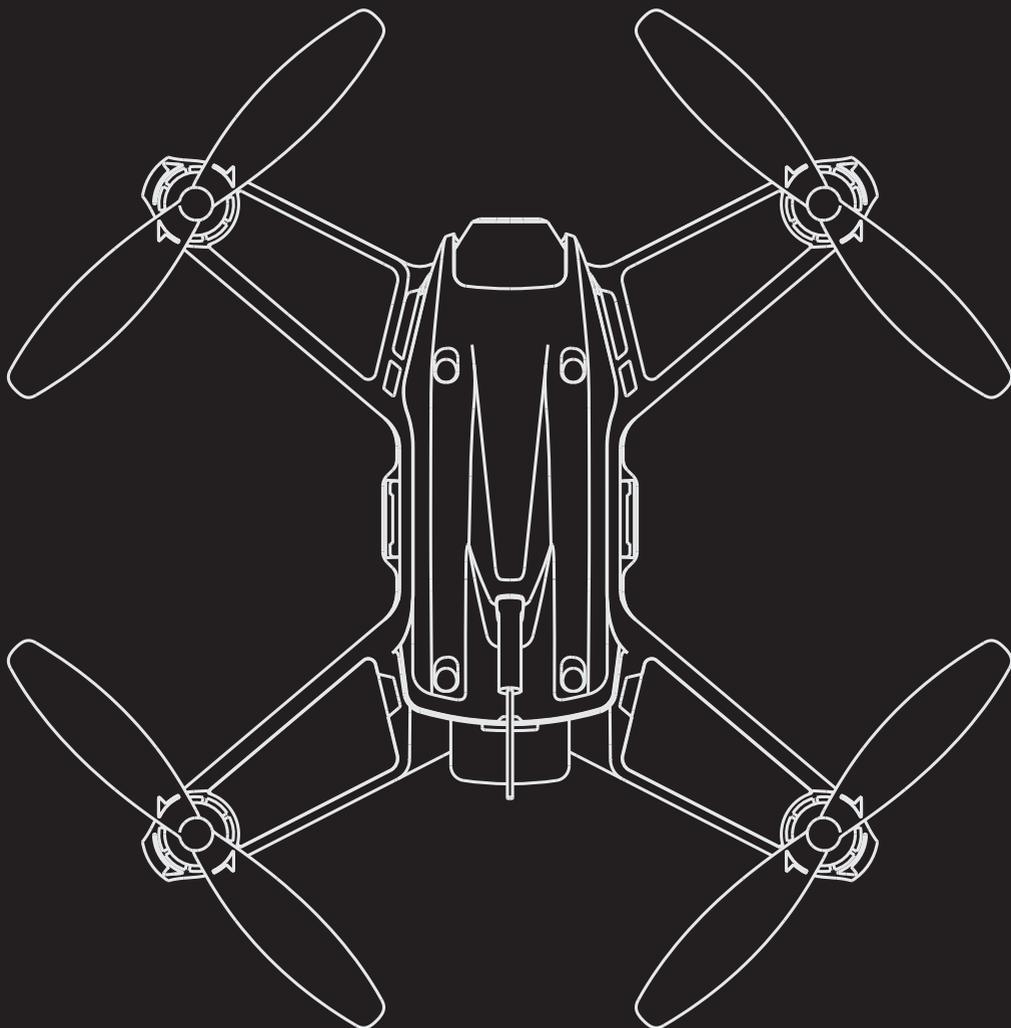


# X1

User Manual V1.0



**WINGSLAND**

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## Introduction

### Symbol Descriptions

Forbid Notice Tips 

### User Suggestion

Wingsland X1 is an aircraft with lots of entertaining options, but please be attention that the X1 is not a toy. The wingsland X1 contains a flight controller, video system, propulsion system and intelligent flight battery, we highly recommend you to read the wingsland X1 Quick Start Manual and the X1 User Manual carefully before your first flight , to watch the video tutorial to ensure your safety.

### Video Tutorial

Users can search the X1 video tutorial on [www.wingsland.com](http://www.wingsland.com)

### Download Wingsland X1 APP

Download wingsland X1 APP to control the flight.

