

H501M X4 AIR BASIC EDITION

《 H501M Quick Start Guide 》

Version 1.0

Disclaimer & Warning

All users must read product operating instructions as well as this liability disclaimer before using any Hubsan product. By using a Hubsan product(s), users are accepting the terms and conditions of Hubsan liability and operational guidelines. This product is not suitable for minors under 14 years of age. While operating a Hubsan product(s), users also accept all liability and responsibility for their own behavior, actions as well as any consequences resulting thereof while using a Hubsan product(s). These products may only be used for purposes that are proper and in accordance with local regulations, terms and any applicable policies/guidelines Hubsan may make available. Users agree to comply with these terms and conditions, along with any and all relevant policies/guidelines set forth by Hubsan.

Instructions

Some product flight functions are restricted in certain areas. Once you use this product, you are deemed to have read carefully the relevant ICAO regulations, local airspace control provisions and the regulations governing UAVs. You assume all liability for any non-compliance with the foregoing, are responsible for the consequences for your actions as well as any indirect and/or direct liability that arises as a result of these limitations.

Flight environment requirements

- (1) Select an open environment devoid of high rise buildings and tall obstructions (such as trees and poles). Near buildings and obstacles, flight control signals and GPS signals can be severely weakened; GPS functions such as GPS mode and Return to Home may not function properly.
- (2) Do not fly in bad weather conditions (such as in wind, rain or fog).
- (3) Fly the drone in ambient temperatures of 0-40 °C.
- (4) When flying, please stay away from obstructions, crowds, high voltage lines, trees, water, etc.
- (5) To avoid remote control signal interference, do not fly in complex electromagnetic environments (such as venues with radio stations, power plants and towers).
- (6) The aircraft cannot be used in or near the Arctic circle or Antarctica.
- (7) Do not fly in no fly zones.
- (8) Do not operate the aircraft near high pressure lines, airports or areas with severe magnetic interference.

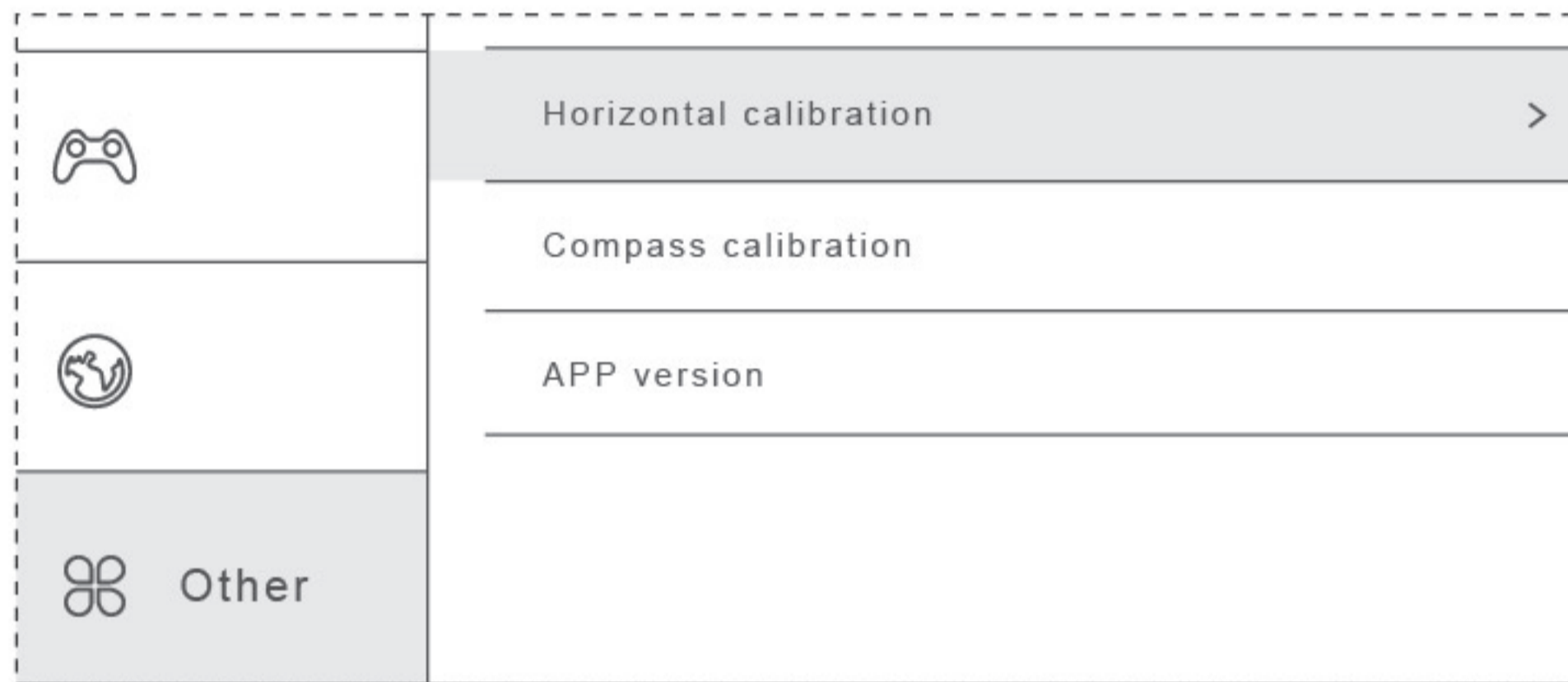
Caution



Before each flight, please perform a horizontal and compass calibration.

How to perform a horizontal calibration:

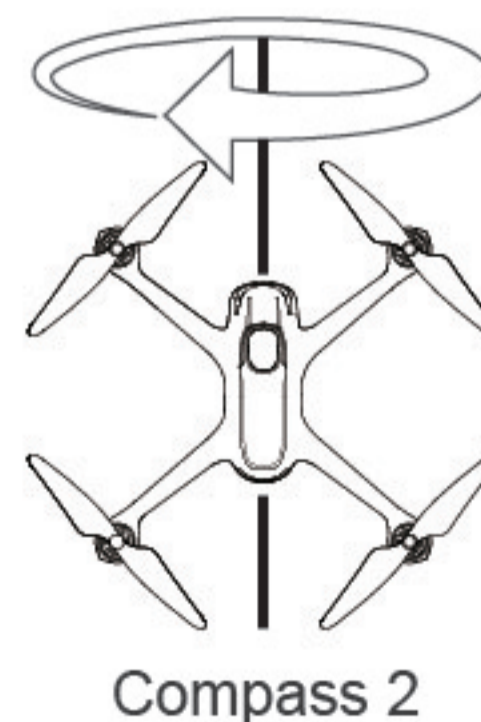
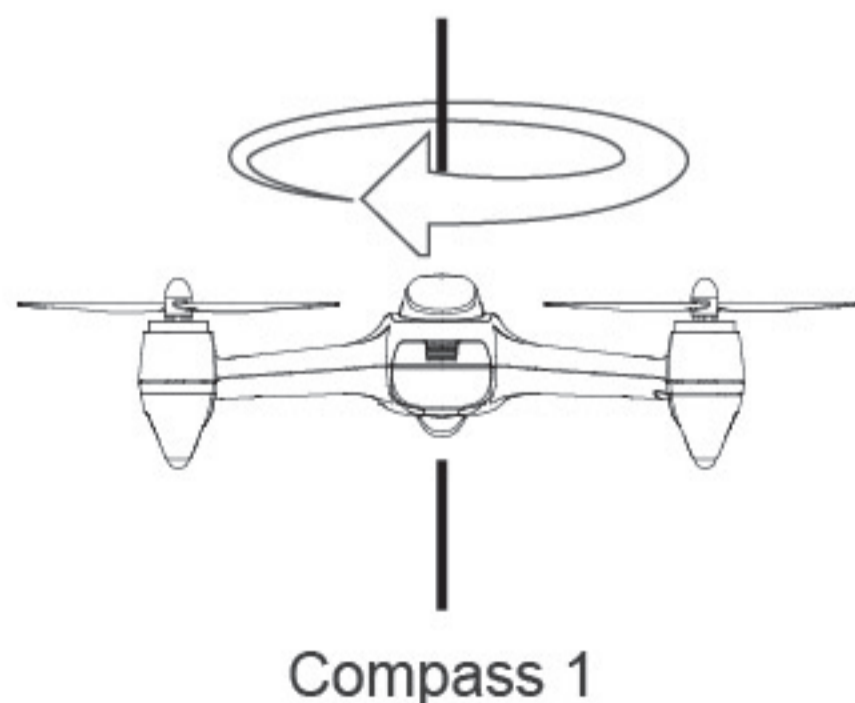
Before taking off, tap the Settings cog at the upper right hand corner of the APP interface. Then, tap "Other" and select "Horizontal calibration". The aircraft will enter Horizontal calibration mode. All 4 of its LEDs will flash simultaneously and turn solid when the calibration is complete. It is recommended that users wait for 15-20 seconds after the calibration is completed before flying again.



How to perform a compass calibration (manually):

Tap the Settings cog and select "Other", followed by "Compass calibration".

1. The aircraft's LEDs will rotate clockwise. Rotate the X4 clockwise on the horizontal plane until the LCD screen says "Calib compass 2"
2. Point the X4 nose down (the aircraft should be perpendicular to the ground) and rotate it clockwise until "Calib compass 2" disappears.
3. When the "Calib compass 2" disappears from the screen and the LEDs turn solid, calibration is complete.



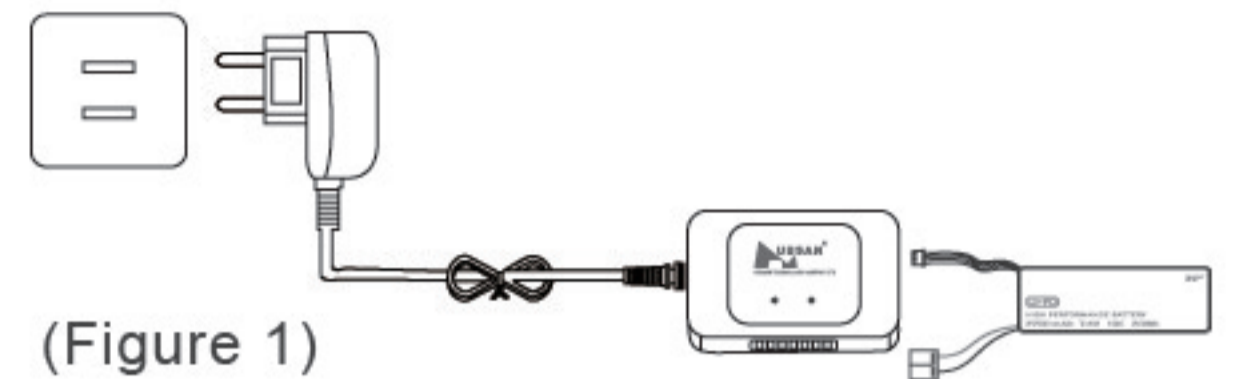
If the aircraft drifts or is unstable while flying, it is recommended to perform both a horizontal and compass calibration again.

Charging and installing the aircraft battery



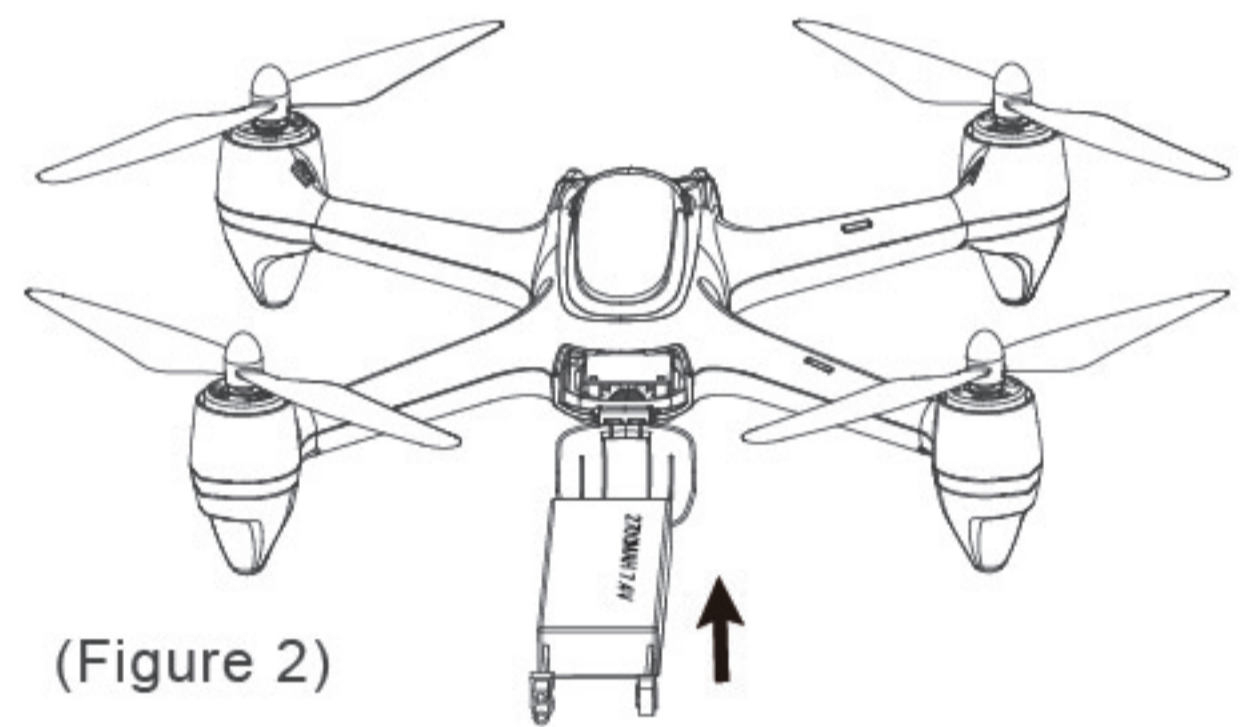
- Make sure the battery is fully charged before each flight
- Please do not leave unattended while charging

To charge the battery, connect the battery to the balance charger and connect the charger to the AC adapter (if necessary, please use a power conversion adapter). The balance charger LEDs are solid red while charging. The LEDs turn solid green to indicate that the battery is fully charged. Please disconnect the battery from the charger immediately afterwards. Full charging time is around 180 minutes. (Figure 1)



(Figure 1)

When installing the battery, push the battery into its compartment with its lines facing away from the unit (Figure 2). Connect the blue adapters, noting the positive and negative polarities. Coil the power line into the compartment and then shut the battery hatch.



