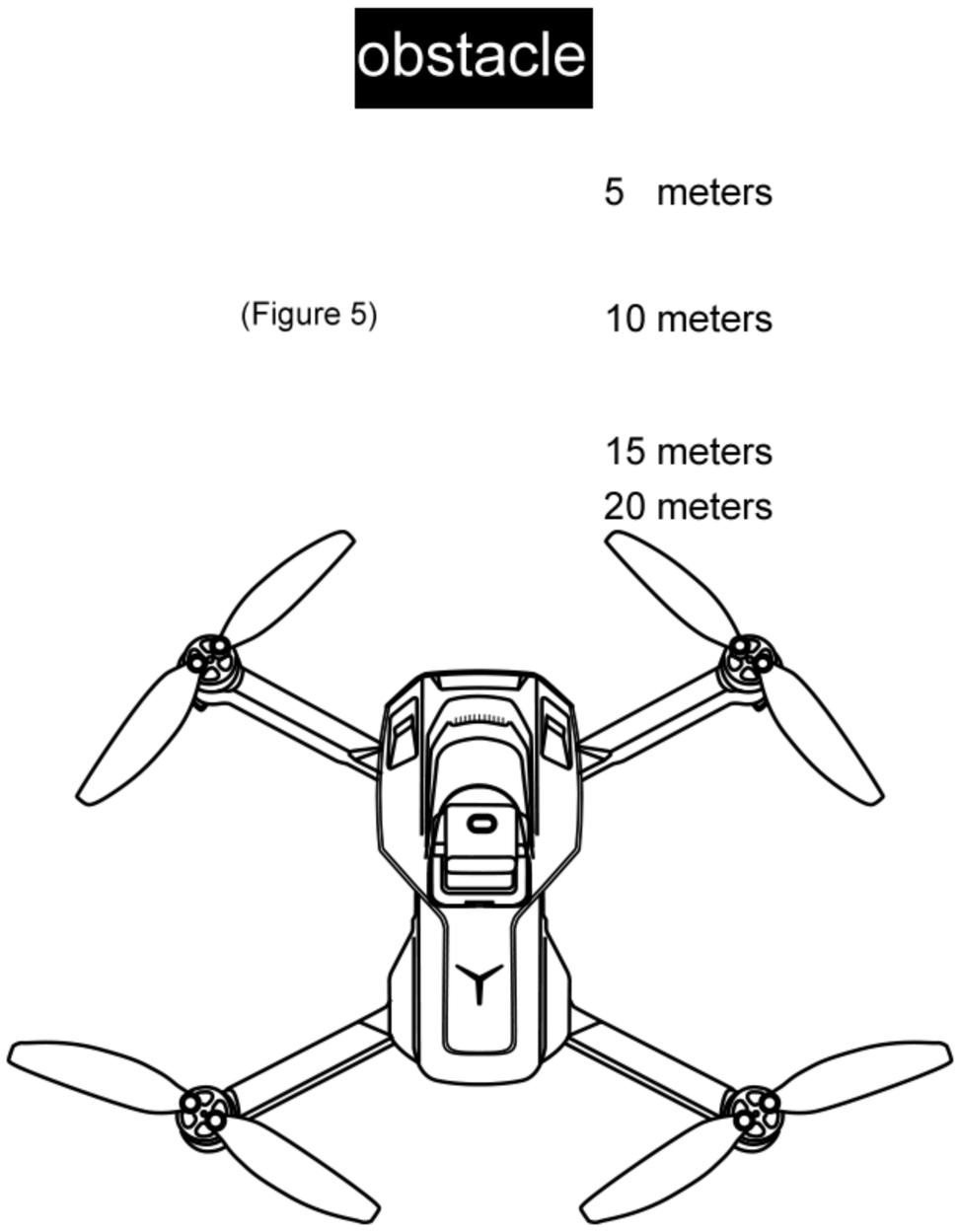


3. (Figure 4) When the drone flies on the left side, as shown in the figure, 20 meters in the left direction of the drone is the effective scanning range of the obstacle avoidance device, and the scanning path is about 90 ° between the two arms on the left side for scanning. Fly backward or right to scan the obstacle avoidance range.

(Figure 4)