#### How to Download :

1. Scan the QR code.



 APP Android



 APP iOS

2. Login [www.wingsland.com](http://www.wingsland.com) to download.
3. To download the APP in Apple Store or Google by searching keyword: wingsland X1

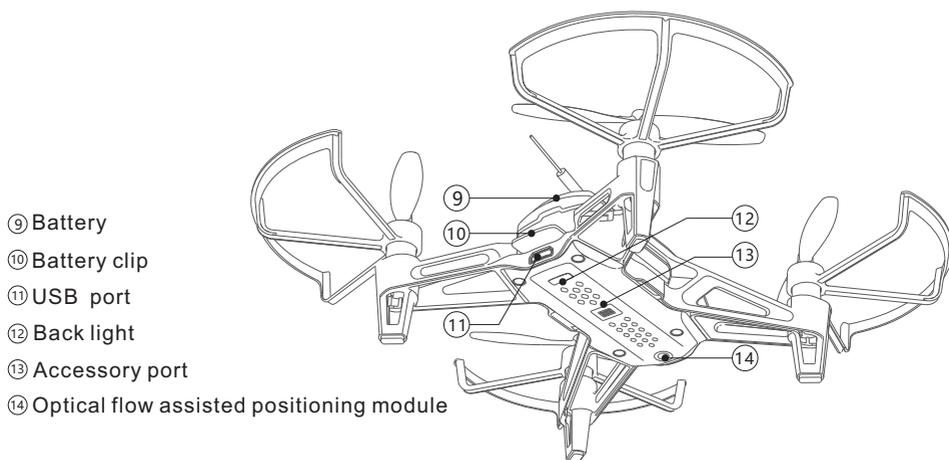
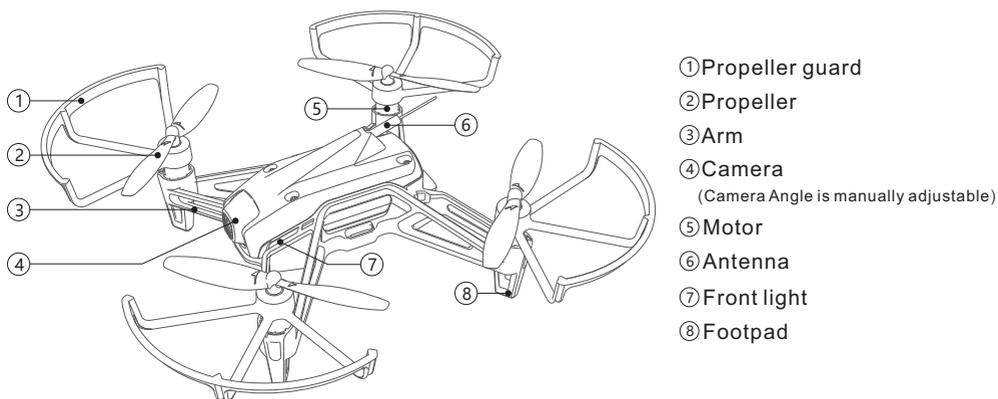
## Product Descriptions

### Brief Introduction

The wingsland X1 is a FPV drone with many entertainment features, you can control the flight by using your mobile devices. Indoor Optical Flow Positioning System can help you to achieve indoor hover and speed racing easily. The X1 is Equipped with adjustable HD camera and HD digital transmission to seize the moment. You can enjoy the FPV flight and capture the memorable second at the same time .

Makes it a typical FPV drone, you can capture the memorable moments and enjoy the speed racing at the same time.

### Aircraft Diagram



## Aircraft

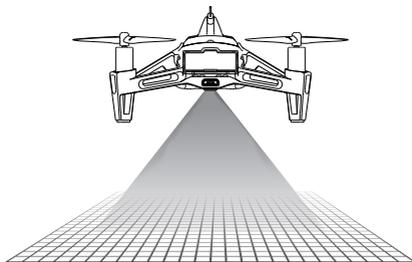
### Vision positioning system

#### Brief Introduction

When the X1 takes off, at a flight height no more than 2.5m, if you stop any operation of direction or height, it will hover at the current position.

#### Work Theory

When the X1 takes off, at a status of no operation, the optical flow sensor which located on the bottom of the aircraft can identify the ground image so the X1 can hover at current height and position.



ⓘ At a flight height no higher than 2.5m, the vision system can't function properly, the X1 won't hover but flow with air.

ⓘ The vision positioning system can be affected by flying speed, light intensity and object surface texture, it won't hover at the situations below:

- high speed flight at low altitude.
- A strongly reflecting object surface.
- Surfaces of water and single color objects.
- Extremely bright or extremely dark.
- An object surface having a slope of more than 30 degrees.
- Other conditions that may affect ultrasound and optical flow localization.