(Figure 2)

Installation and removal of propellers

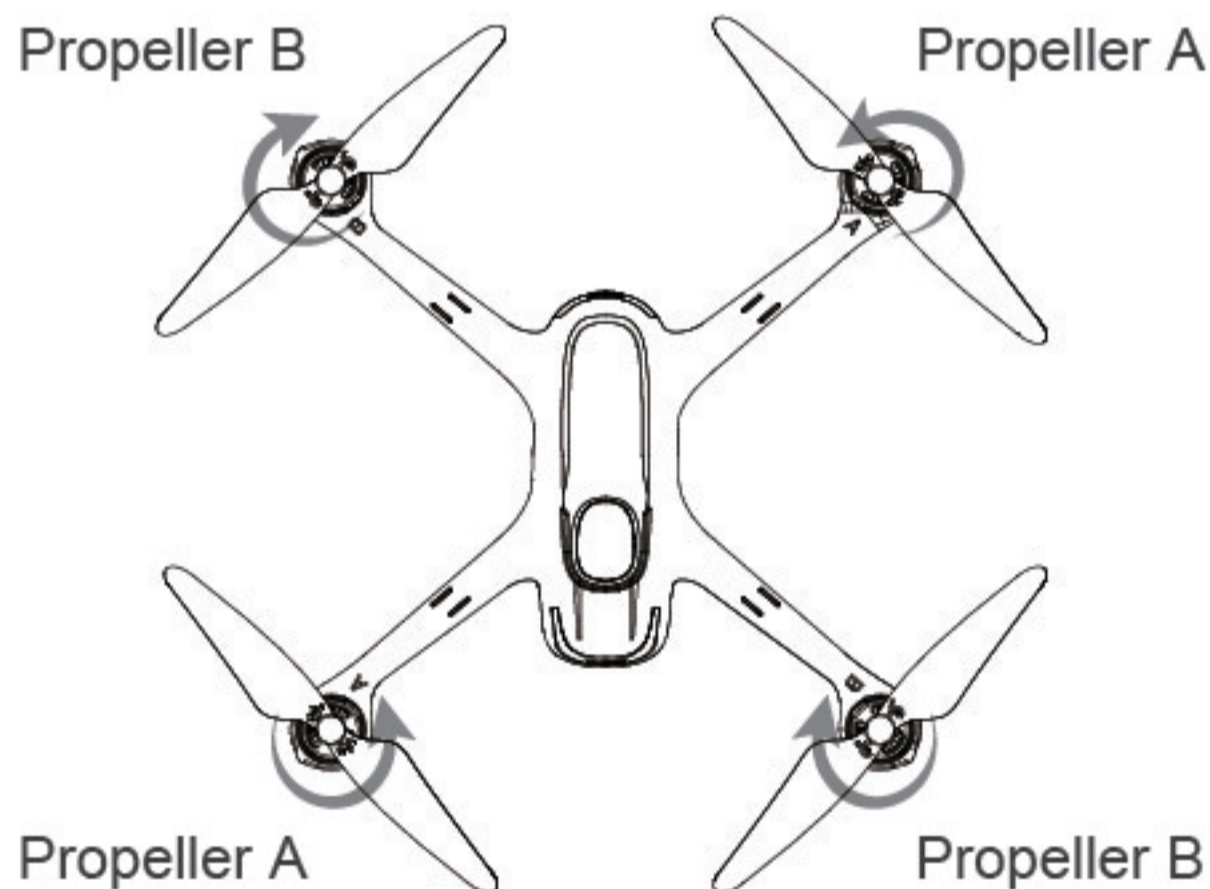


Figure 3

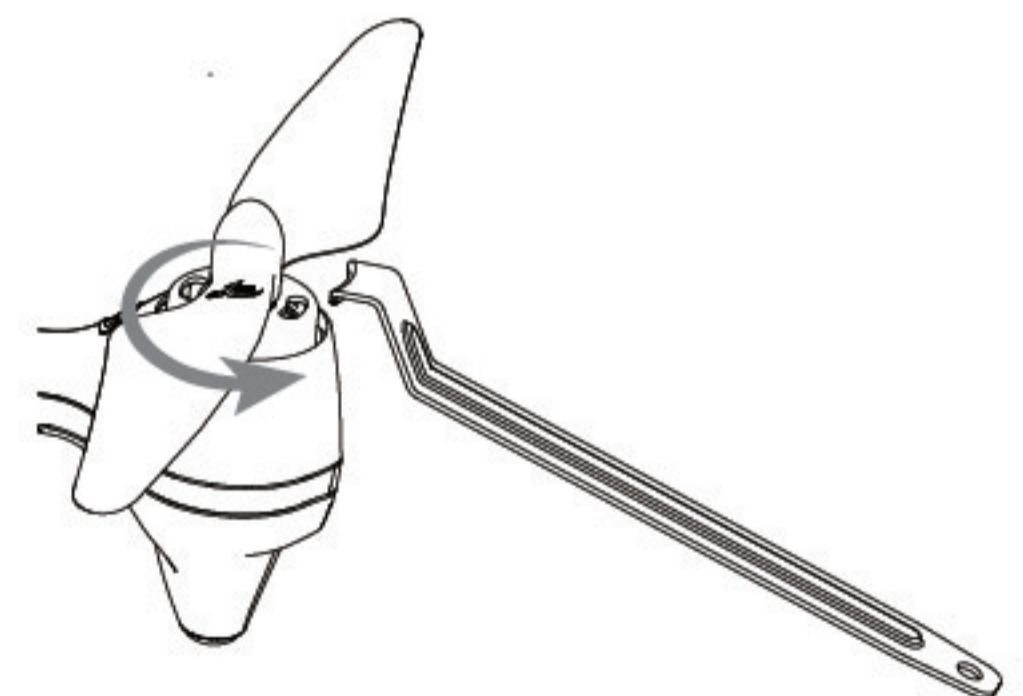
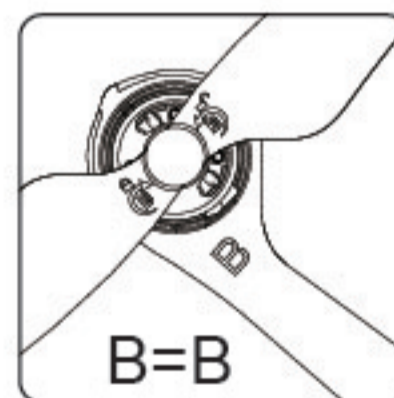
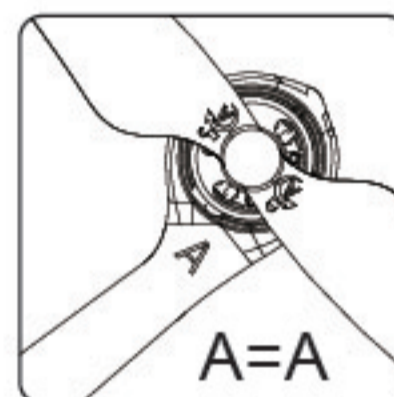


Figure 4

The X4 aircraft uses 7.3-inch propellers. Each is marked with either an A or a B. Please replace damaged propellers.

Before installing the propellers for the first time, please check whether the propeller and motor arm read "A" or "B". The two letters should match. Mount all 4 propellers on their motors (be sure all letters on the propellers match the letters on the motor arms). Turn each propeller in the indicated "lock" direction. (Figure 3)

When the blade is damaged or needs to be replaced, hold the propeller with a hand or the provided auxiliary wrench, and remove by turning it in the indicated “unlock” direction. (Figure 4)



- The propellers are self-tightening units. Please do not use other screws or screw glue to attach them to the motor shafts.
- Make sure that the propellers are installed in the correct positions, otherwise the aircraft will not be able to fly normally.
- Since the propeller blades are thin and somewhat sharp, it is recommended that users wear gloves during installation to prevent accidental scratches.

Downloading the APP

Downloading the X-Hubsan APP

Before flying with the H501M, users must download the X-Hubsan APP.

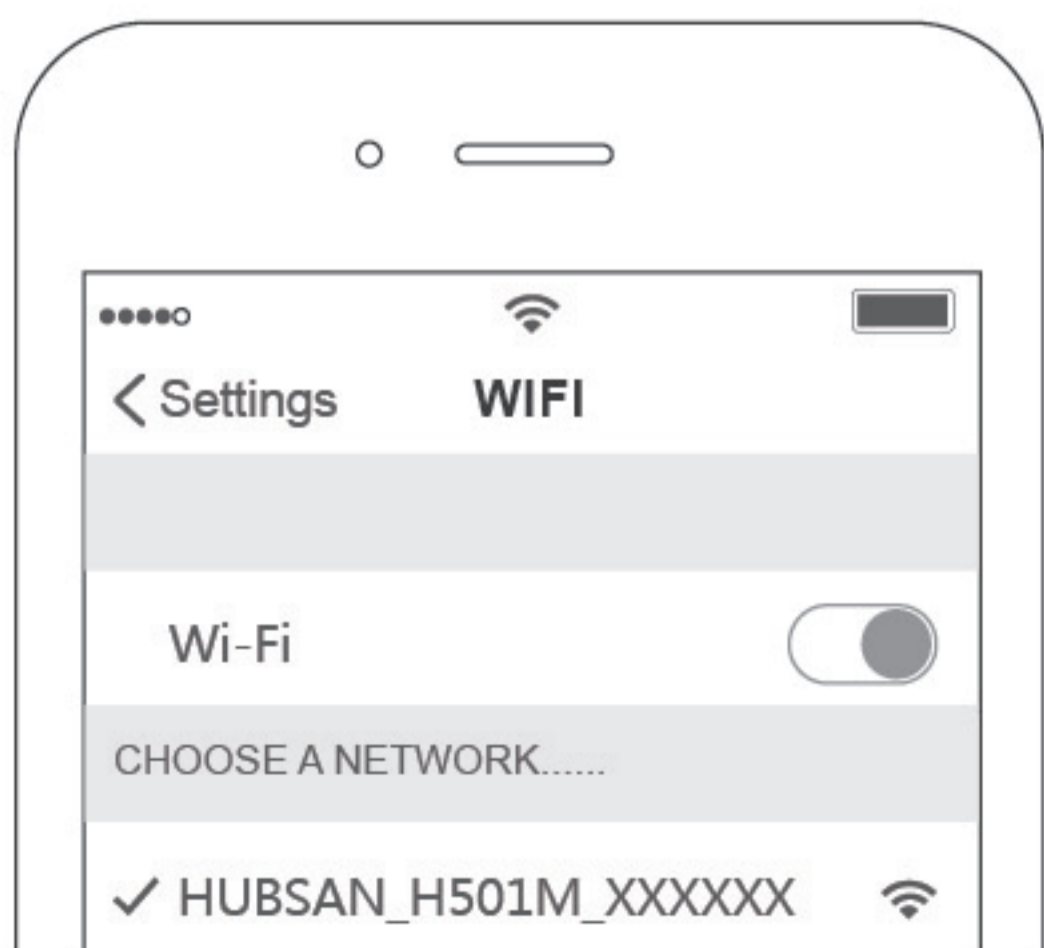
Download the APP for free by scanning the code on the right or by downloading it via the App Store (iOS) and Google Play (Android).



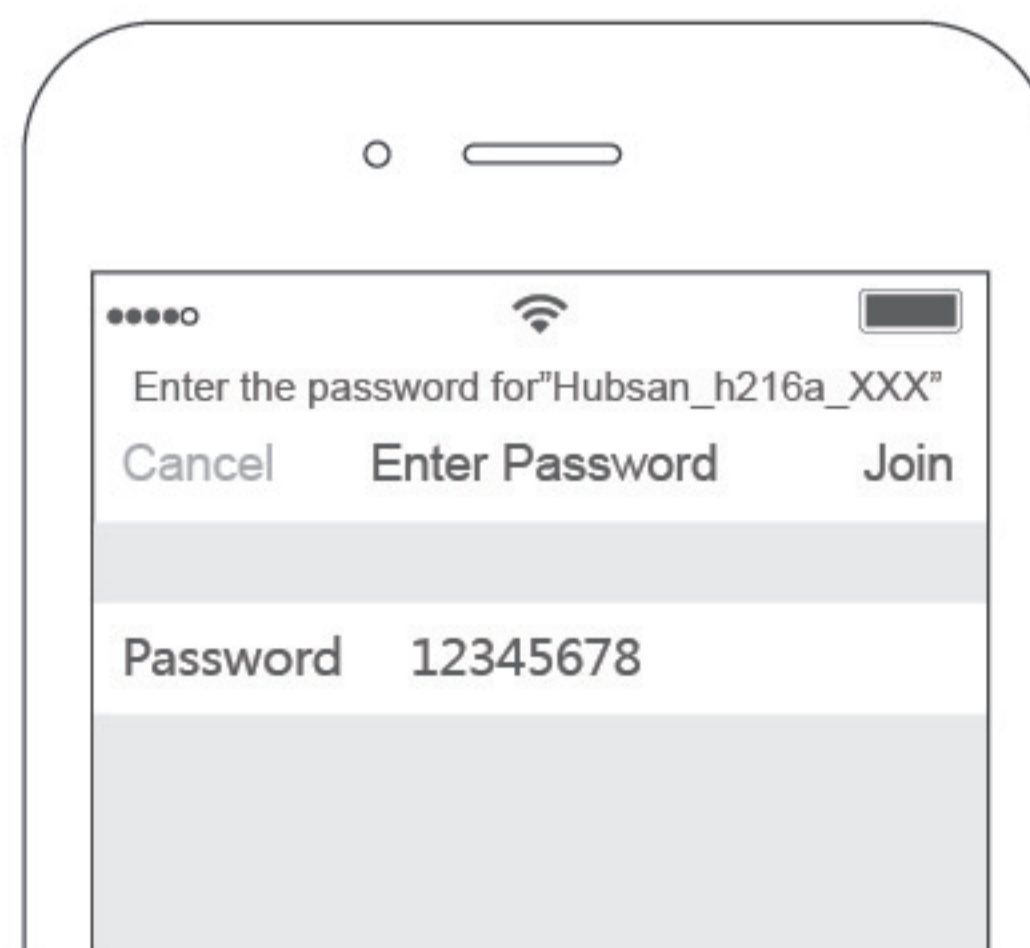
The first flight configuration: aircraft +mobile device (phone/tablet)+ HT009 transmitter

Step 1: Pairing the aircraft and mobile device

Connect the aircraft to its battery and power it on. Go to your mobile device's WIFI settings and pair the device with the aircraft. Then, run the X-Hubsan APP.