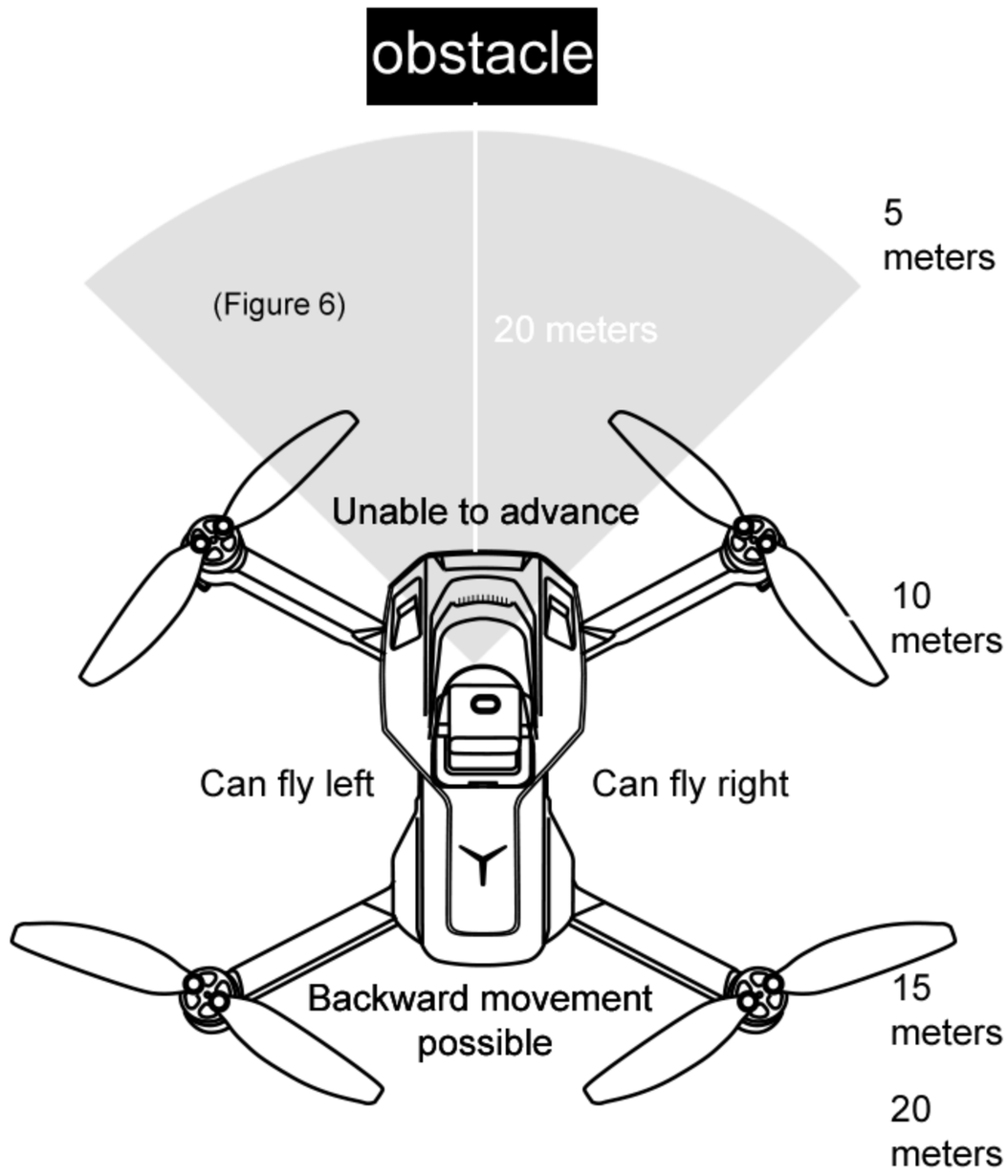


4. (Figure 5) The position where the drone stops flying is determined by the flight speed, when the drone is flying at full speed in a low gear. After the drone scans an obstacle at a distance of 20 meters, it starts computing and issues a stop flight command. The stop flight position of the drone is determined by the flight speed (the faster the flight speed, the closer the distance between the drone and the obstacle, on the contrary, the slower the flight speed, the farther the distance between the drone and the obstacle)



(Figure 5)

5. (Figure 6) When the drone is hovering in the flight direction of 20 meters and encounters obstacles within the scanning range, the drone cannot continue to fly in that direction. It can be raised to avoid obstacles and continue to fly or fly in other directions where there are no obstacles within 20 meters.



(Figure 6)

6. When taking off, there are obstacles within 20 meters in the forward direction of the drone. If the drone cannot fly in this direction, it can be raised to avoid obstacles and continue flying or fly in other directions without obstacles within 20 meters.
7. If the UAV encounters an obstacle during GPS intelligent return, the obstacle avoidance device will scan the obstacle and rise to a safe height again before returning.

Pre flight environmental requirements:

Please choose an open indoor environment or an outdoor environment without rain, snow, and wind force less than Level 4. When flying, please stay away from people, trees, power lines, tall buildings, airports, and signal transmission towers.

UAV Flight Tutorial:

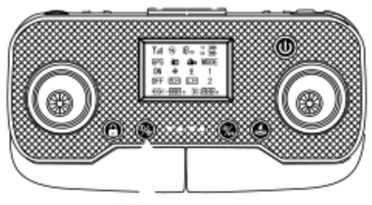
Indoor mode tutorial:

1. UAV frequency alignment

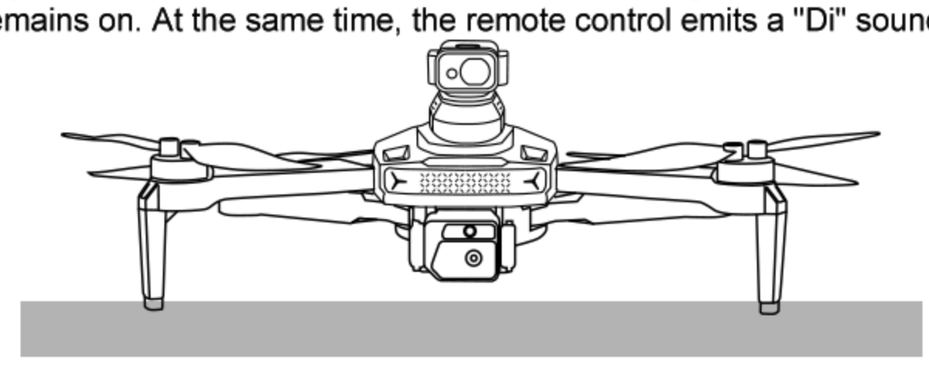
Install the drone battery into the drone battery slot in the correct direction, turn on the drone power supply, place the drone on a level ground, (at this time, the light on the drone slowly flashes), and then turn on the power supply of the remote controller. At this time, the remote controller rings twice (at this time, the red and blue lights on the remote controller are permanently lit). The green indicator light on the aircraft slowly flashes, and the red indicator light is permanently lit, indicating successful frequency synchronization.