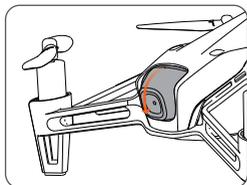
### Adjustable Camera Angle

#### Camera Angle Adjust System

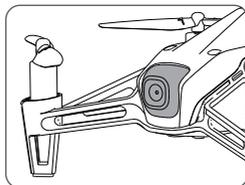
The X1 aircraft cameras are designed with adjustable angle, when the lens and the aircraft body are at the same level, (The relative angle is 0 degrees ),you can use your fingers to adjust the camera angle, the adjustable angle is 15 degree.

#### How to Adjust Camera Angle

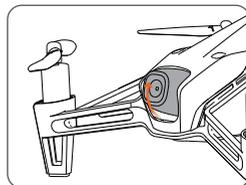
At the status that the X1 doesn't take off, use your fingers to poke the camera to adjust its angle.



Camera down 15°



The X1 default camera angle is 0°



Camera up 15°

- ⓘ
- Please adjust the camera angle gently.
  - Over adjustment may cause the damage of the X1.

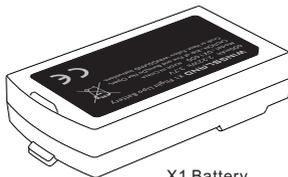
## Camera

After the X1 aircraft is powered on, the camera will be activated automatically.

Through the image transmission system, the camera can transmit the captured picture to X1-app meanwhile with the highest resolution of 1280x720p.

The photos or videos will be stored in your mobile device's album, the stored video resolution is 640x368, image resolution is 640x368.

## Exclusive Battery



X1 Battery

### Brief Introduction

The X1 lithium battery has a capacity of 600mAh, voltage 3.7V, the maximum flying time is 7 minutes. (the maximum flying time is tested under the Wingsland experimental environment)

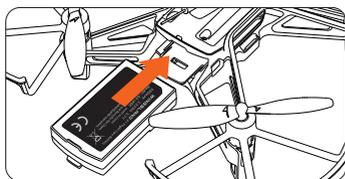
### Battery Assembling and Disassembling

#### ① Assembling:

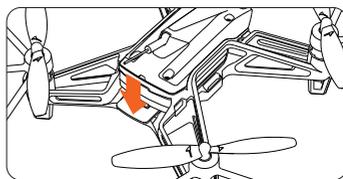
When the battery is installed, the battery should be facing up and inserted into the battery compartment to ensure that the tail of the battery is stuck on the battery lock.

#### ② Disassembling:

Pull the battery latch down and pull the battery out with your fingers.



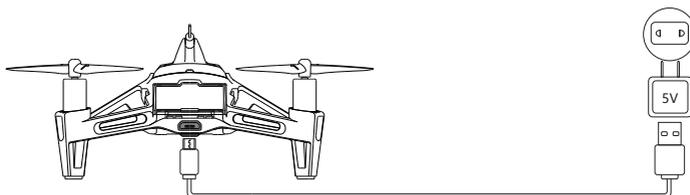
①



②

### Charging

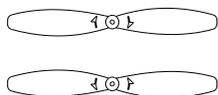
1. Insert the X1 battery into the battery compartment.
2. Connect one end of the micro USB connector to the aircraft, and the other end to the power adapter. The input voltage is 5V.
3. During the charging, the front indicator light of the X1 will blink slowly, and it will go out when the charging is complete.
4. When the charging current is greater than 1A, the charging time is about 50 minutes. After charging, unplug the micro USB cable and remove the battery.



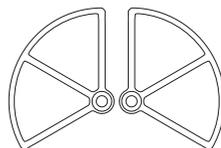
The Aircraft Charging



## Propeller & Propeller Guard



Propeller

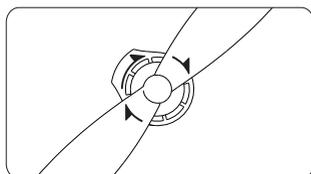


Propeller Guard

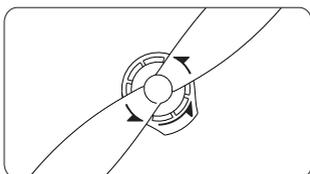
### Brief Introduction

Propeller and propeller guard are easy to disassemble.