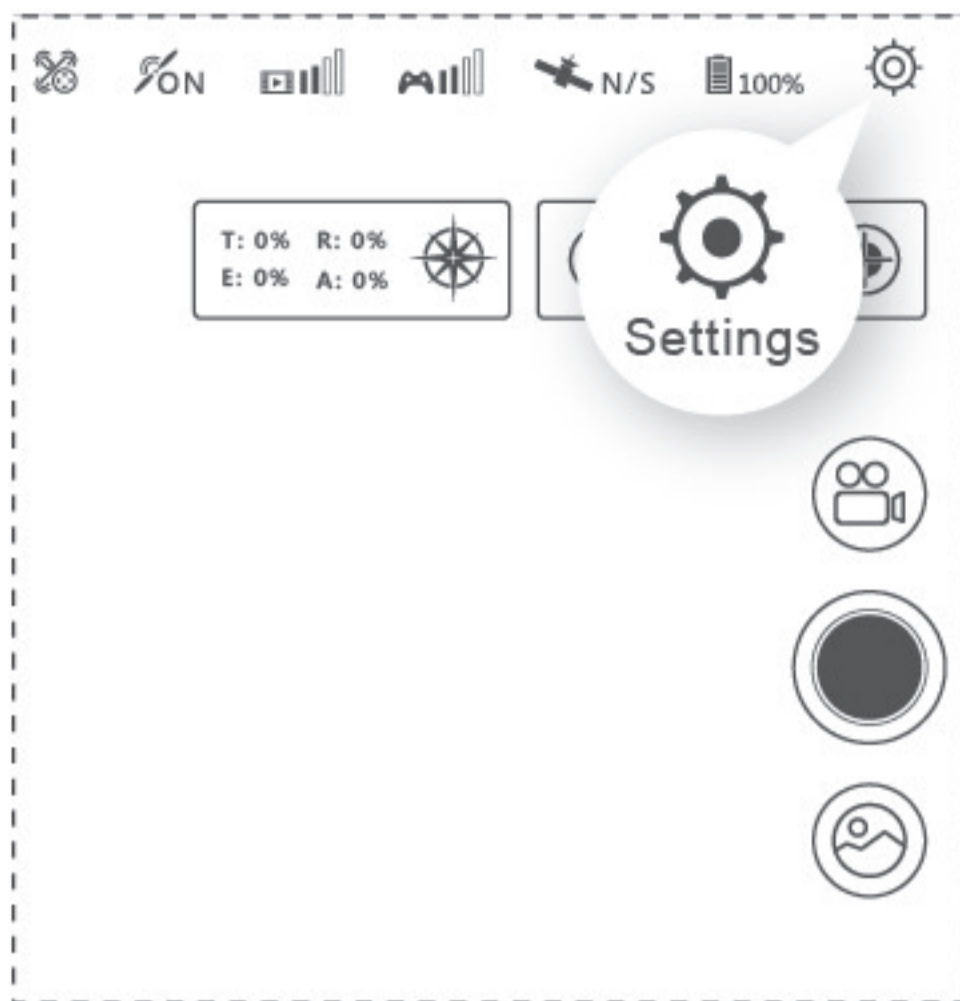
Name: HUBSAN_H501M_XXXXXX



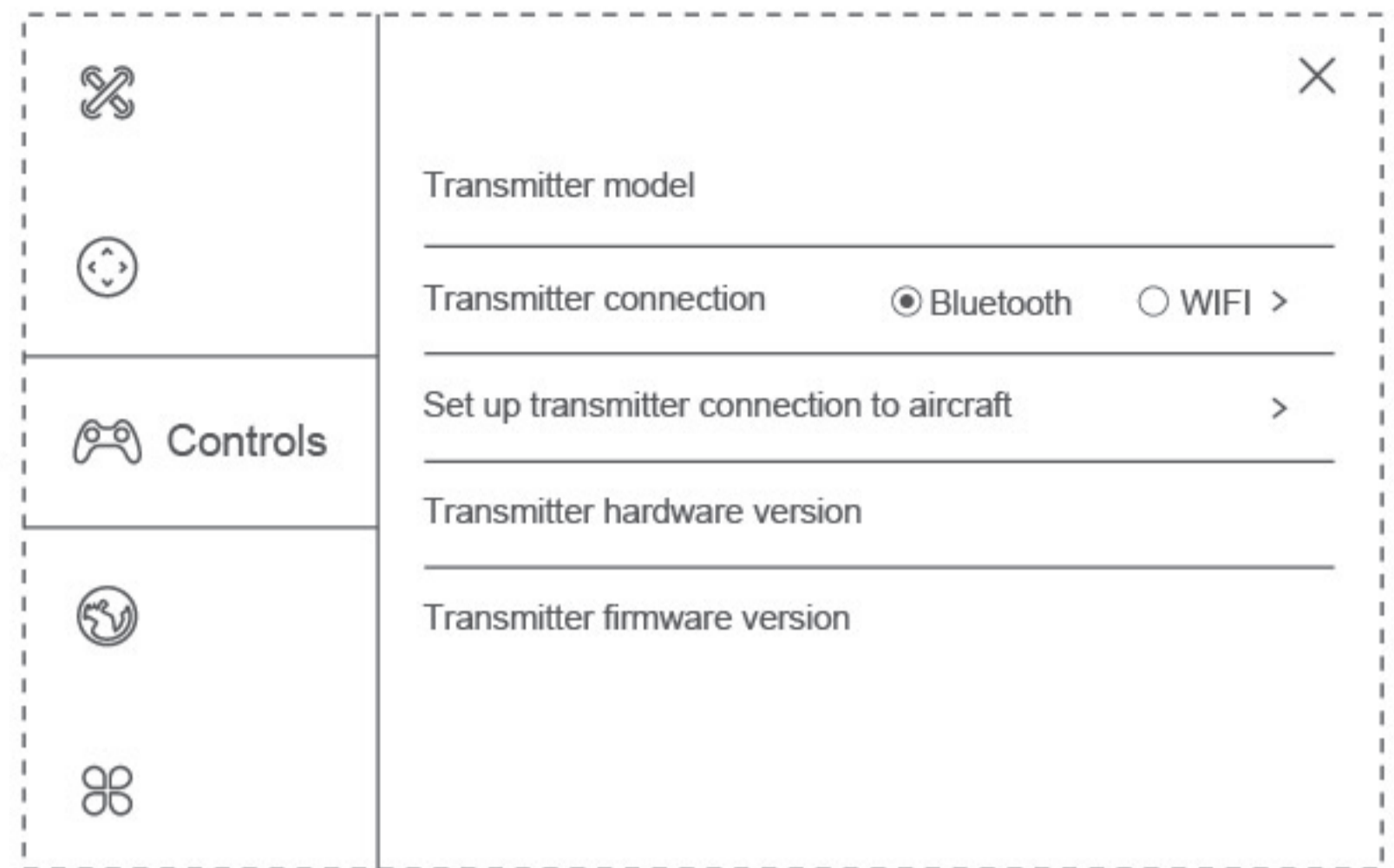
Password: 12345678

Step 2: Pairing the transmitter and mobile device

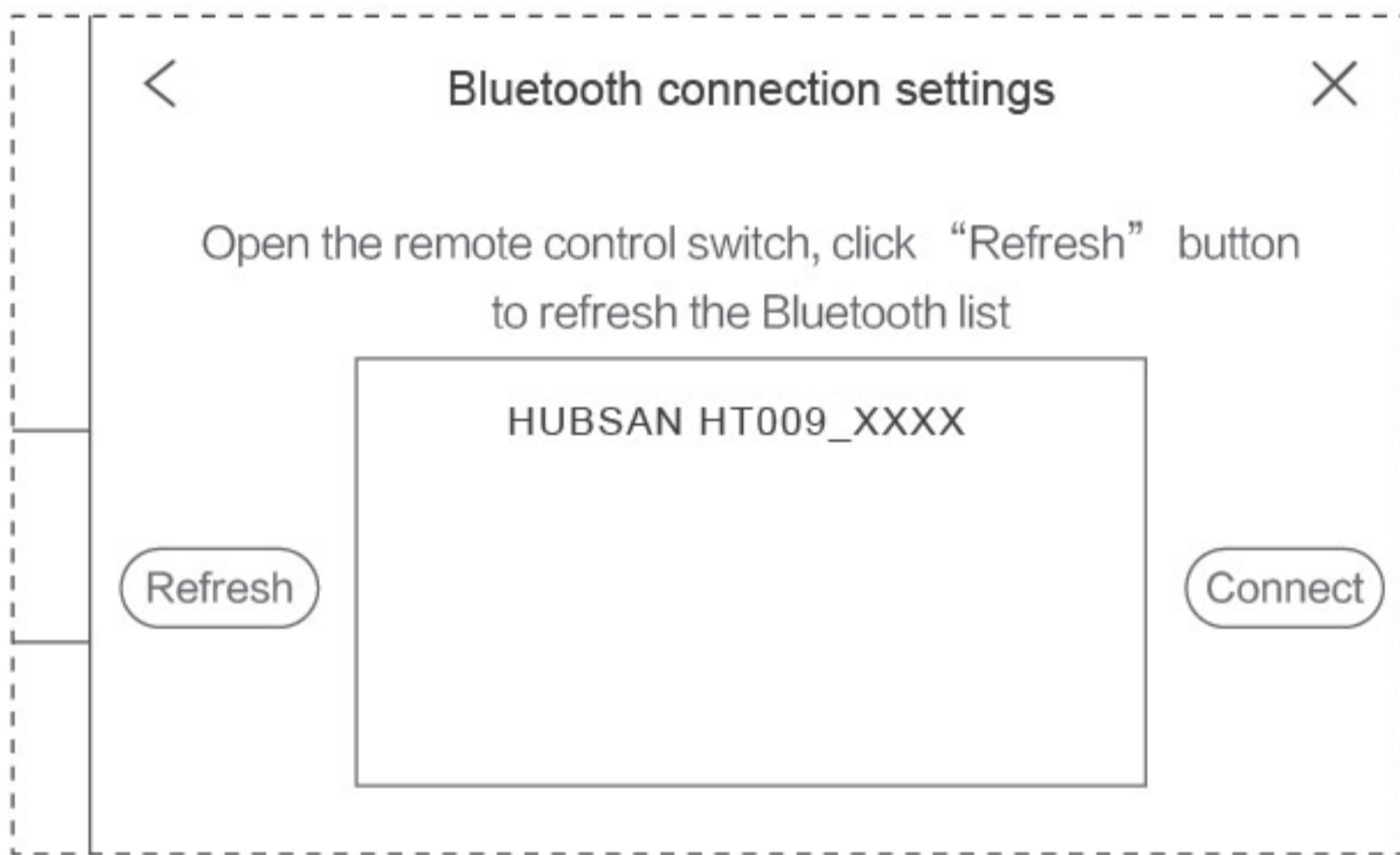
Power the transmitter on, pair the mobile device and transmitter on the Bluetooth menu.



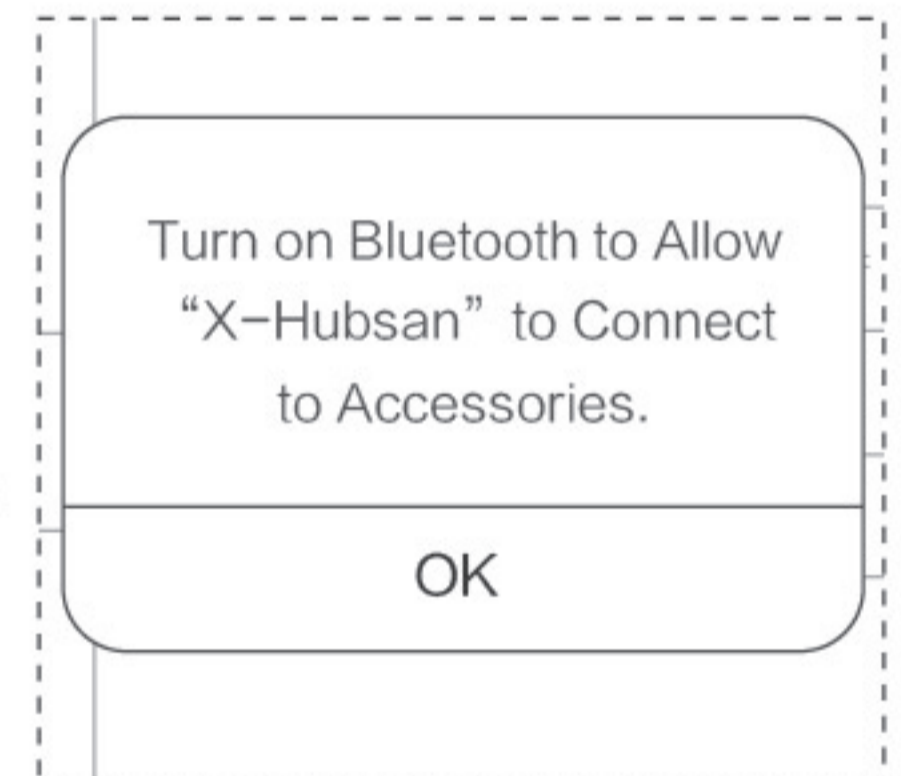
Enter the main APP interface and tap the Settings cog on the upper right hand corner.



Tap "Controls" and then "Set up transmitter connection to aircraft".



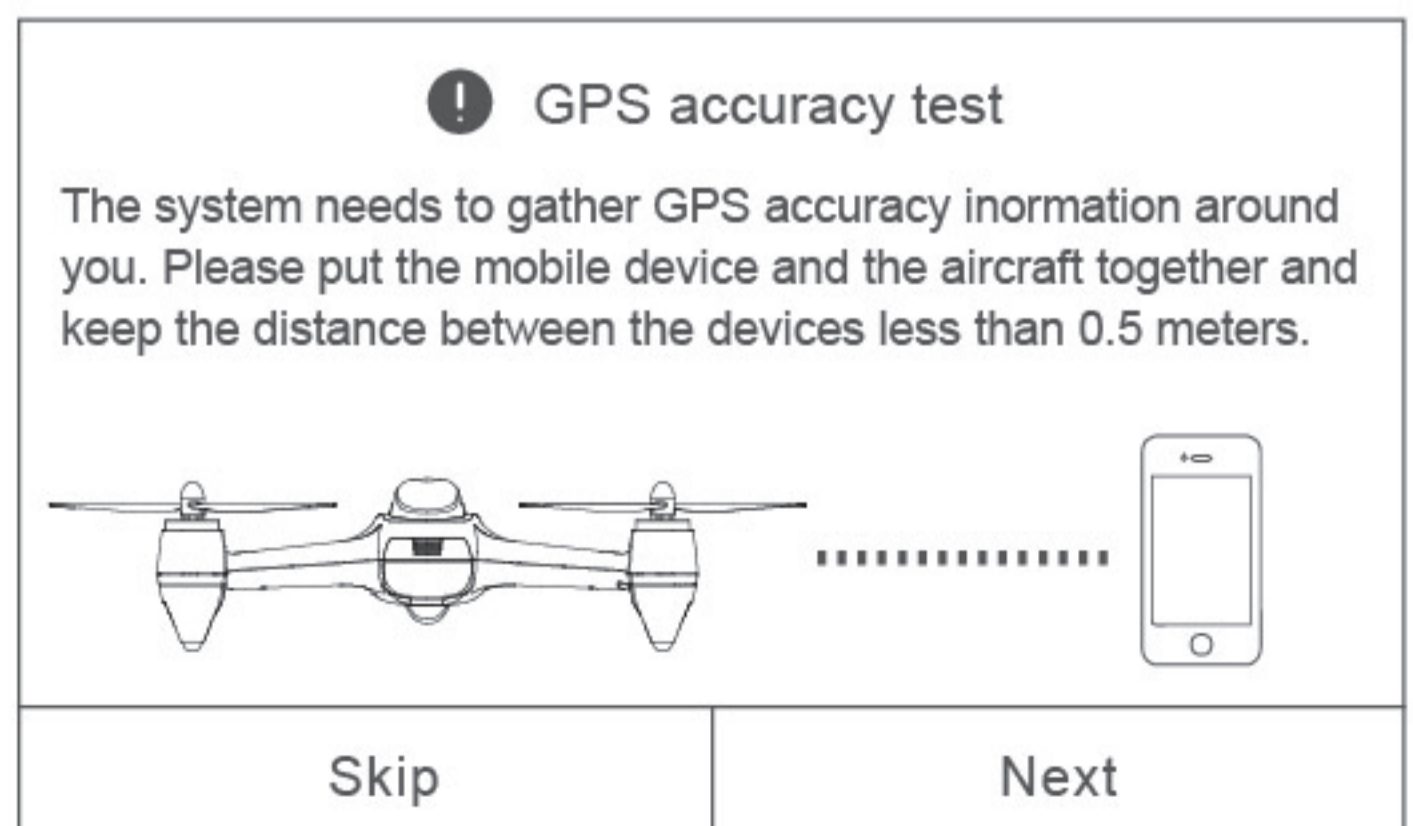
The interface will then show the "Bluetooth connection settings" menu. Select "HUBSAN HT009_XXXX" and tap connect.