2. Gyro calibration operation

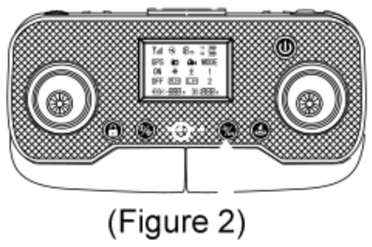
Place the drone in a horizontal position, and press and hold the "Gyro Calibration" button on the remote control (Figure 1). The drone's light flashes quickly to a green light that slowly flashes, while the red light remains on. At the same time, the remote control emits a "Di" sound, indicating that the calibration is successful.



(Figure 1)



3. Enable indoor mode



(Figure 2)

Press and hold the GPS switch button for 3 seconds (Figure 2), and the remote control will "tick" and "tick" twice to turn on indoor mode. At this time, the green light on the drone will flash slowly, and the red light will stay on for a long time (the indoor mode indicator on the remote control will go out) to indicate that the drone has entered indoor mode.

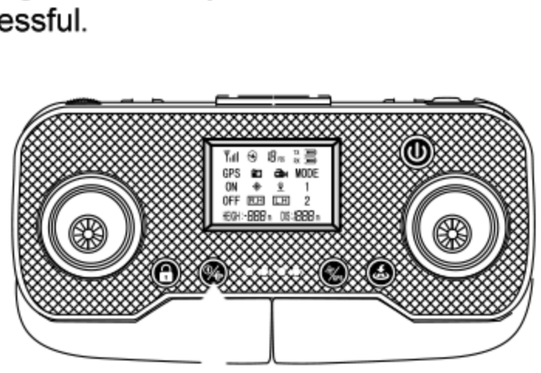
Outdoor mode tutorial:

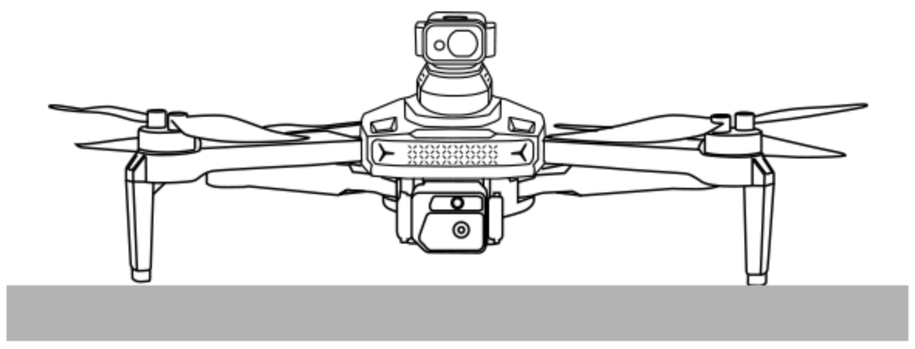
1. UAV frequency alignment

Install the drone battery into the drone battery slot in the correct direction, turn on the drone power supply, place the drone on a level ground, (at this time, the light on the drone slowly flashes), and then turn on the power supply of the remote controller. At this time, the remote controller rings twice (at this time, the red and blue lights on the remote controller are permanently lit). The green indicator light on the aircraft slowly flashes, and the red indicator light is permanently lit, indicating successful frequency synchronization.

2. Gyro calibration operation

Place the drone in a horizontal position, and press and hold the "Gyro Calibration" button on the remote control (Figure 1). The drone's light flashes quickly to a green light that slowly flashes, while the red light remains on. At the same time, the remote control emits a "Di" sound, indicating that the calibration is successful.





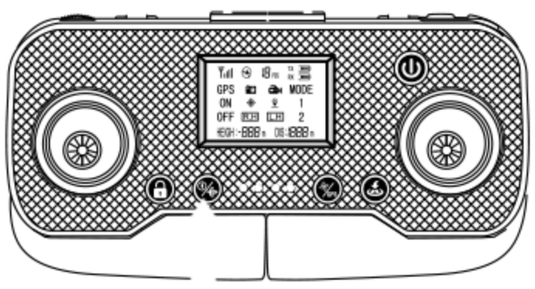
(Figure 1)

3. Calibrate geomagnetic operation

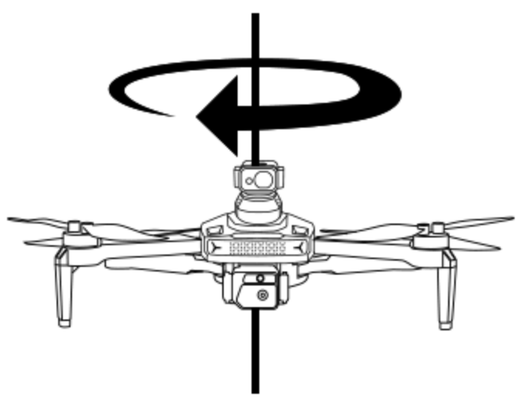
The geomagnetic field is susceptible to interference from other electronic devices, which will cause data anomalies that affect flight. For the first time, geomagnetic calibration must be performed.