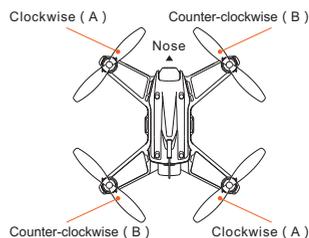
Please pay attention to the arrow direction on the propellers while installing them, and make sure the directions are same to those on motor.



Direction for Clockwise Propeller(A)  
and corresponding motor



Direction for Counter-clockwise Propeller(B)  
and corresponding motor

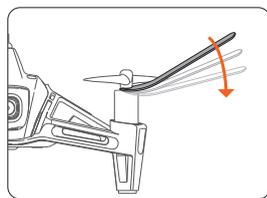


X1 state as delivered

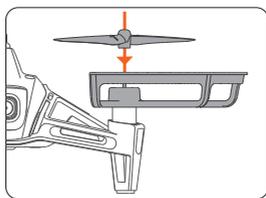
ⓘ If the propellers are not installed on corresponding motors, the X1 aircraft cannot fly normally, and will even flip over or rotate on the ground.

### How to install the propeller guards:

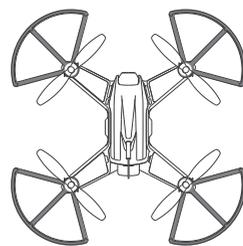
- ① First of all , please remove the propellers by dismantling key .
- ② Install the propeller guards onto the motors first and then install the propellers firmly.
- ③ Make sure direction of arrows on propellers are the same with Aircraft's.



①



②



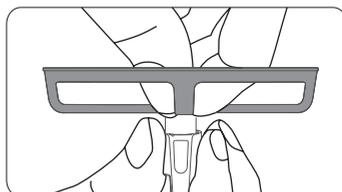
X1 state with propeller guards

ⓘ Don't use the auto flipping function while flying with propeller guards. Otherwise the drone may lose control while auto flipping. Please take off the propeller guards before flipping.

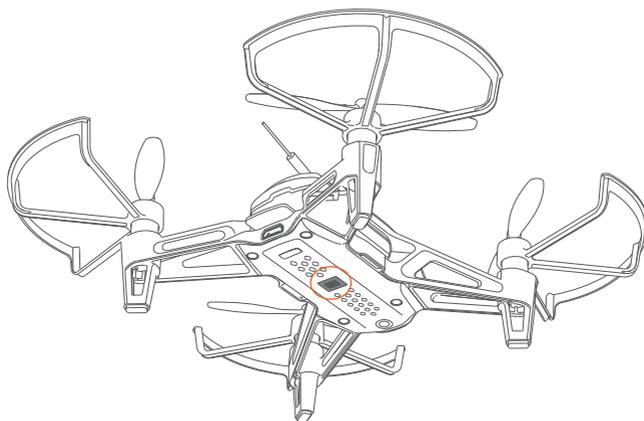
### How to uninstall the propeller guards:

1. First of all , please remove the propellers by dismantling key .
2. Hold the motor with one hand, twist and pull off the propeller guard.

ⓘ Don't hold the arms of the aircraft while disassembling the propellers! Otherwise it would break the connector wires and damage the motors .



## Extension Port

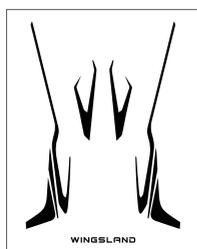


The extension port is located at the bottom of X1, it is used to connect with the optional entertaining accessories provided by wingsland.

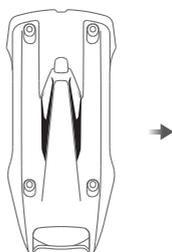
## DIY Stickers

### Stickers Usage:

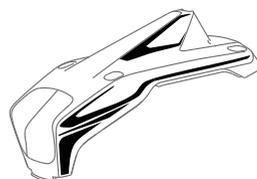
- ① Paste the middle stickers on the middle of the aircraft upper shell.
- ② Then paste the side stickers on two sides of the aircraft upper shell.