The interface will request Bluetooth be turned on. Tap "OK" to be redirected to the mobile device's Bluetooth page. Confirm that Bluetooth is set to "On" for X-Hubsan.

Step 3: GPS accuracy test

Please follow the APP's prompts to test GPS accuracy (right hand figure).



Step 4: Taking off and landing

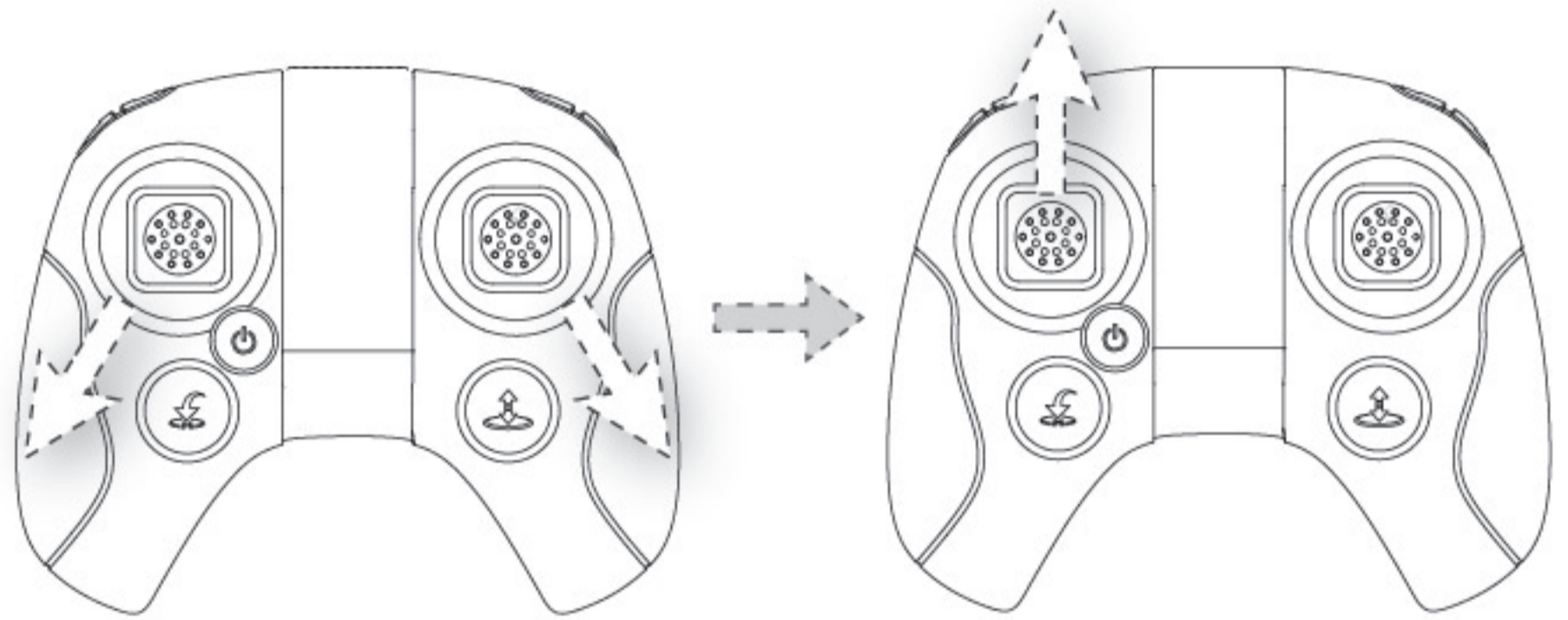
Takeoff: (two options)

It is recommended that users implement some kind of flight training (i.e using a simulator for flight practice, seeking professional guidance, etc.) before flying the H501M. Please select an appropriate flight environment for flight.

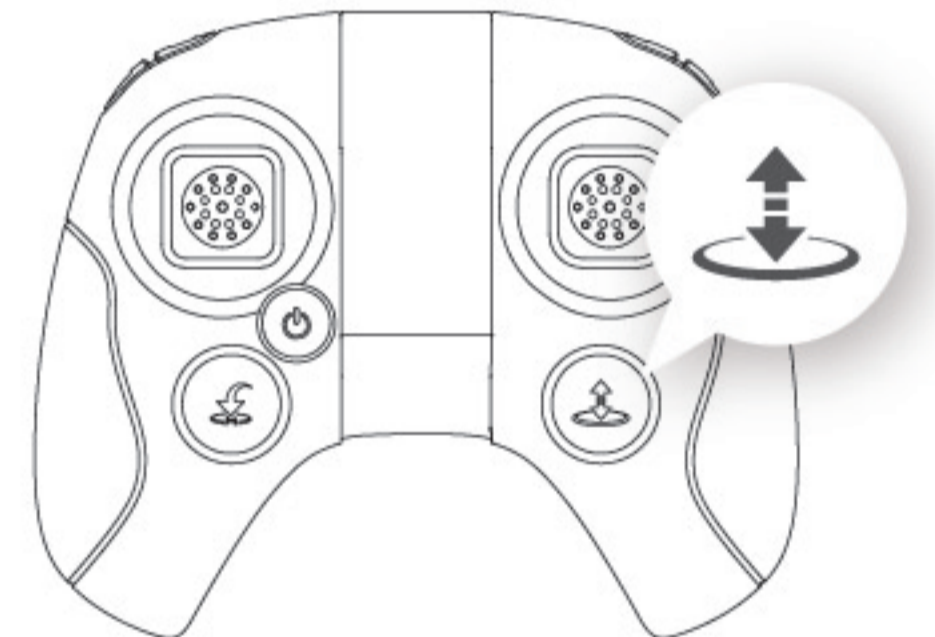


Please fly when the aircraft has acquired at least 6 or more satellites. GPS Hold, Return to Home, Waypoints, Orbiting and Follow Me are ready for use only when the aircraft possesses 6 or more satellites. GPS signal and functions (listed above) are not available indoors.

1) Manual takeoff: To start/arm the motors, please be sure that the joystick setting is activated. Simultaneously pull both joysticks diagonally down-out as shown in the right hand figure. Slowly push the throttle stick up; the aircraft will ascend and takeoff.

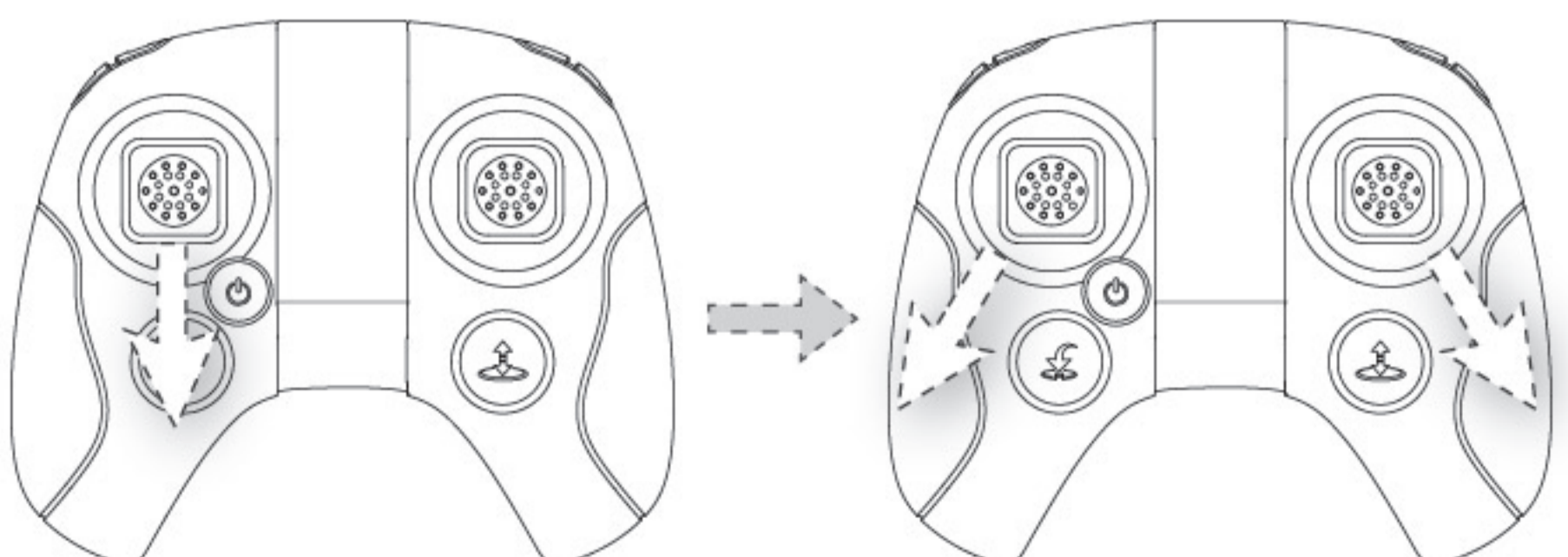


2) Automatic takeoff: Press the Auto Takeoff button. The aircraft will take off and hover at a height of around 2 meters (right hand figure). Note that the Auto Takeoff key will turn into an Auto Land key after the aircraft begins to fly.



Landing: (three options)

1) Manual landing: Slowly push the throttle stick down until the copter has completed its descent to the ground. Pilots may disarm the motors by simultaneously pulling both sticks diagonally down-out, or by holding the throttle in its most downward position for 3 seconds. When the motors have completely stopped, release the joystick(s).



2) Press the Auto Land button and the aircraft will slowly descend to the ground. (Figure 5)

3) Tap the Return to Home icon. The aircraft will return and slowly descend to the ground. (Figure 6)

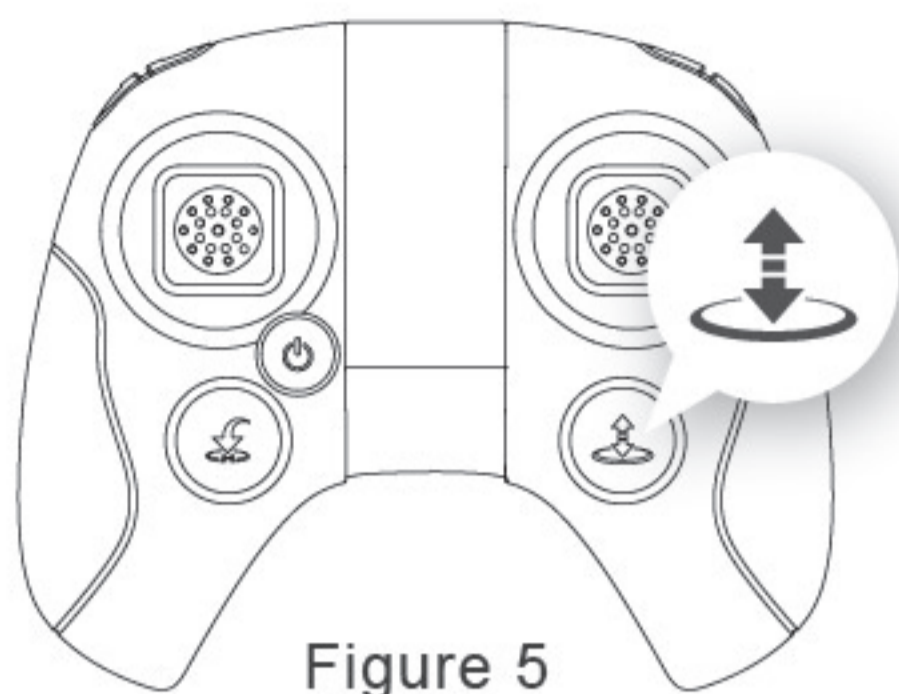


Figure 5

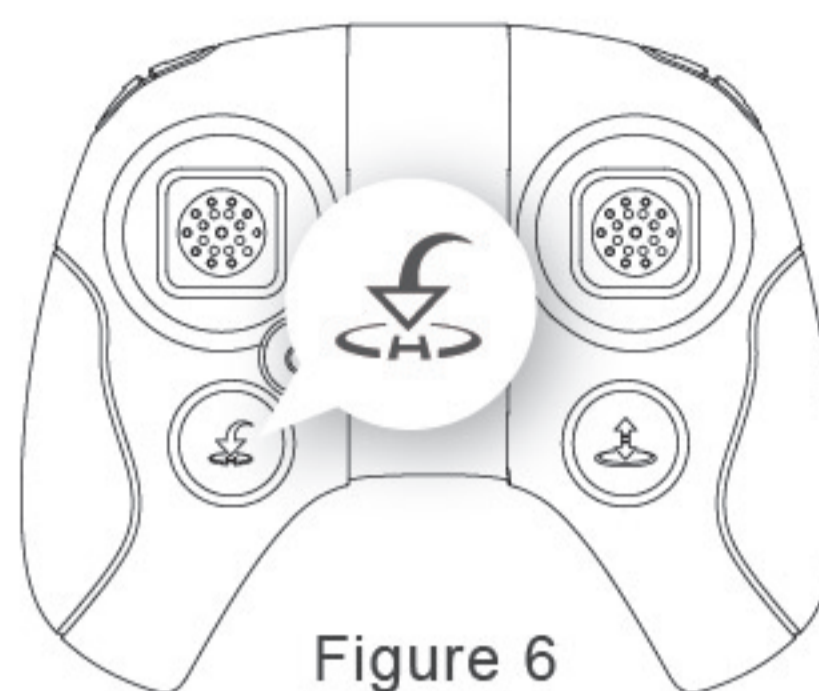


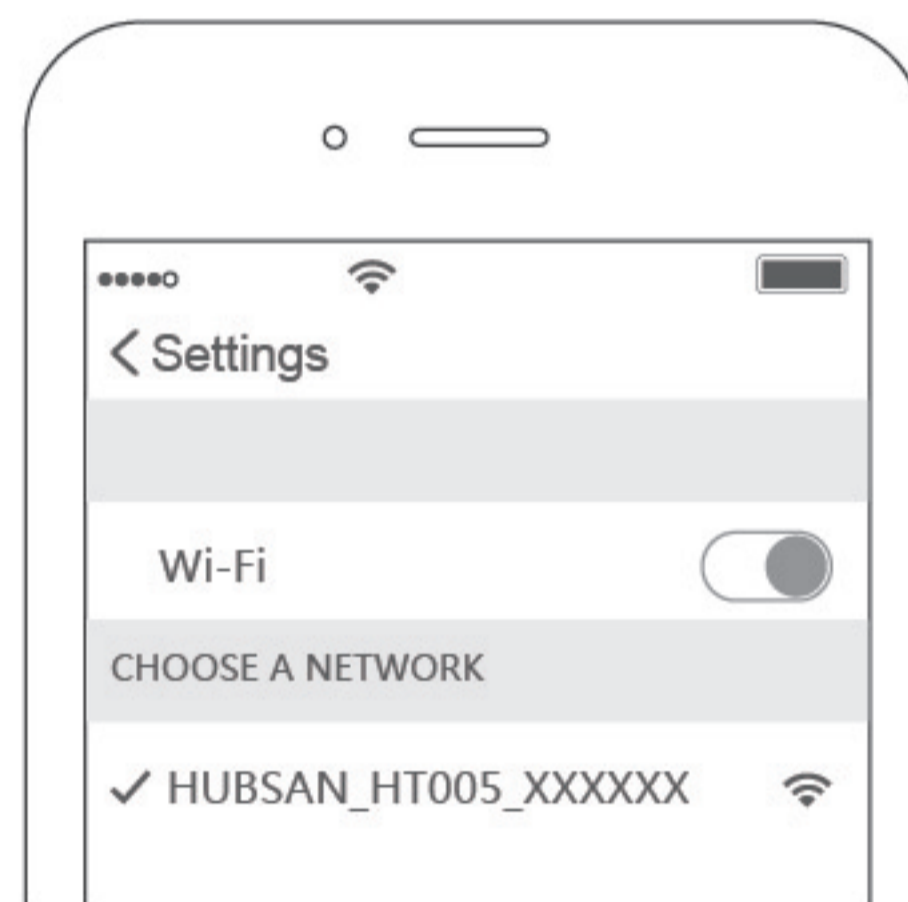
Figure 6

Before taking off, make sure that there are no obstructions in the flight route or environment. Be sure to choose a flat, open area when landing.