Follow the steps below to calibrate the geomagnetism:

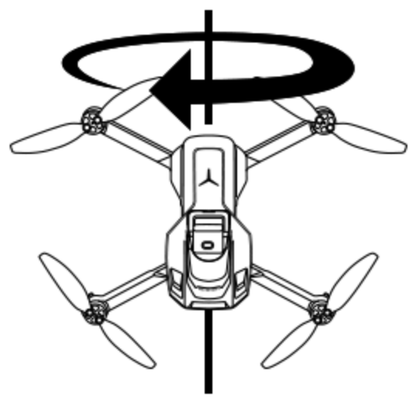
Briefly press the "geomagnetic correction" button on the remote control, as shown in Figure 2. The remote control emits a "Di" sound, and the drone indicator light changes to a flash. At this point, calibration can be performed. Hold the drone in your hand and slowly rotate it clockwise for 3 turns in the horizontal direction (Figure 3). The drone indicator light changes from fast to slow flashing, and the remote controller emits a "Di" sound, indicating that the horizontal calibration has been successful. At this point, it is possible to proceed in the vertical direction (as shown in Figure 4), slowly rotate the nose downward for 3 turns clockwise, and the drone indicator light will slowly flash to the front indicator light. After that, the indicator light will remain on for a long time. The remote control will emit a "DiDi" sound twice to indicate successful calibration.



(Figure 2)



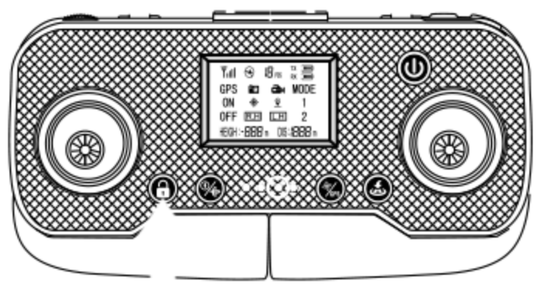
(Figure 3)



(Figure 4)

4. Search for GPS signal:

Place the drone in an open and undisturbed environment. After the geomagnetism and gyroscope are calibrated successfully, the green indicator light in front of the drone slowly flashes, and the red indicator light in the rear remains on. Wait for the GPS to automatically search for more than 9 stars. The green indicator light in front of the drone changes from slow flashing to long flashing, and the red indicator light in the rear remains on. The remote controller emits a "Di" sound, indicating that the search for stars is successful, ensuring that the GPS signal is stable and does not bounce, At this time, press the "unlock button" on the remote control, as shown in Figure 5, to fly.
(At this time, the GPS indicator light on the remote control is permanently on)



(Figure 5)

Special tips:

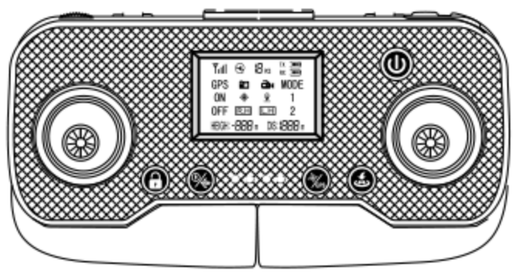
1.For outdoor flights, please ensure that the GPS signal has at least 9 stars and is stable without significant pulsation, and that there is no obvious signal interference around before takeoff.
2.Please take the drone to an outdoor open area for calibration.
3.Each region has different latitude and longitude, and new customers must calibrate it once. For example, Guangdong and Beijing differ by 28 degrees. Therefore, non calibration indicates that forward and backward flight is not a straight flight, and calibration is for the accuracy of the barometer's altitude measurement.

Basic flight:

Basic flight steps:

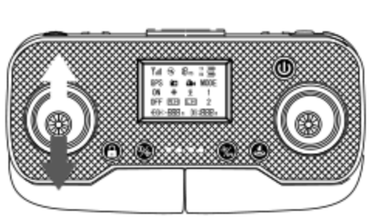
1. Code the remote controller and the drone, and the drone completes initialization.
2. Geomagnetic calibration. (No need to recalibrate at the same location)
3. Connect your phone with Wi Fi and open the phone app
4.After the aircraft calibration is completed, wait for the satellite to be received. Generally, it takes 60-100 seconds (more than 9 stars) to unlock the flight.

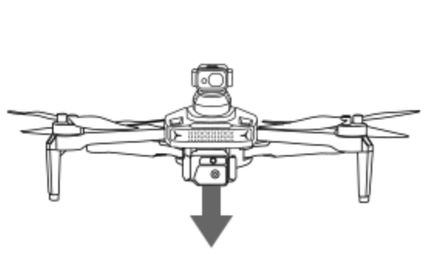
Remote control video/picture capture instructions:



During the flight, you can use the camera or video recorder on the remote control to record the images captured during the flight. Briefly press the camera button, and the camera will take a photo. The remote control will prompt with a "click" sound, and the phone app will prompt with a "click" sound. Long press the video button, and the camera will start recording. The remote control will prompt with a "click" sound, and then press and hold this button again. The remote control will emit a "click" sound to exit the recording mode.

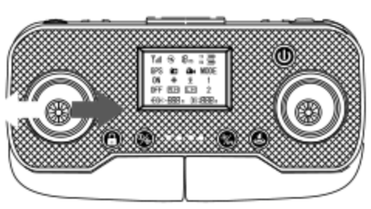
Control method:

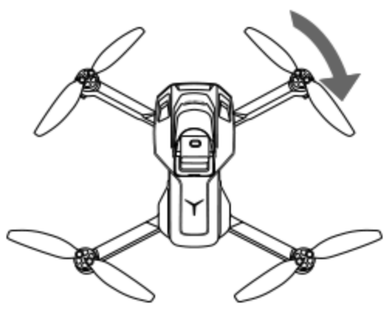




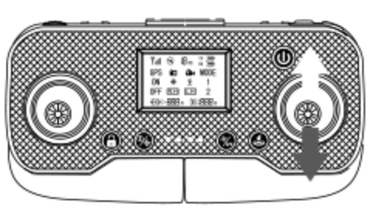
When the left joystick (throttle) is pushed upward, the main fan speed increases, and the aircraft rises.