Stickers



①

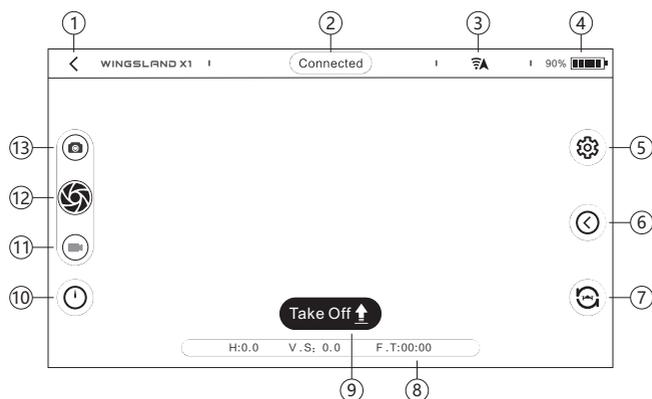


②

## Wingsland X1 APP

After the mobile device connected with the X1 WiFi, you could control the X1 on wingsland X1 APP.

### Control Interface Introduction :



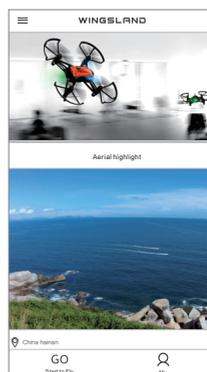
- |                     |                               |           |
|---------------------|-------------------------------|-----------|
| ① Exit              | ⑥ IOC Setting                 | ⑪ Video   |
| ② Connection Status | ⑦ Auto Flipping               | ⑫ Shutter |
| ③ WiFi Signal       | ⑧ Flight Data                 | ⑬ Photo   |
| ④ Battery Level     | ⑨ Auto Takeoff/Landing Button |           |
| ⑤ General Settings  | ⑩ (3s) Time-lapse photography |           |

### Detailed APP Interface Introduction :

1. Find the X1 APP icon on your device, click and enter into the main interface.

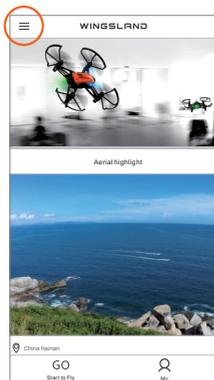


X1 APP icon

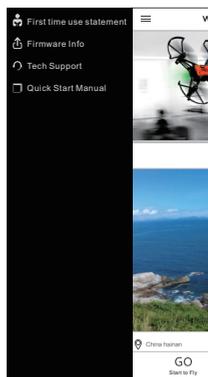


Main Interface

2. The menu at the top left corner contains the “First time use statement”, firmware information, technical support and “Quick Start Manual” .

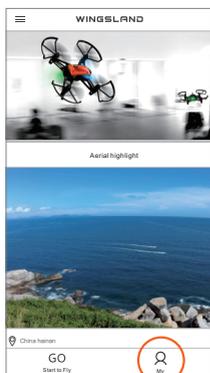


Main Interface



Menu

3. Select “My” on the bottom and you can view the photos or videos you took.

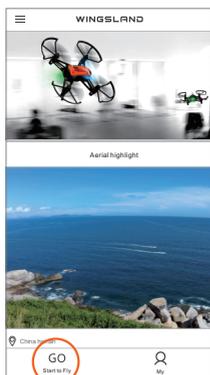


Main Interface

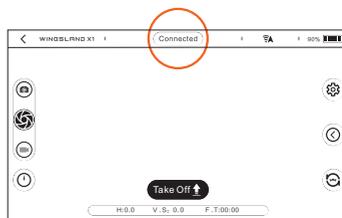


View video and photo

4. Select “Start to Fly” and get into control interface. Real-time image would be shown on screen if device is successfully connected.

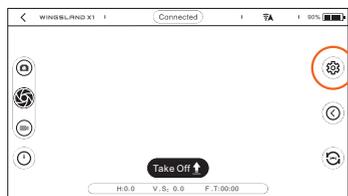


Main Interface

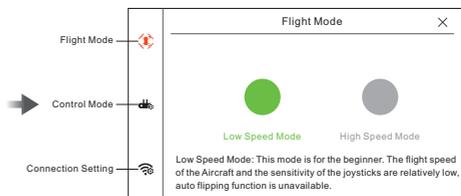


Control Interface

5. Select “Setting” icon on the right, there are “Flight Modes,” “Control Modes” and “Connecting Setting”.
6. Under the “Flight Modes” you can choose “Low Speed Mode” or “High Speed Mode” base on your preference. For the beginners we recommend you choose “Low Speed Mode” for a better control.