The second flight configuration: aircraft+ mobile device (phone/tablet)+HT005

Step 1: Pairing the HT005, mobile device and aircraft

1) Power on the HT005. Enter your mobile device's WIFI settings and connect to the HT005's WIFI signal (Hubsan_HT005_XXXXXX as shown on the right).



2) Run X-Hubsan APP. Enter the "Settings" interface and tap the "Controls" tab. Select "WIFI" on the "Transmitter connection" tab (Figure 7).

3) Refresh the WIFI list and select the WIFI signal of the aircraft you are using (i.e. HUBSAN-H501M-XXXX). Tap the WIFI signal in question and allow the relay and aircraft to connect (Figure 8).

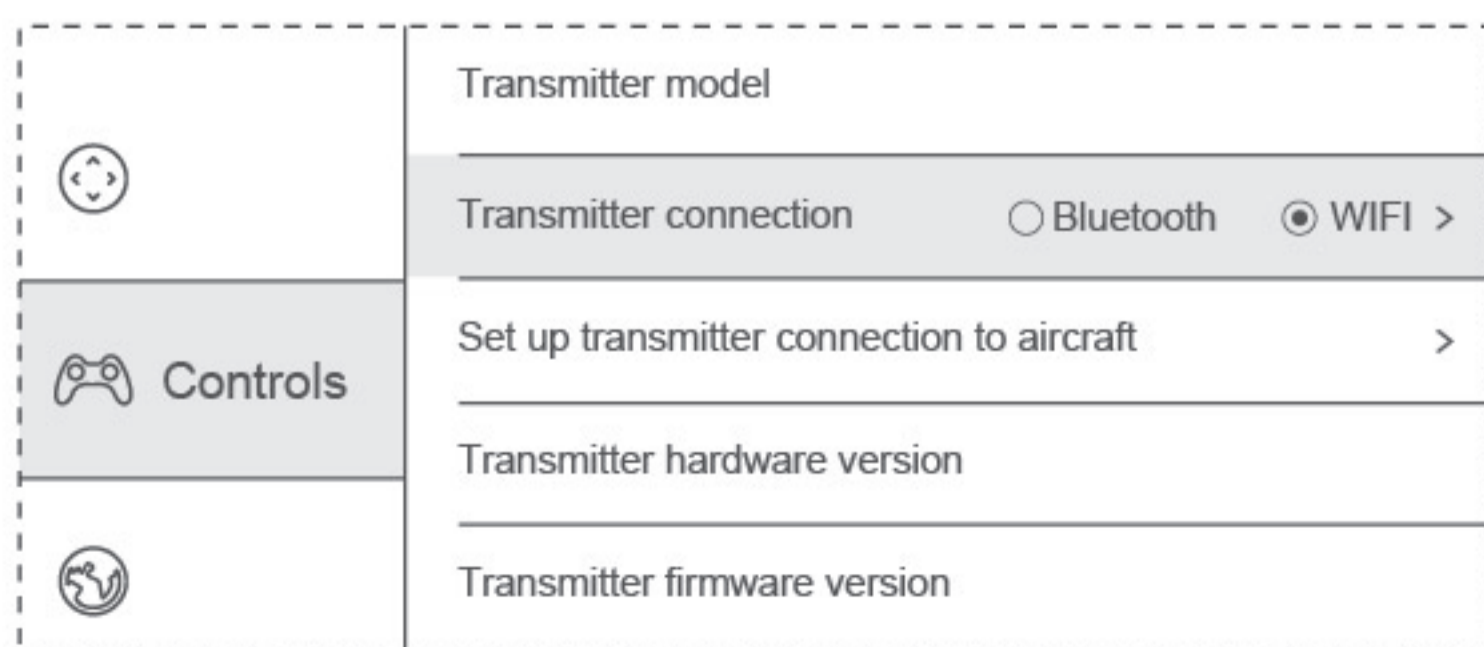


Figure 7

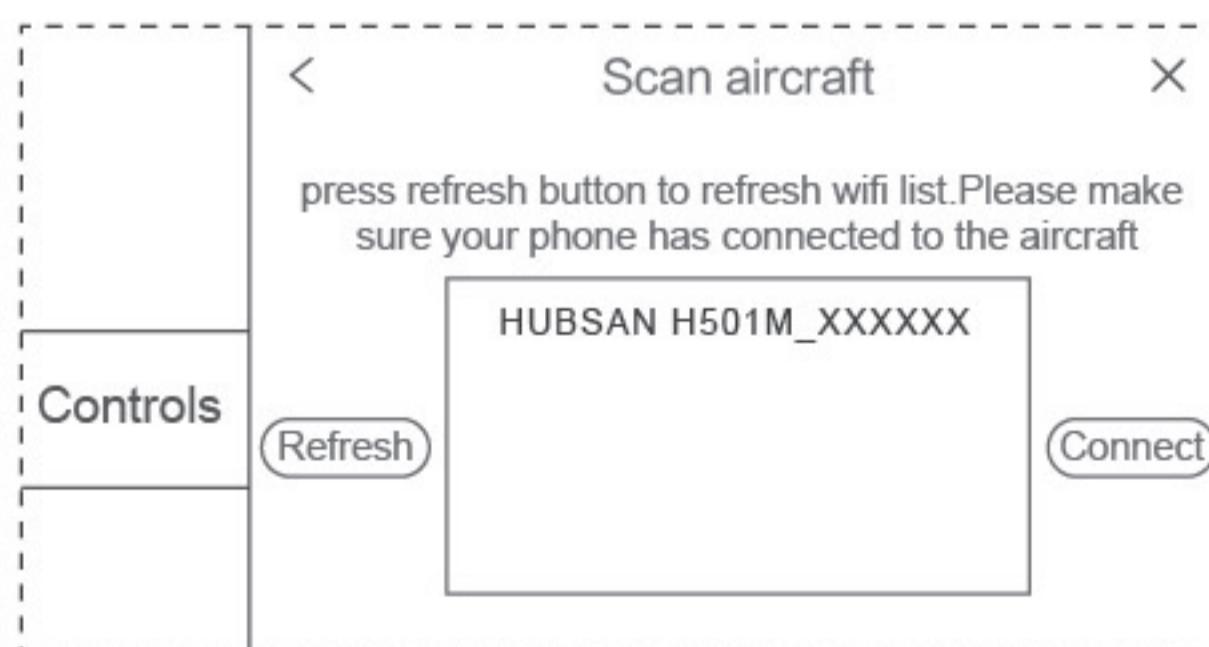
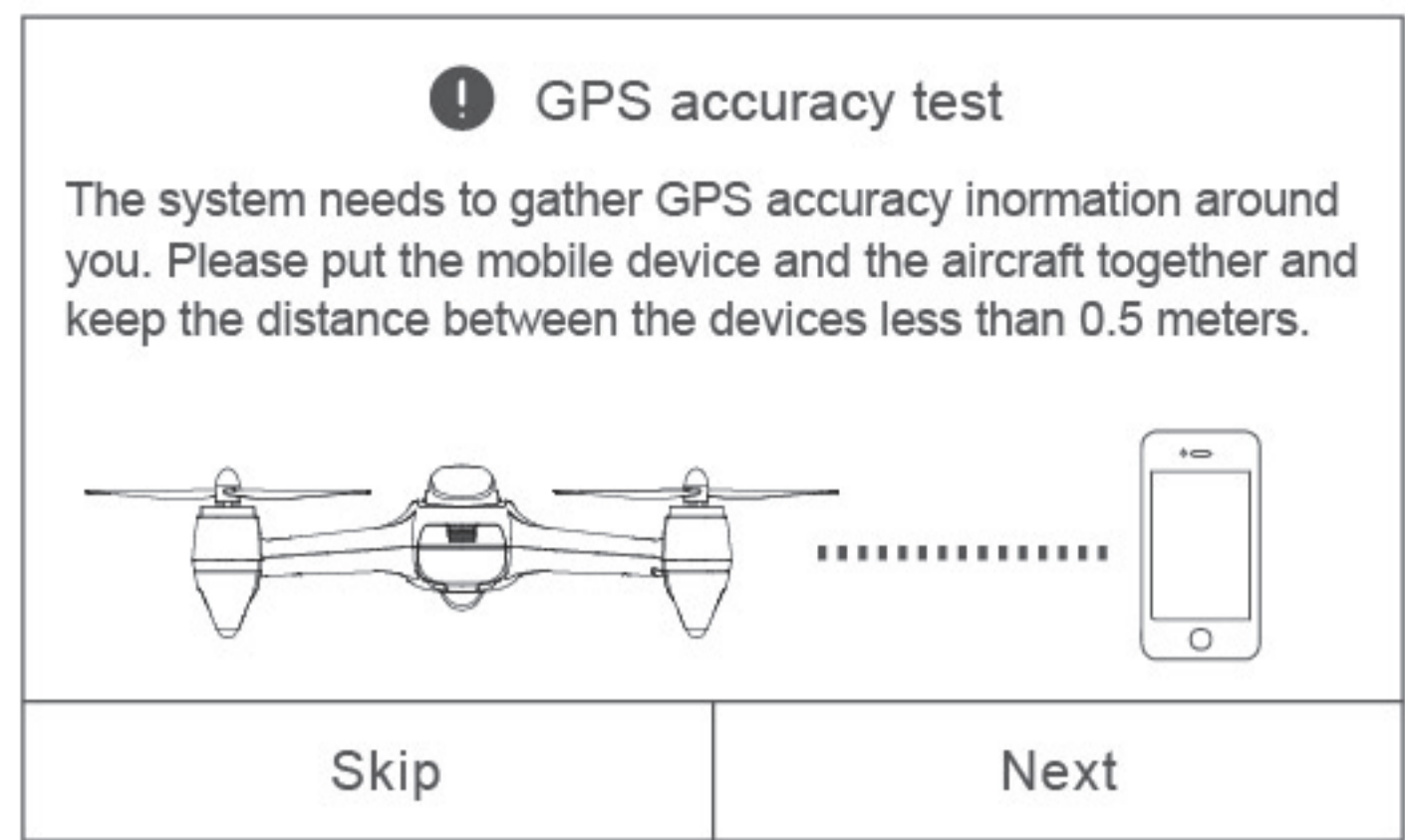


Figure 8

Step 2: GPS Accuracy test

Please follow the APP's prompts to test GPS accuracy (right hand figure)



Step 3: Taking off and landing

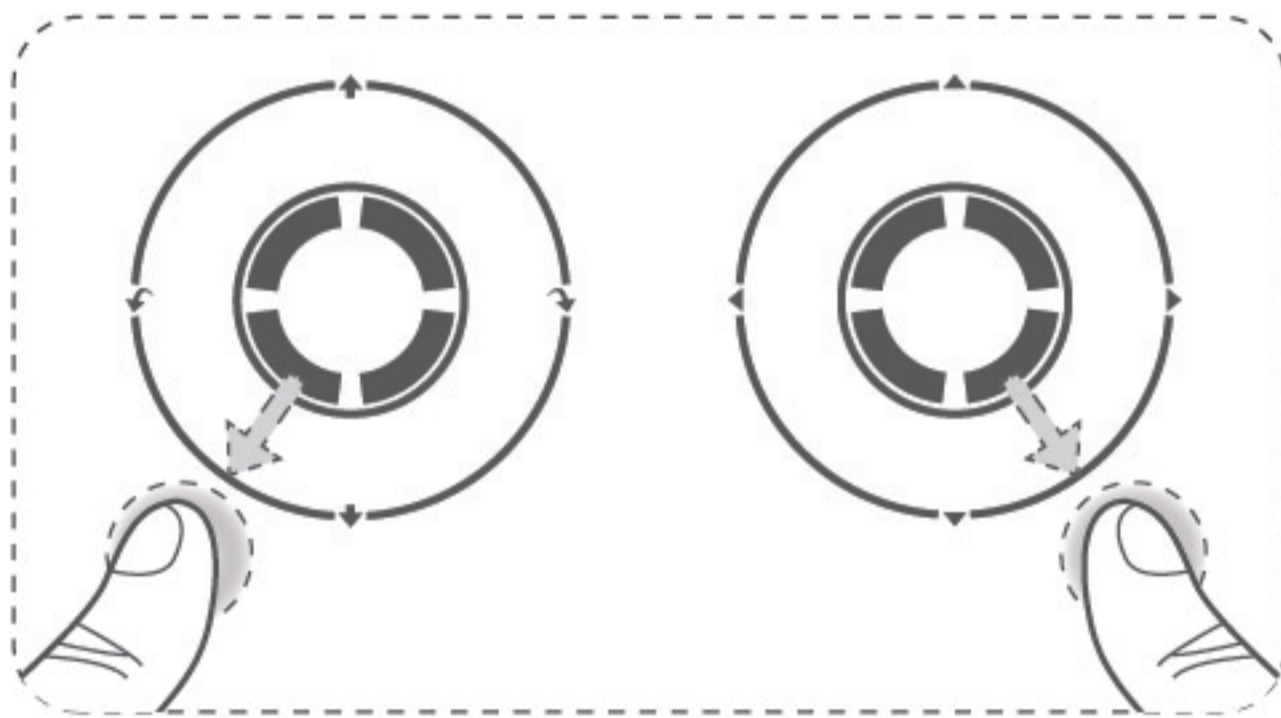
Takeoff: (two options)

It is recommended that users implement some kind of flight training (i.e using a simulator for flight practice, seeking professional guidance, etc.) before flying the H501M. Please select an appropriate flight environment for flight.