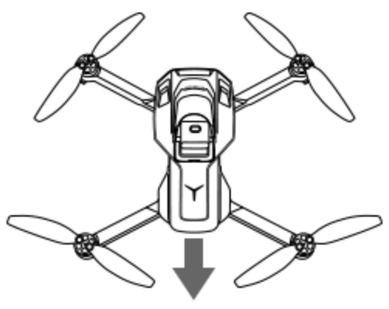
When the left joystick (throttle) is pushed downward, the main fan speed slows down and the aircraft descends.





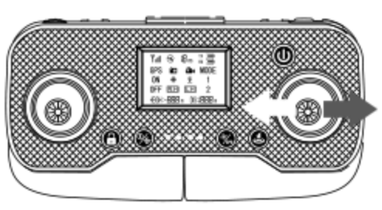
When the left joystick (steering wheel) is pushed to the left, the aircraft nose turns left, and when pushed to the right, the aircraft nose turns right.

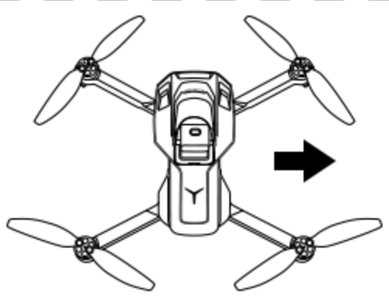




When the right joystick (rudder) is pushed upward, the aircraft advances.

When the right joystick (rudder) is pushed down, the aircraft moves backward.





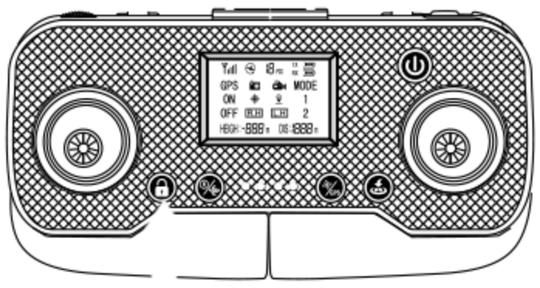
When the right joystick (steering wheel) is pushed to the right, the aircraft flies to the right.

When the right joystick (steering wheel) is pushed to the left, the aircraft flies to the left.

Warning: When the drone is at a position 30 cm from the ground, the drone may become unstable due to the influence of its own blade vortex, which is called "ground effect response". When the drone is at a lower height, the impact of ground effect response will become greater.

Introduction to remote control function operation:

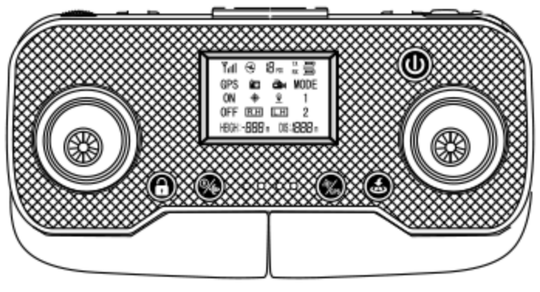
1. UAV Unlock



(Figure 1)

When the drone successfully searches for stars outside, it needs to be unlocked to start. Press the "Unlock" button on the remote control (Figure 1), and at this time, the four propellers rotate at an equal speed, indicating that the unlocking is successful. When the unlocking is completed, the drone can operate and fly normally.

2.Speed gear adjustment

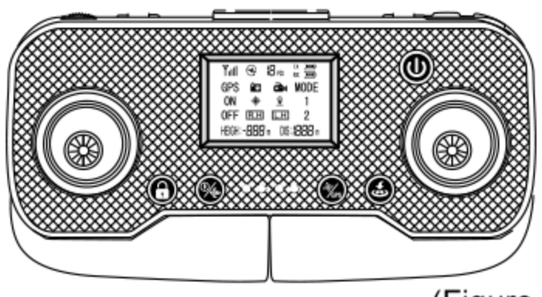


(Figure 2)

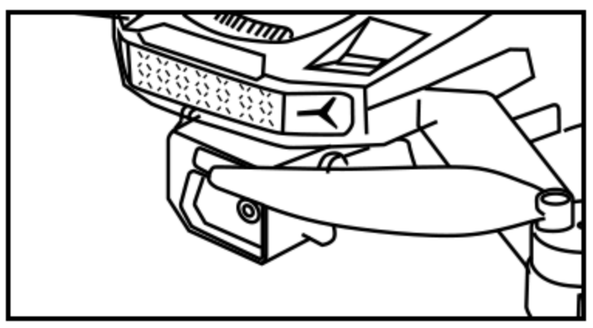
The default takeoff speed gear for a drone is a slow gear. When the drone is flying in the air, adjust the speed through the fast and slow speed gear (Figure 2). Press the speed button once, and the remote control will "tick" twice to enter the second gear. Press the speed button again, and the remote control will "tick" once to return to the low gear.

Long press the fast and slow gear keys, and the remote control emits a "tick" sound to turn off the obstacle avoidance function. Long press the fast and slow gear keys, and the remote control emits a "tick" sound to turn on the obstacle avoidance function.

3. Camera angle adjustment

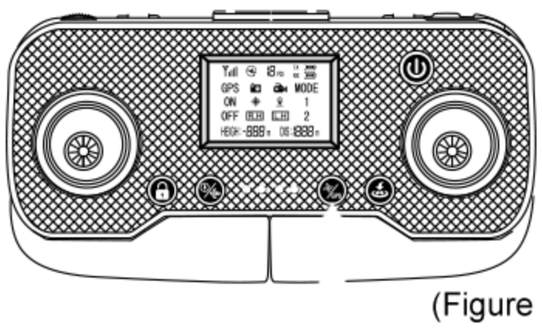


(Figure 3)



During drone flight, the camera angle can be adjusted through the camera adjustment knob (Figure 3). The camera angle decreases when the knob is turned left, and increases when the knob is turned right.