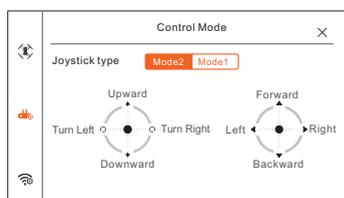
Control Interface



Flight Modes – Low Speed Mode, High Speed Mode

⚠ The auto flipping is not available under the low speed mode.

7. Under the “Control Mode” section, you can select your preferred control mode. We recommend users select “Mode 2” if you have never flown aircraft.



Control Setting

8. Under the “Connection Setting”, you can reset the WiFi password.



Connection Setting – Reset password

9. Under the “Connection Setting”, you can also change the WiFi frequency channel. If the you fly the aircraft in a strong signal interference area, or more than one X1 in the same area, we recommend changing the frequency channel, so that mobile devices and X1 can smoothly communicate.



Set the channel

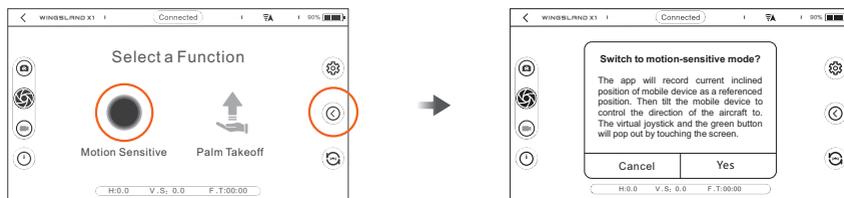


Choose Channel

## Function Menu

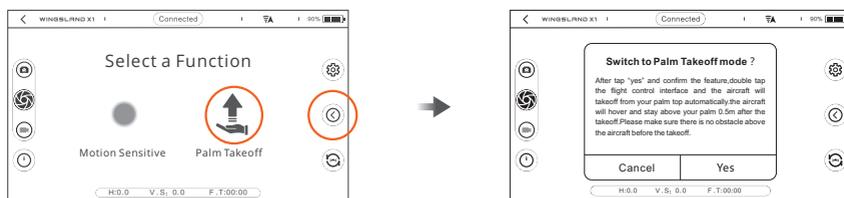
### Motion Sensitive:

Tap “Function Menu” icon, select “Motion Sensitive” mode, read the notification and select “Yes” to start using “Motion Sensitive”.



### Palm Takeoff:

Tap “Function Menu” icon, select “Palm Takeoff” mode, read the notification and select “Yes” to start using “Palm Takeoff”.

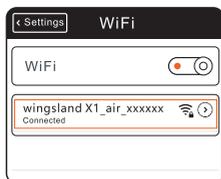


## Using Mobile Device to control aircraft

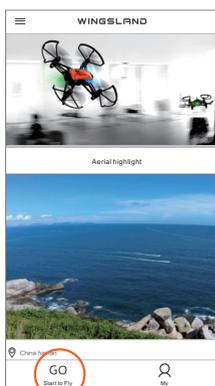
### Flight Preparation

Please follow the steps below to control the X1 aircraft by mobile devices:

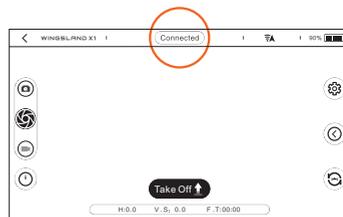
1. Please make sure X1 aircraft is fully charged.
2. Insert the battery to X1 battery compartment and make sure battery is firmly installed. Then the X1 aircraft is turned on.
3. Search the WiFi broadcasted by X1 aircraft on your mobile device. The default WiFi name should be : wingsland X1\_air\_xxxxxx , and the password should be "wingsland".



4. Run the wingsland X1 APP, tap "Start to Fly" and get into the control interface. The real-time image would be shown if the mobile device is successfully connected.



Main Interface



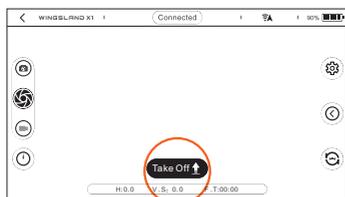
Control Interface

### Takeoff

We recommend users only fly aircraft when lighting condition is adequate and on textured surface.

#### Auto Takeoff

Tap "Take off" on main interface, after reading the warning notification, tap on the takeoff icon, then the aircraft will take off and stay hovering on a certain height.