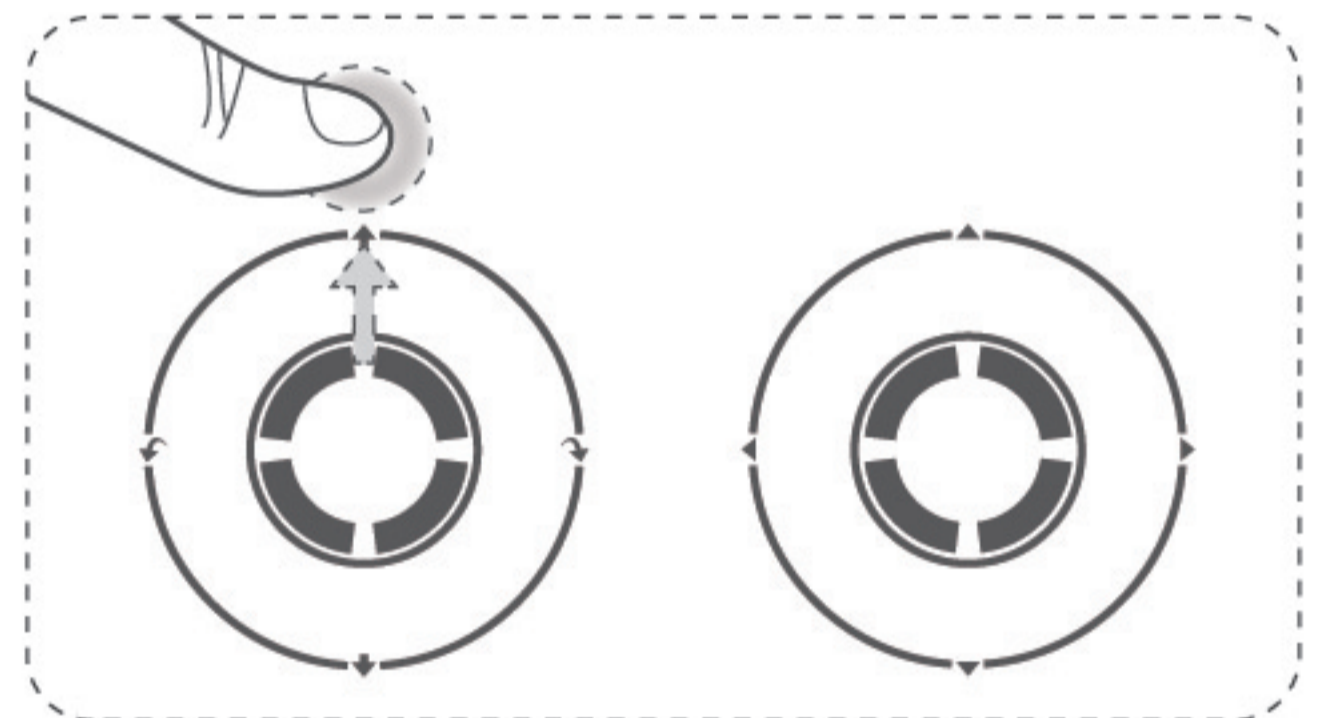


Please fly when the aircraft has acquired at least 6 or more satellites. GPS Hold, Return to Home, Waypoints, Orbiting and Follow Me are ready for use only when the aircraft possesses 6 or more satellites. GPS signal and functions (listed above) are not available indoors.

1) Manual takeoff (with the virtual joysticks): To start/arm the motors, please be sure that the joystick setting is activated. Simultaneously pull both joysticks diagonally down-out as shown in the figures below. Slowly push the throttle stick up; the aircraft will ascend and takeoff.

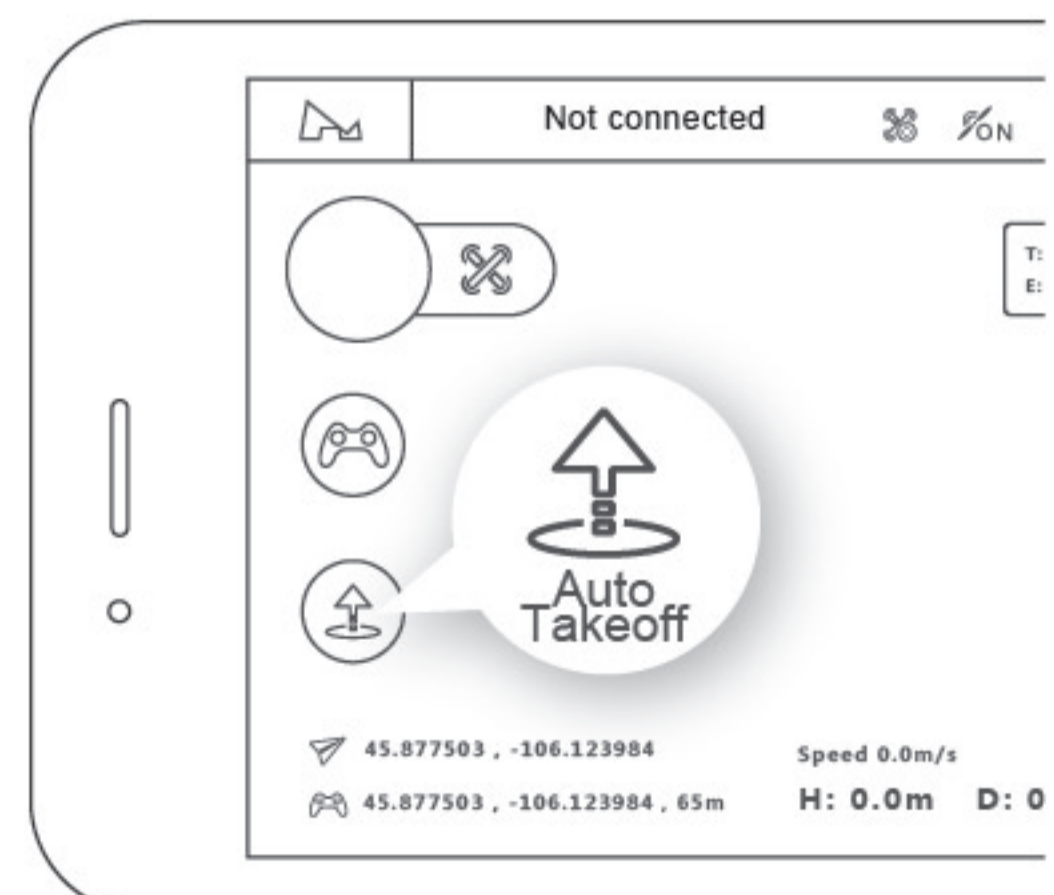


Arming the motors



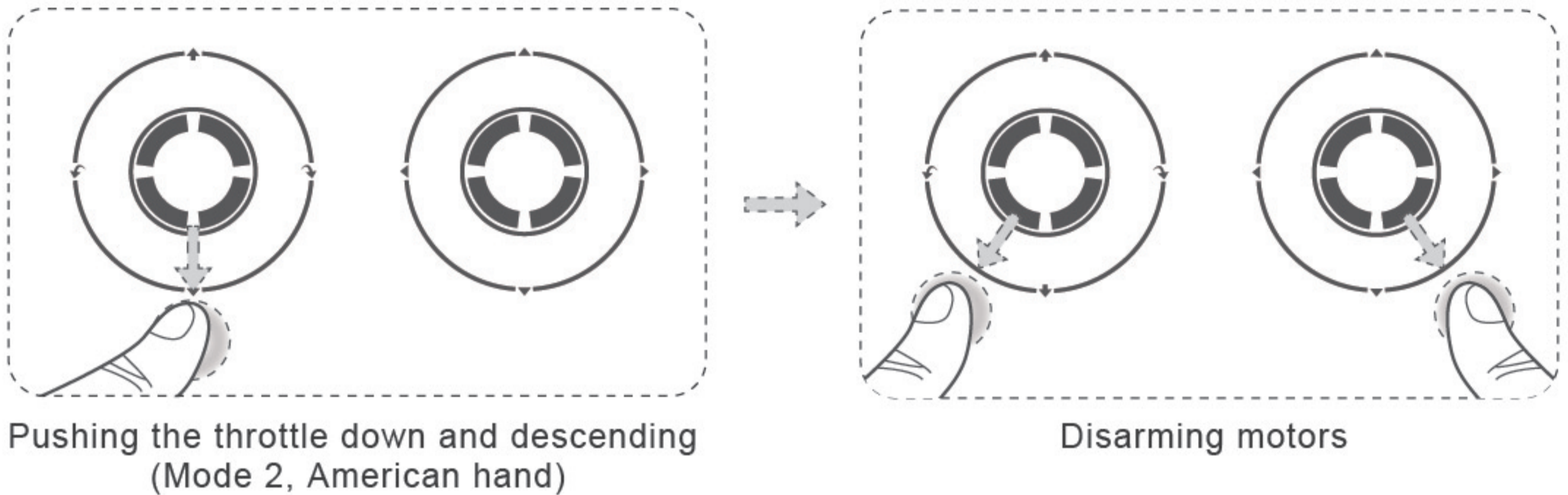
Pushing the throttle up and ascending (Mode 2, American hand)

2) Automatic takeoff: Tap the Auto Takeoff key. The aircraft will take off and hover at a height of around 2 meters. Note that the Auto Takeoff key will turn into an Auto Land key after the aircraft begins to fly. (right hand figure)

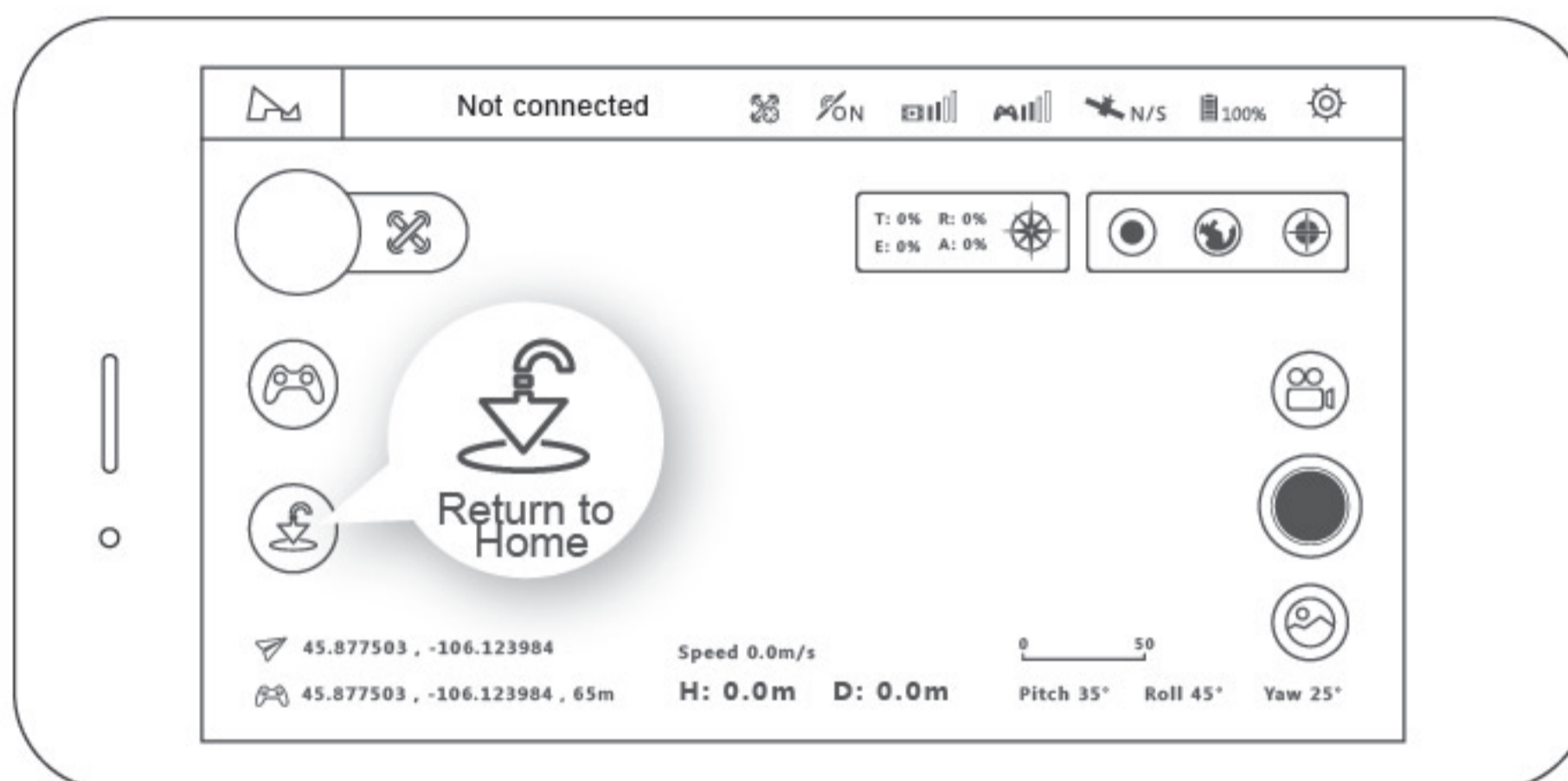


Landing: (two options)

1) Manual landing (with the virtual joysticks): Slowly push the throttle stick down until the copter has completed its descent to the ground. Pilots may disarm the motors by simultaneously pulling both sticks diagonally down-out, or by holding the throttle in its most downward position for 3 seconds. When the motors have completely stopped, release the joystick(s).



2) Automatic landing: Tap the Auto Land icon and the aircraft will slowly descend to the ground.