4. Headless mode



(Figure 4)

Place the drone directly in front of the remote control, with the drone's nose facing forward. After frequency alignment, calibrate the takeoff horizontally. During flight, briefly press the headless mode button (Figure 4), and the remote control will "tick" once, indicating that the drone has entered headless mode. At this time, the drone indicator light will flash quickly (while the remote control will indirectly emit a tick sound). To exit headless mode, press the headless mode button again, and the remote control will "tick" twice, Exit headless mode.

Please ensure that the operator faces the same direction from beginning to end, consistent with the direction of the aircraft during takeoff.
At this time, no matter which direction the aircraft is facing, the operator will pull the directional rocker to retreat, and the aircraft will retreat towards the operator.

5. One click return

When the drone is flying in the air, pressing the homing function key on the remote control will automatically raise or lower to a height of 30 meters and return straight back and land to the takeoff location.
Special prompt: When the drone is flying, the LED light on the front of the fuselage flashes slowly, indicating that the drone has insufficient charging capacity. When the drone loses or loses power during flight

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Return:

The aircraft has a homing function. If the homing point is successfully recorded before takeoff, the aircraft will automatically return to the homing point and land when the communication signal between the remote controller and the aircraft is lost or the homing button is pressed, in order to prevent accidents.

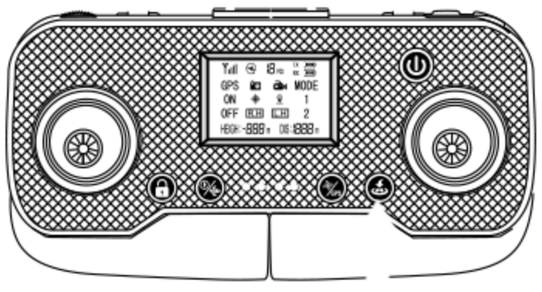
There are three different ways for aircraft to return, namely, one button return, no signal return, and low battery return.

Return point:

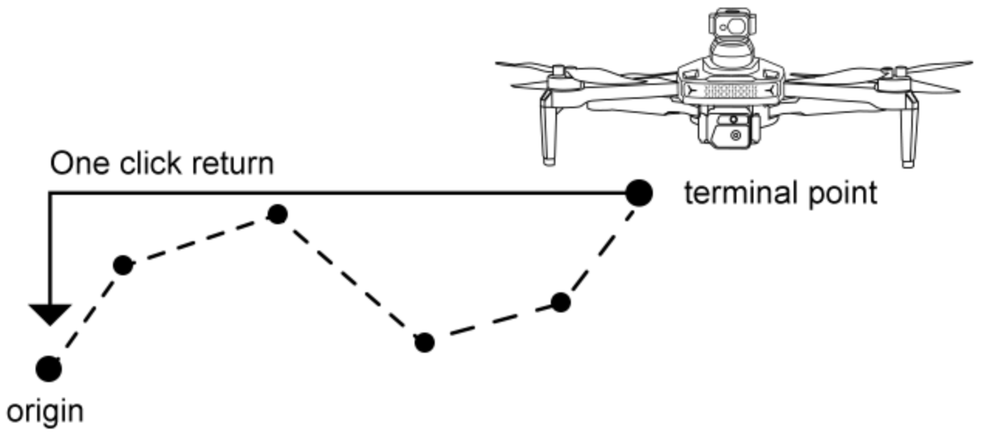
During takeoff or flight, when GPS first receives more than 9 stars, it will be recorded as the aircraft's current position as the return point.

One click return:

When the GPS signal is good (the number of satellites is greater than 9), the aircraft can be started to return by pressing the "one button return" button on the remote control. The return process is the same as that of a runaway return, except that when the aircraft returns to land, the user can control the aircraft through the joystick to avoid obstacles, and then press the "one button return" button on the remote control to exit the return function, allowing the user to regain control.



(Figure 5)



Uncontrolled return:

When the GPS signal is good (the number of satellites is greater than 9), the compass operates normally, and the aircraft successfully records the return point. If the remote control signal continues to be interrupted for more than 6 seconds, the flight control system will take over control of the aircraft and control it to fly back to the recorded return point. If the remote control signal is restored during flight, the homing process will continue, but the user can cancel the homing by pressing the homing button on the remote control to regain control of the aircraft.

⚠ Precautions for returning:

1.During automatic homing, the aircraft cannot avoid obstacles.

2.Unable to return when GPS signal is poor or GPS is not working.

3.If the aircraft does not receive the satellite and the remote control signal continues to be interrupted for more than 6 seconds, the aircraft will not be able to return and will slowly descend until landing is locked.

Low power return:

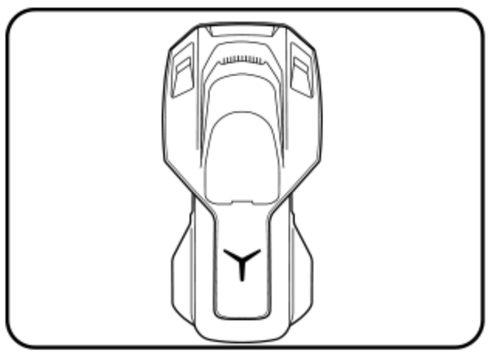
The low voltage indicator light of the aircraft will flash slowly, and the remote control will indirectly emit a drip sound. At this time, the aircraft will automatically return to the vicinity of 30 meters for takeoff (after low power, the aircraft will return to the vicinity of the takeoff point, and the altitude and distance of the aircraft will be limited to 30 meters)

The aircraft will automatically land to the return point if its voltage falls below a safe value.