## Palm Takeoff

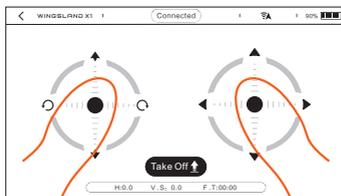
- After the aircraft is connected to the mobile device, put X1 on your palm and stretch your arm.
- Tap "Function Menu" icon and select "Palm Takeoff", double tap the screen after confirm the notification, then the aircraft should automatically take off.
- After takeoff, X1 will stay hovering over the palm by about 0.5 meter.



ⓘ Please ensure there is no obstacle in aircraft hovering height.

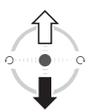
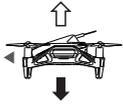
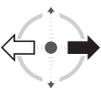
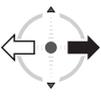
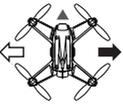
## Virtual Joystick Control

Users should be able to control X1 by virtual joystick after takeoff. Take the center line of the screen as the dividing line, the left virtual joystick will pop up when user press left side of the screen. Same, the right virtual joystick will pop up when user press right side of the screen.

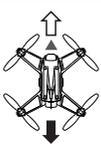
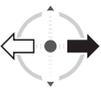
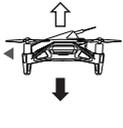
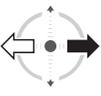
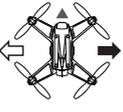


- ⓘ • After takeoff, users can control the altitude and direction of aircraft by virtual joysticks.
- Below is the introduction to control virtual joystick. We recommend users select "Mode 2" by default if you have never flown aircraft.

**Mode 2:**

Virtual Joystick	Aircraft (▲front)	Control
Left joystick 		Left thumb slide up, Aircraft will fly upwards, Left thumb slide down, Aircraft will fly downwards.
Left joystick 		Left thumb slide left, Aircraft will rotate to the left, Left thumb slide right, Aircraft will rotate to the right.
Right joystick 		Right thumb slide up, Aircraft will fly forwards. Right thumb slide down, Aircraft will fly backwards.
Right joystick 		Right thumb slide left, Aircraft will fly leftwards. Right thumb slide right, Aircraft will fly rightwards.

**Mode 1:**

Virtual Joystick	Aircraft (▲front)	Control
Left joystick 		Right thumb slide up, Aircraft will fly forwards. Right thumb slide down, Aircraft will fly backwards.
Left joystick 		Left thumb slide left, Aircraft will rotate to the left, Left thumb slide right, Aircraft will rotate to the right.
Right joystick 		Left thumb slide up, Aircraft will fly upwards, Left thumb slide down, Aircraft will fly downwards.
Right joystick 		Right thumb slide left, Aircraft will fly leftwards. Right thumb slide right, Aircraft will fly rightwards.

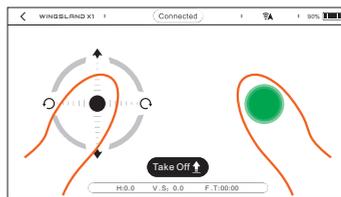
## Motion Sensitive Mode

Motion sensitive mode is based on the gravity sensor built in the mobile device, to control the motions of the craft by tilting the mobile device.

Switch to Motion Sensitive Mode:



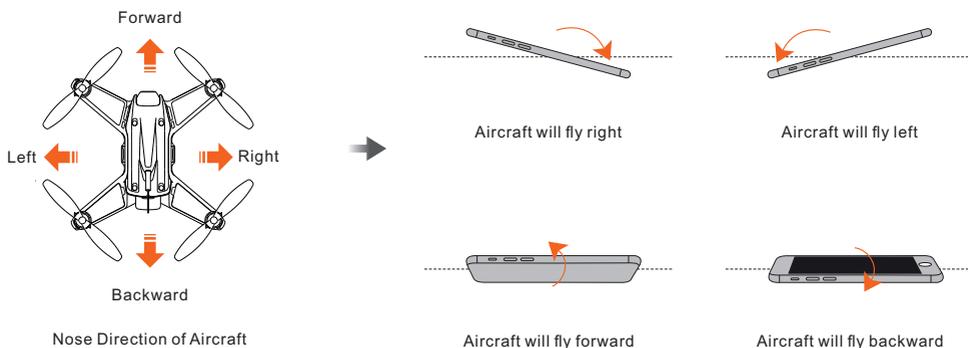
Tap "IOC Setting" icon (⚙️), Select Motion Sensitive and confirm.