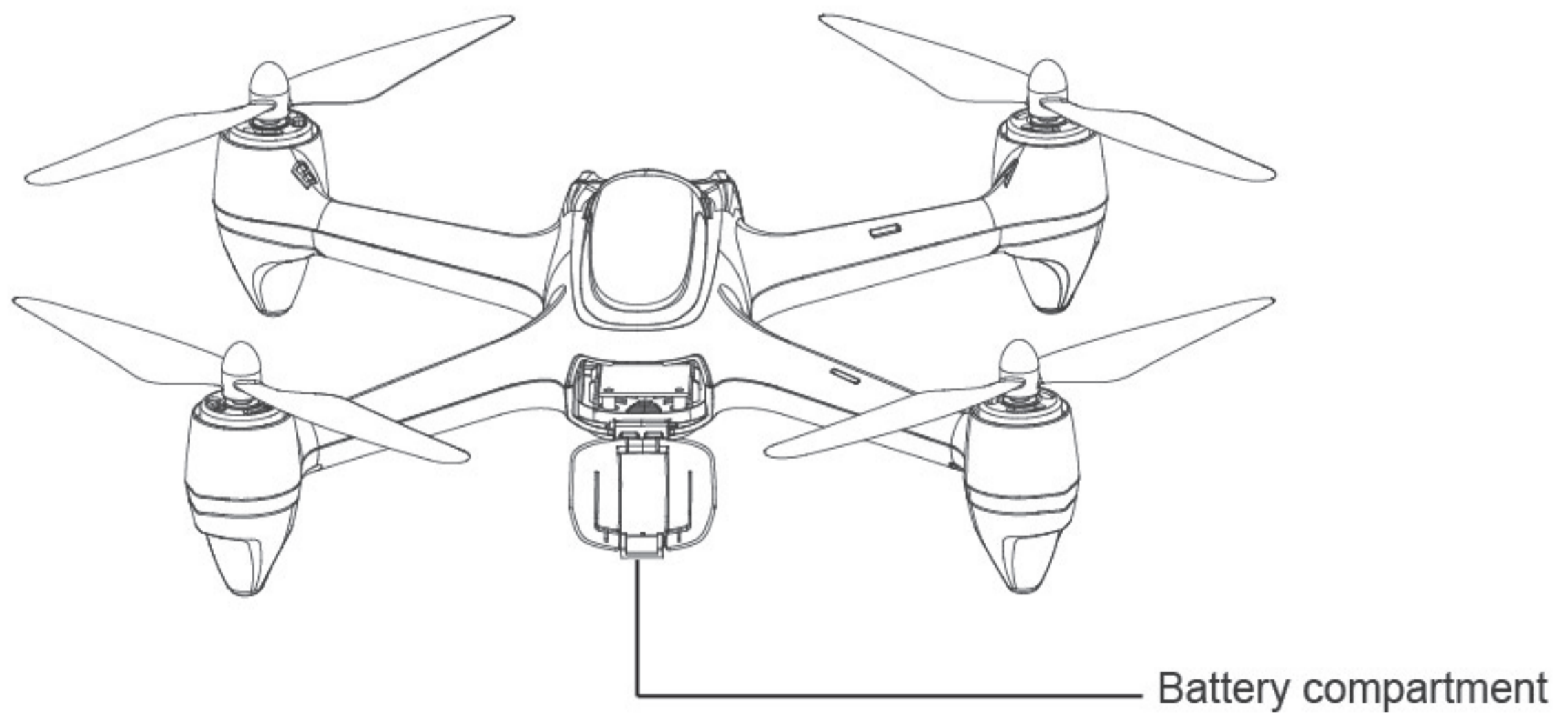
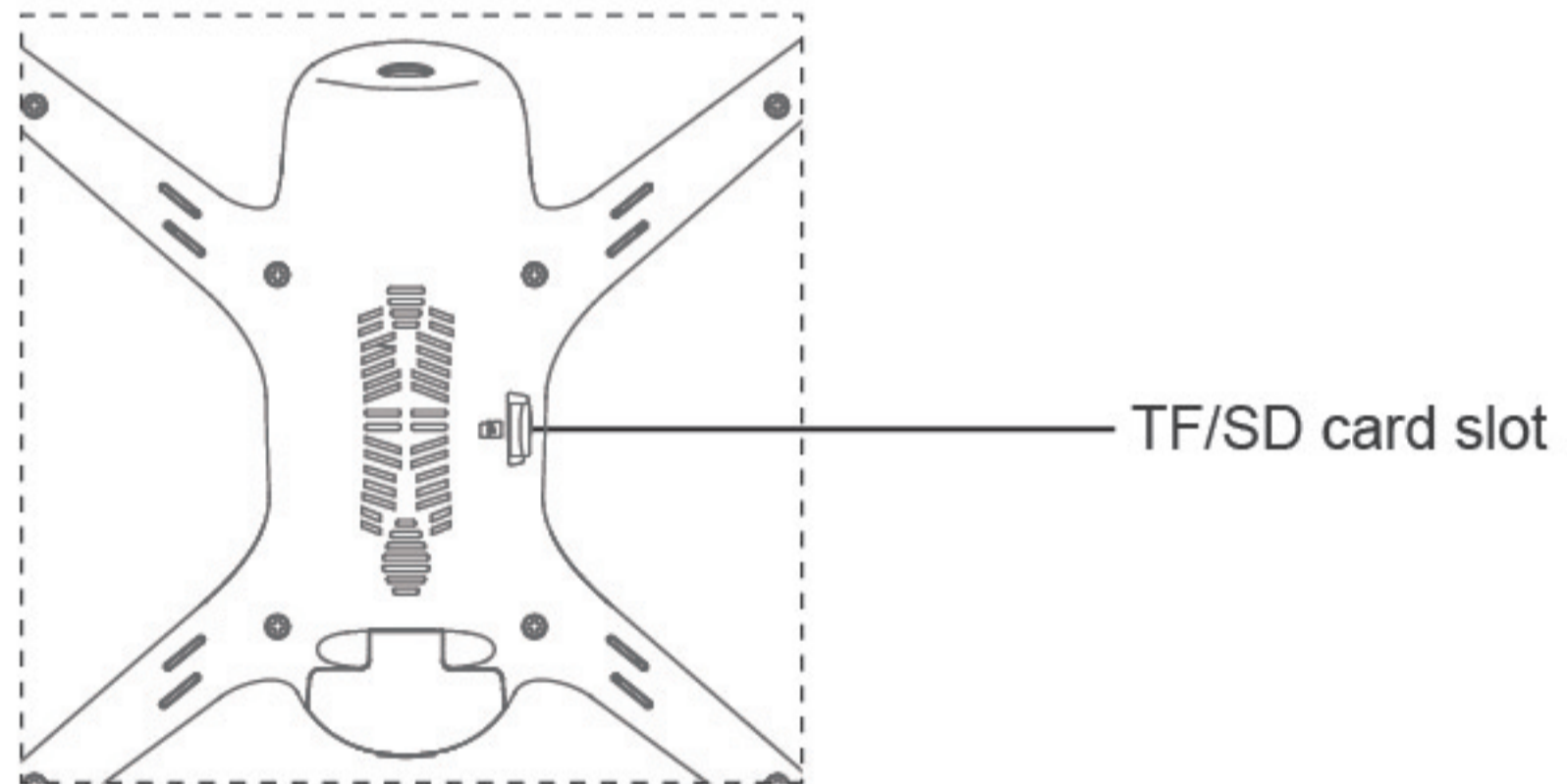
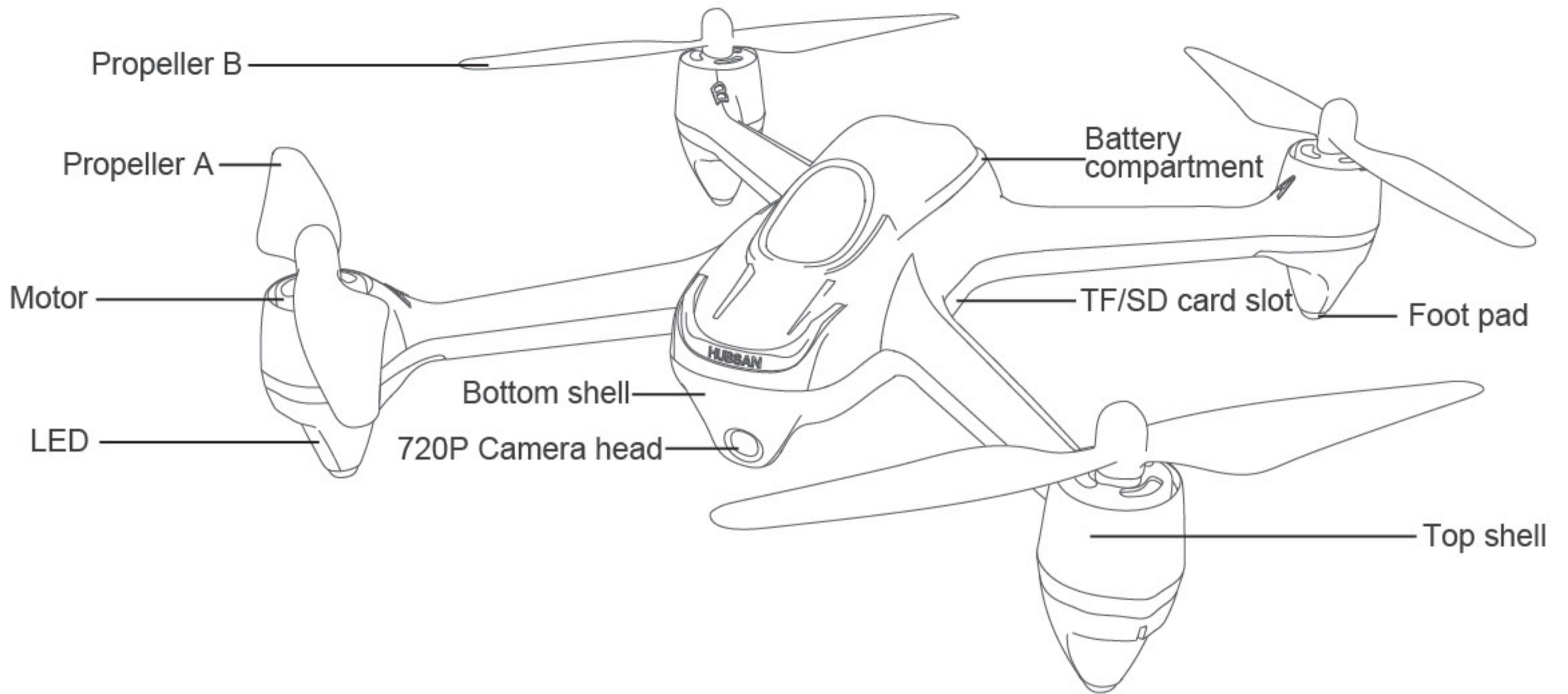
(Figure 9)



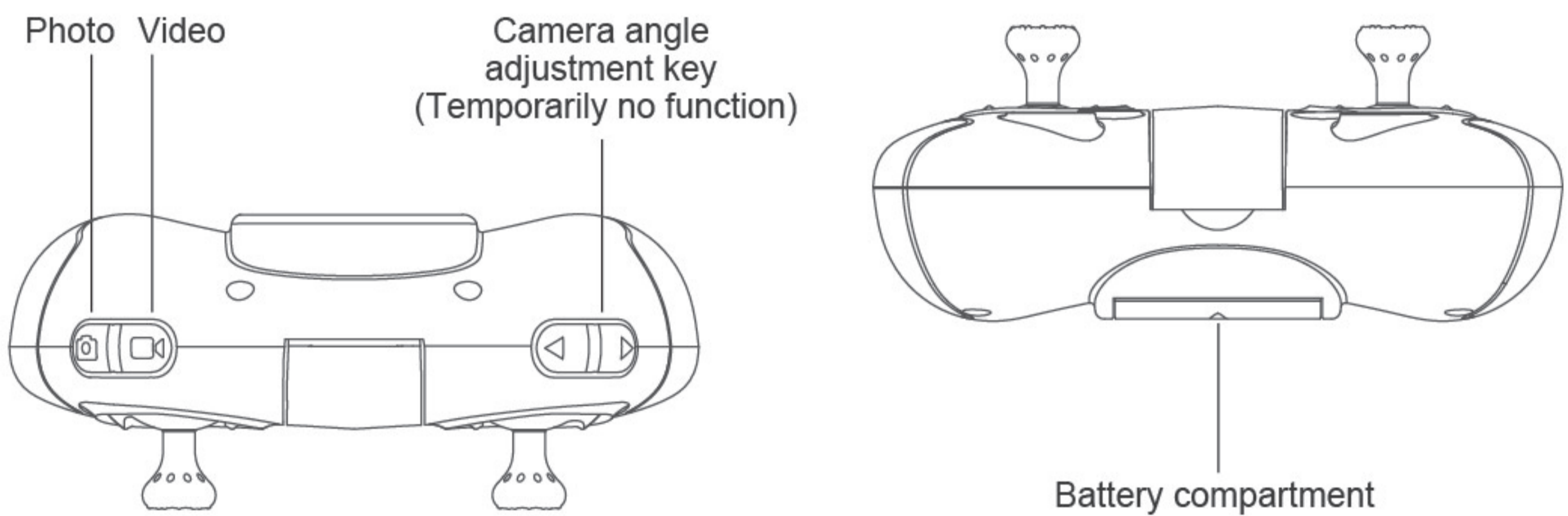
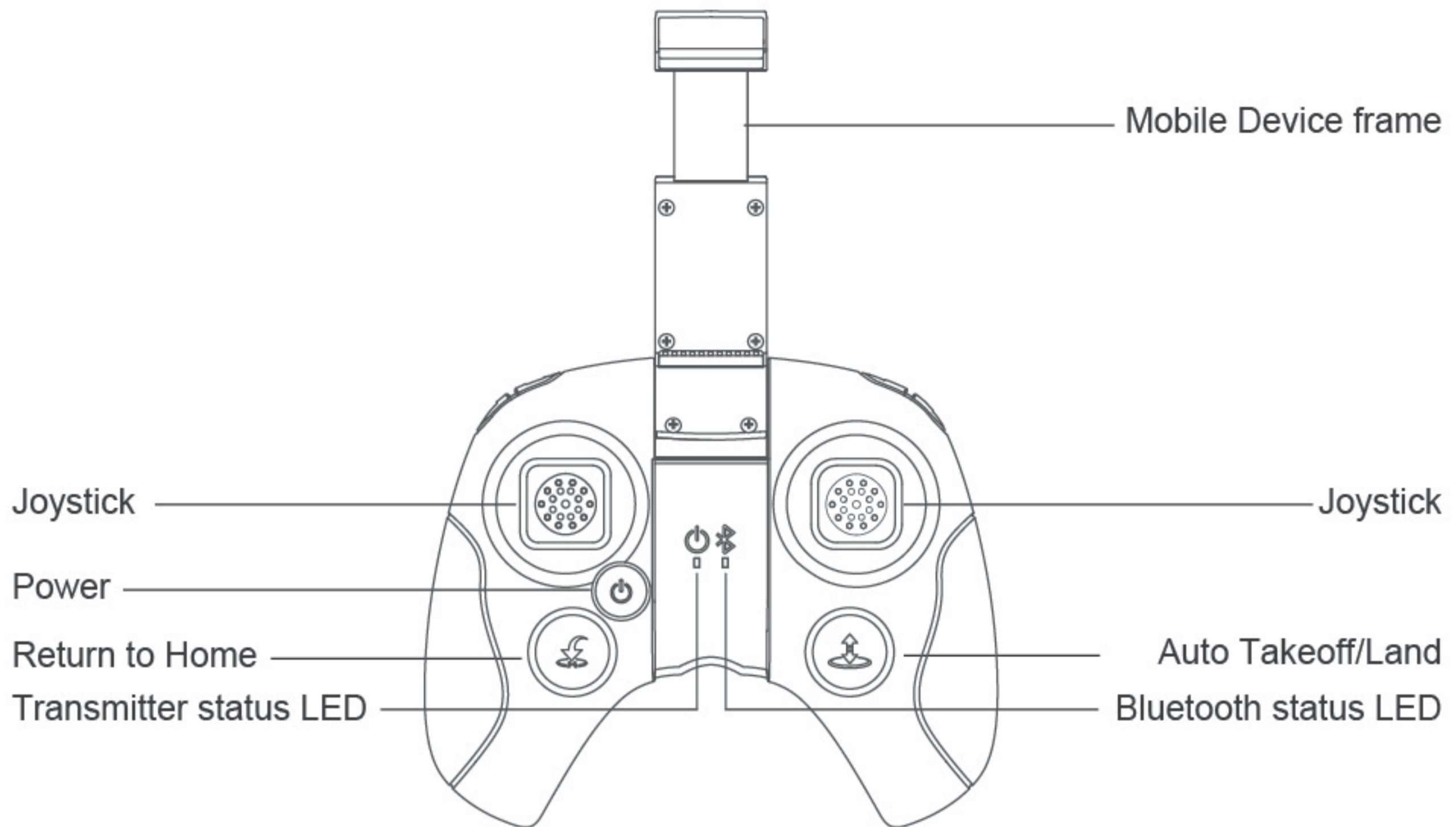
Before taking off, make sure that there are no obstructions in the flight route or environment. Be sure to choose a flat, open area when landing.