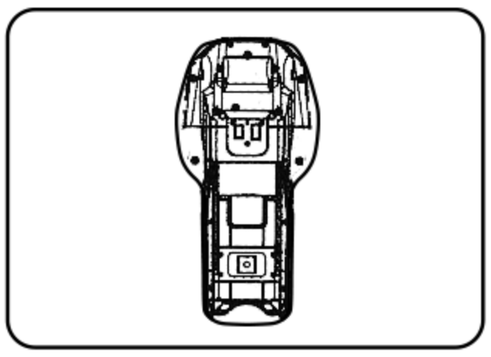
Guidelines for Frequently Asked Questions:

Question	Resolvent
After the aircraft is powered on, the indicator light continues to flash rapidly	The aircraft is in a gyroscope detection state. Please place the aircraft on a stationary plane or on the ground
After takeoff, the aircraft cannot hover and inclines to one side relatively large	Place the aircraft on a flat or level ground and perform gyro calibration again
The aircraft vibrates badly	The fan blade is deformed and needs to be replaced
The aircraft cannot be unlocked, and the indicator light flashes quickly	The battery voltage of the aircraft is too low. Please fully charge the battery
Flight instability of windy aircraft	Wait for gusts below level 4-5 before flying
Can't hover, keep circling	The geomagnetic correction is not successful, and the geomagnetic correction is repeated

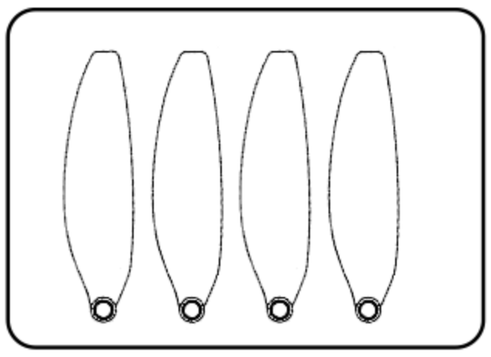
Spare parts list



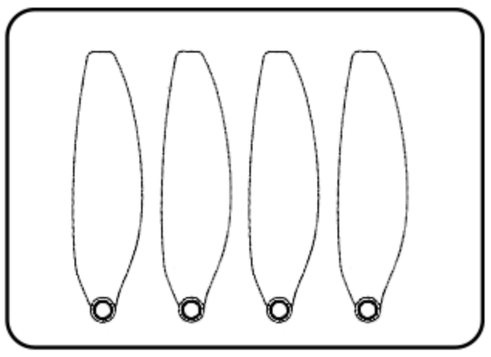
loam cake



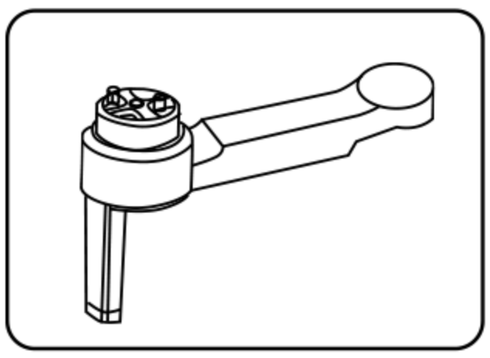
Lower cover



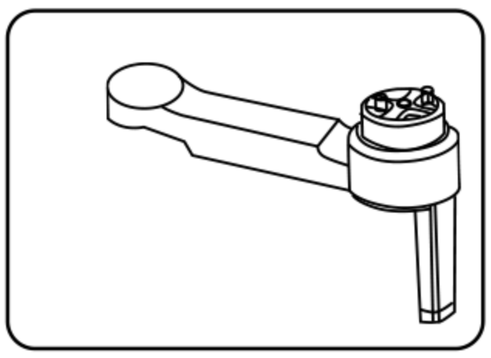
Blade A



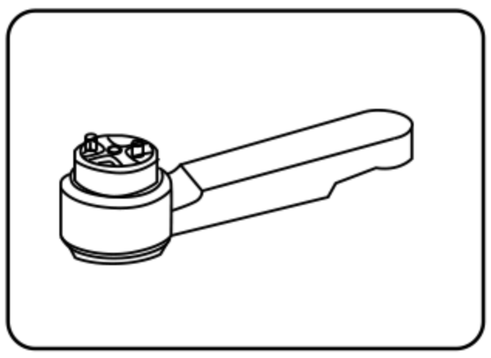
Blade B



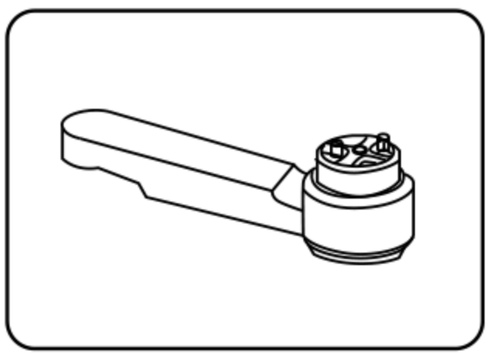
Front left arm



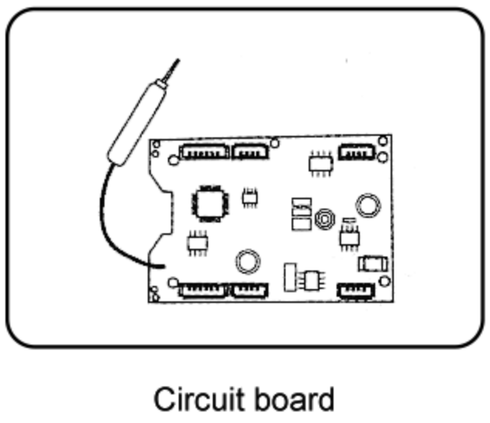
Front right arm



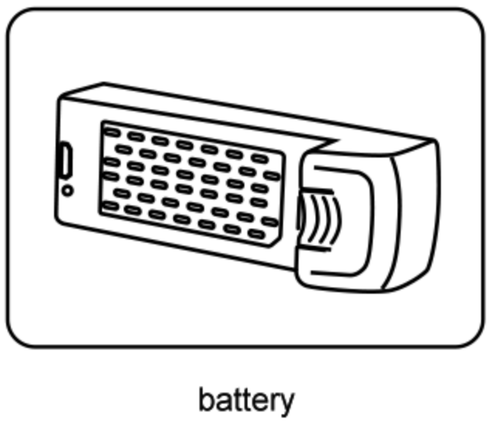
Rear left arm



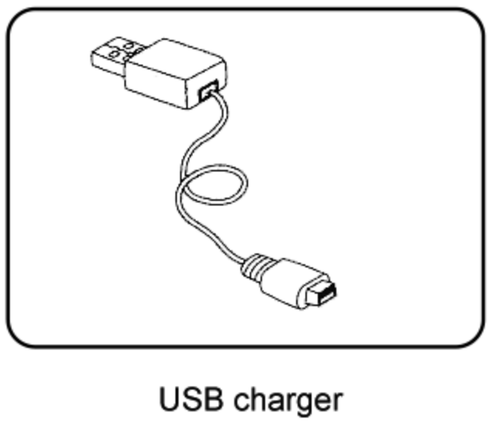
Rear right arm



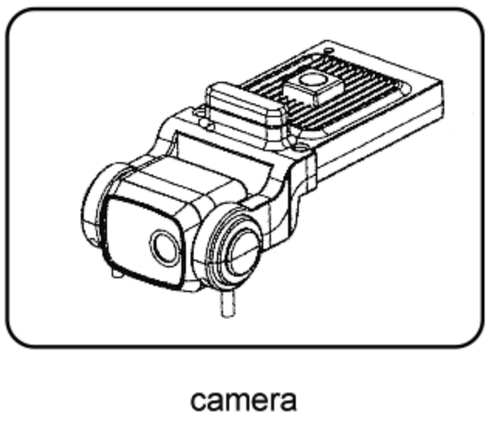
Circuit board



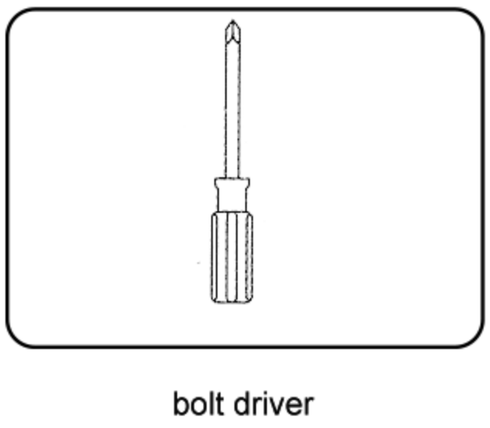
battery



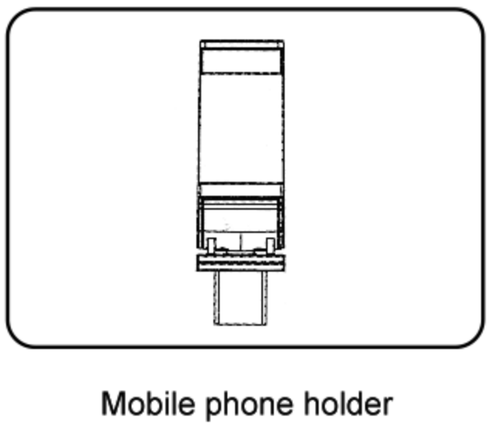
USB charger



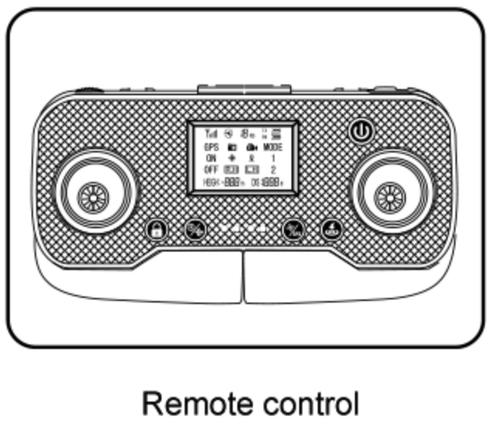
camera



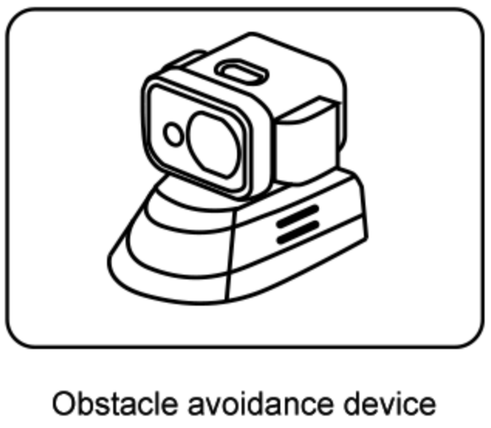
bolt driver



Mobile phone holder



Remote control



Obstacle avoidance device

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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.