To ensure safe flight, do not use your mobile device for other purposes or pair your unit with another mobile device during operation. If you wish to use another device to fly the aircraft, please power the unit off before reinitiating a new pairing.

Getting to know your H501M aircraft



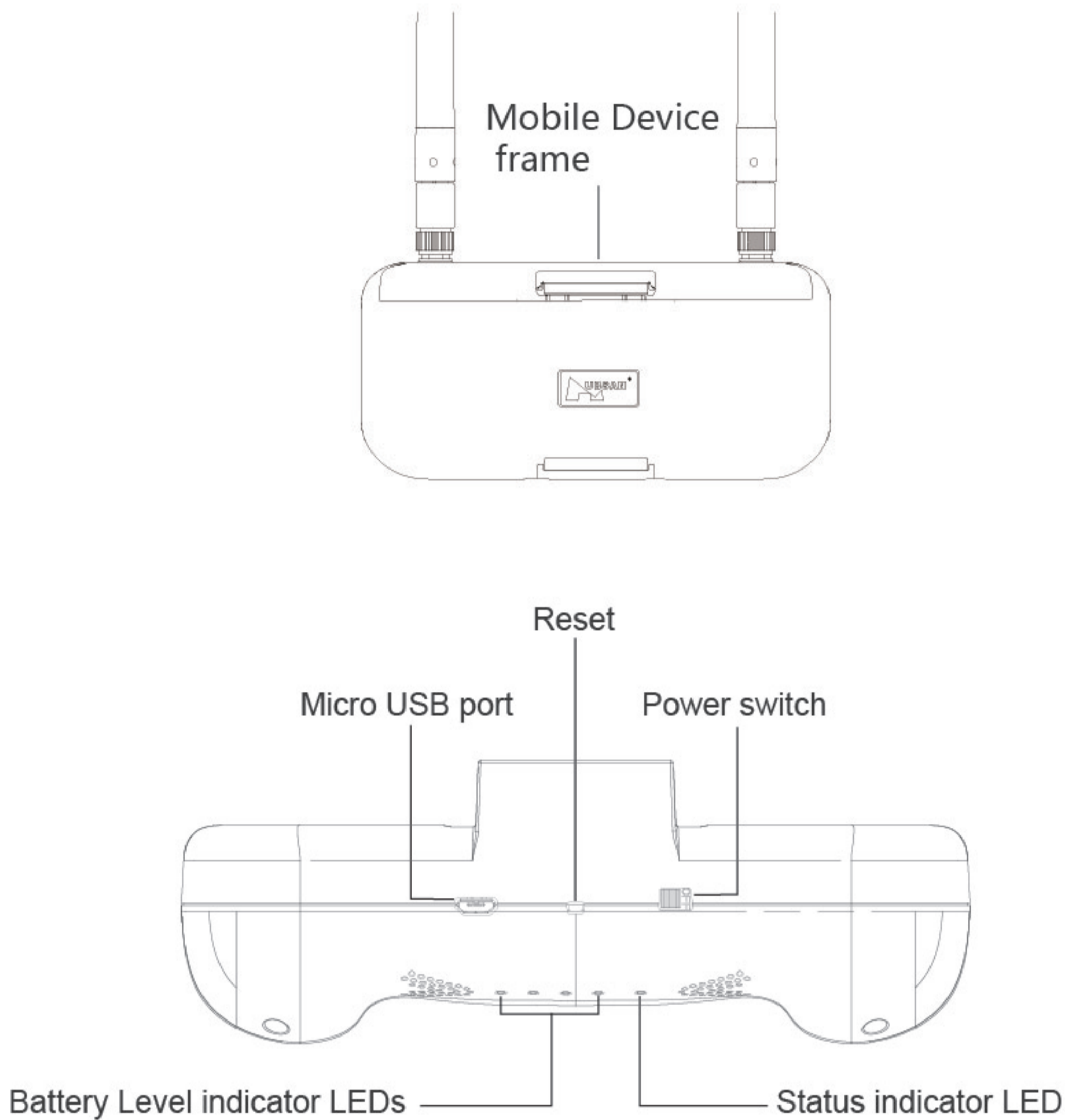
Getting to know your HT009 transmitter



Getting to know your HT005 relay

Product Description

The HUBSAN HT005 relay is a wireless signal amplifier. When used to amplify the aircraft WiFi and X-Hubsan APP connection, users can experience increased flight range. This device is suitable for any HUBSAN WiFi-enabled aircraft.



Indicator LEDs

Status indicator: red upon start up, green when start up is complete.

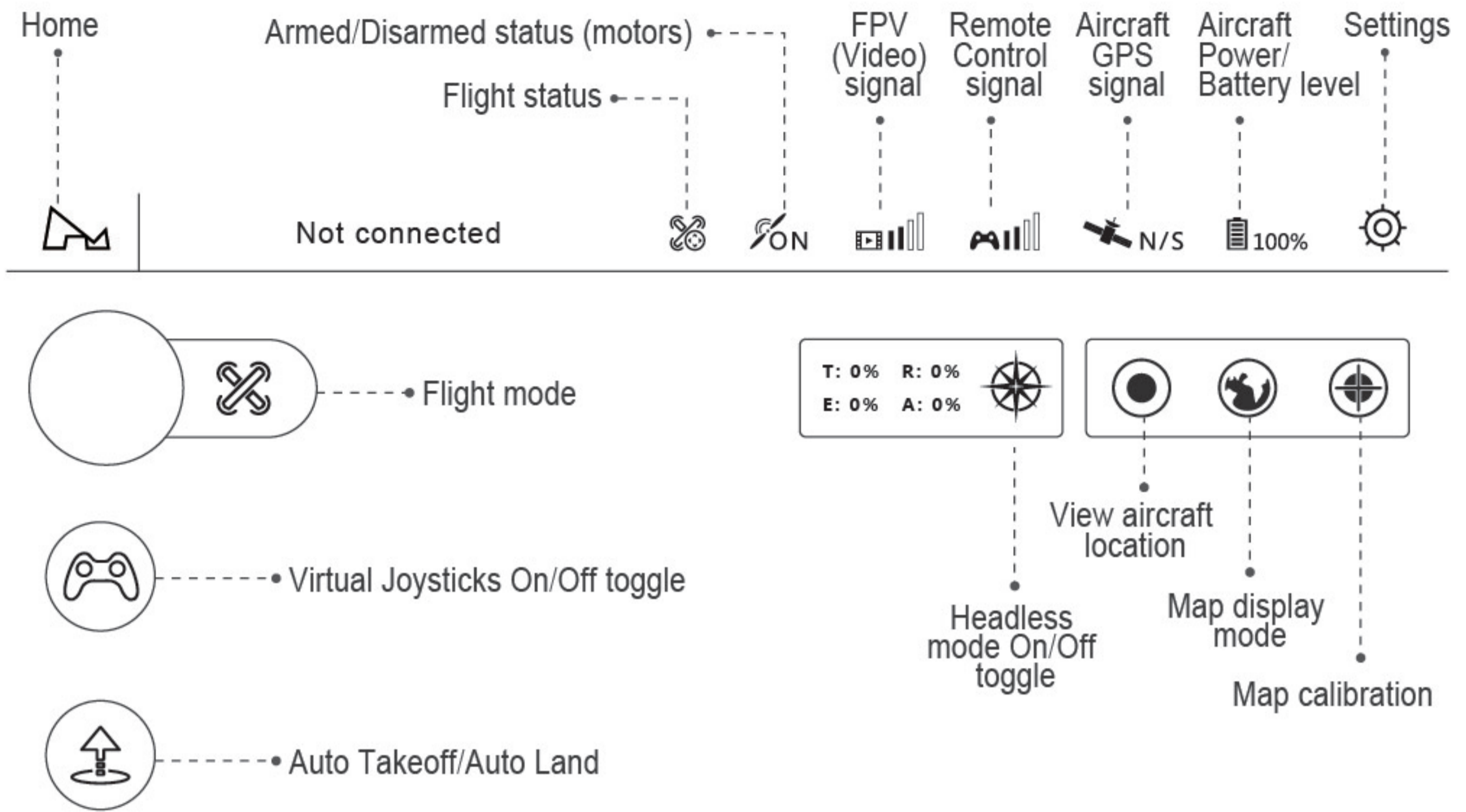
Power indicator: When charging, all 4 LEDs will flash blue. They will stay solidly lit when the battery is fully charged. Each LED represents 25% of the battery's maximum charge.

Getting to know the X-Hubsan APP

X-Hubsan is a flight control APP designed for HUBSAN WIFI-enabled aircraft. Users can control flight, camera, video and flight parameters with the APP.

It is recommended to use a large screened smartphones or tablets for the optimal visual experience.

Please download the X-Hubsan APP for free via the App Store or Google Play.



Aircraft LED indications

The H501M has 4 LEDs; the fore/frontal LEDs are blue and the rear LEDs are red. The LED status indications are defined as follows:

Function	LED status indication
Power on and start up	All 4 LEDs flash simultaneously
Compass Calibration	Calib. Compass 1: all 4 LEDs flash clockwise.
	Calib. Compass 2: LEDs should be flashing in vertical pairs, alternately.
Horizontal Calibration	All 4 LEDs flash simultaneously
Inertial Sensor Calibration	All 4 LEDs flash clockwise
Flight mode	All 4 LEDs are solidly lit
Low Power	Fore/frontal blue LEDs stay solidly lit and the rear red LEDs flash rapidly
Flight control signal loss warning	When the flight control signal is lost, the rear LEDs will stay solid while the fore LEDs will slowly flash
Headless mode	Fore LEDs (blue) flash alternately; rear LEDs (red) stay solid
How to turn off the LEDs	Long press the Photo button

H501M Frequently Asked Questions

1. Aircraft and mobile device are not pairing

- ① Check that the WIFI utility on the mobile device is on and any data (ie 4G, LTE) is shut off.
- ② Restart the aircraft by disconnecting and reconnecting it from its battery.

2. Weak or nonexistent GPS signal/few or no GPS satellites

Make sure that the aircraft is not indoors or between buildings. Please take the aircraft outdoors to receive GPS satellites/signal.

3. Follow Me mode does not work

- ① Check that the aircraft is in GPS mode (Follow me will not work without it).
- ② Check that the aircraft has passed the GPS accuracy test (Follow Me will not work if you skip or fail this step).
- ③ Make sure the aircraft still has at least 25% of its power remaining.

4. The aircraft does not return to the home point

When the aircraft takes off, be sure that the aircraft has received 6 or more satellites.

5. The aircraft keeps on losing GPS satellites or GPS satellites drop to 0 erratically

Check to see whether there are sources of high-frequency signal interference around the aircraft (such as high-voltage lines, signal transmission towers, etc).

6. Aircraft/video feed is shaking/shaky

- ① Check if the aircraft propellers are deformed or broken. Please replace them.
- ② Check that all aircraft body screws are firmly in place.
- ③ Check whether any motor shafts are broken or warped. Motors must be replaced if the shafts are in abnormal condition.

Limitation of Liability

Hubsan accepts no liability for damages, injuries or any legal responsibilities incurred directly or indirectly from the use of Hubsan products under the following conditions:

1. Damages, injuries or any legal responsibilities incurred when users are drunk, under the influence of drugs or anesthesia, dizzy, fatigued, nauseous and/or affected by other conditions both physical and mental that could impair sound judgment and/or personal ability.
2. Subjective misjudgment and/or intentional mis-operation of products.
3. Any and all mental damage, trauma, impairment, illness, compensation caused/solicited by accidents involving Hubsan products.
4. Product operation in no-fly zones (i.e. natural reserves).
5. Malfunctions or problems caused by modification, refit, replacement or use with non-Hubsan accessories/parts, failure to follow the guidance of the manual in assembly or operation.
6. Damages, injuries or any legal responsibilities caused by mechanical failures due to natural wear and tear (aircraft flight time clocking in 100 hours or above), corrosion, aging hardware, etc.
7. Continued flight after low voltage protection alarms are triggered.
8. Knowingly flying aircraft under abnormal conditions (such as when water, oil, soil, sand or other unknown material are inside the X4, the aircraft and/or transmitter are incompletely assembled, the main components have obvious faults, obvious defect or missing accessories, etc).
9. Flying in the following situations and/or environments: areas with magnetic interference (such as high voltage lines, power stations, broadcasting towers and mobile base stations), radio interference, government regulated no-fly zones, if the pilot loses sight of the X4, suffers from poor eyesight or is otherwise unsuited for operating Hubsan products.
10. Aircraft use in or exposure to bad weather, such as a rain, wind, snow, hail, lightning, tornadoes and hurricanes.
11. Products are involved in/exposed to collisions, fire, explosions, floods, tsunamis, manmade and/or natural structure collapses, ice, avalanches, debris, landslides, earthquakes, etc.
12. The acquisition, through use of Hubsan products (specifically but not limited to aircraft), of any data, audio, video that results in infringement of law and/or rights.
13. Misuse and/or alteration of batteries, product/aircraft circuits, hardware protections (including protection circuits), RC model and battery chargers.
14. Any malfunction of equipment or accessory, including memory cards, that results in the failure of an image or video to be recorded or to be recorded in a way that is machine readable.
15. Users who engage in reckless, unsafe flying (with or without sufficient training).
16. Noncompliance with precautions, instructions, information and operation guidelines/methods given through official Hubsan website announcements, product quick start guides, user manuals, etc.

17. Other losses, damages, or injuries that are not within the boundaries of Hubsan responsibility.

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE LOCAL REGULATIONS.

HAZARDOUS MOVING PARTS KEEP FINGERS AND OTHER BODY PART AWAY.

Declaration of Conformity

Hereby, SHENZHEN HUBSAN TECHNOLOGY CO., LTD.,

declares this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. A copy of the original Declaration of Conformity can be obtained at the following address: SHENZHEN NANSHAN SOFTWARE INDUSTRY BASE 1C, 13/F

This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European Directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment.

For further information, please contact your local or regional authorities. Electronic products not included in the selective sorting process are potentially dangerous for the environment and human health due to the presence of hazardous substances.

FCC INFORMATION

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 local dealer or an experienced radio/TV technician for help.

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

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.

Electrical and electronic equipment that are supplied with batteries (including internal batteries)

WEEE Directive & Product Disposal

At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

Internal / Supplied Batteries.

This symbol on the battery indicates that the battery is to be collected separately.

This battery is designed for separate collection at an appropriate collection point.





Notice: Read the instruction manual carefully before use.
Propellers may cause injury; caution!

Warning:

Do not leave the quadcopter charging unattended. Always disconnect the quadcopter from the charger immediately after charging is complete.

This is not a toy and is not suitable for children under 14.

www.HUBSAN.com

Product Name: X4 WAYPOINTS FPV
Company: Shenzhen Hubsan Technology Co., Ltd.
Address: 13th Floor, Block 1, Tower C, Software Industry Base,
Xuefu Road, Nanshan District, Shenzhen, China.
Email: service@hubsan.com



User Manual