Motion-sensitive Mode Interface

How to control:

Under the Motion Sensitive Mode, tap the screen, a virtual joystick will be displayed in the left of the APP screen, which controls the throttle and rotation of the aircraft. Tap and hold the red round on the right of the APP screen, then tilt the mobile device to control the motions of the aircraft when the round turns green. Tilt the mobile device up/down, the aircraft will fly forward/backward, tilt the mobile device left/right, the aircraft will fly toward left/right.

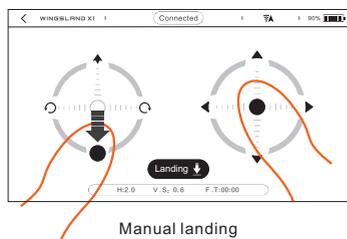


⚠ Under Motion Sensitive mode, left virtual joystick functions are the same as Mode 2.

## Landing

### Manual Landing:

After the flight, left thumb slide to bottom (Mode 2) and X1 aircraft will be landing on current location.



### Auto Landing:

Tap on the “Landing” icon, after reading the warning notification and confirm landing, the X1 aircraft will be landing on current location.



Auto Landing

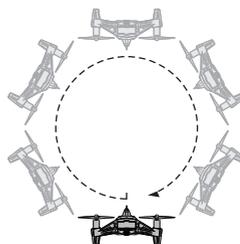
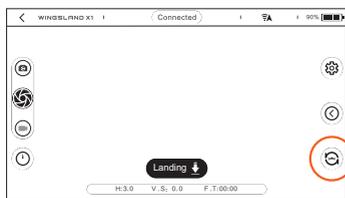


## Auto Flipping

By the Auto Flipping function, X1 aircraft can perform a 360° auto flipping in the air. After flipping, X1 will stay hovering at current location.

### Operation:

After X1 takes off and stays hovering, tap the Flip icon on the lower right side of control interface, then X1 will automatically flip 360° in the air.



- ⓘ • Please ensure enough space for the Aerial Flip, at least 1m from X1 to the top, bottom, left and right.
- The Aerial Flip function can not be active when battery power is lower than 60%.

## Disclaimer

This product has a certain risk, may cause harm to the operator, nearby people and their property. Please read this document carefully before you use this product. Once you use, we will recognize that you have understood and accepted all rules and contents of our statement. "Shenzhen Wingsland Technology Co., Ltd." will not undertake liabilities to any direct or indirect personal injury and property loss if users do not use this product according to below safety guidelines and user manual.

## Product Safety Notice

1. The product is not for children under 14.
2. Only use wingsland approved accessories. wingsland takes no responsibility if any injury or damage happened caused by a third party accessories.
3. Please choose a wild open area to fly your aircraft. Do not touch the rotating propellers.
4. Rotating propellers may cause serious injury, keep away from crowds.
5. Be careful when flying the aircraft. Avoid hitting people, and keeping certain distance away from children and animals.
6. Do not fly the aircraft into fireplace or other place may has a extremely high temperature.
7. Do not fly the aircraft into water or landing on a water surface
8. Do not fly the aircraft through a window from indoor to outdoor.
9. Stop using the products if an abnormal performance happened. Contact wingsland after-service center or an authorized wingsland dealer.

## Flight Battery Safety Guidelines

### Battery Use:

1. DO NOT allow the batteries to contact any liquid. DO NOT use the battery in rain or moist environment. If the battery pins or inside get in touch with water, it may lead to corrosion or even explosion.
2. Do not put the battery into fire or store in a high temperature environment. Using the battery in environments above 50°C may cause fire or explosion.
3. Do not use non-Wingsland batteries, wingsland takes no responsibility for any damage or accidents caused by non-Wingsland batteries.
4. Do not use or charge swollen, leaky or damaged batteries. If above situation occurs, please contact Wingsland for after sales service.
5. Storing or using the battery in temperature under 0°C will heavily cut down the battery lifetime.
6. Do not drop, strike, impale the battery. Do not use a swollen, leaky or damaged battery.
7. Avoid the short-circuit in the battery, and store the battery with no conductor around.
8. Do not put heavy objects on the battery.
9. Clean the battery with a dry cloth if there is any dirt on the battery.
10. If found the battery leakage, do not contact with skins and eyes. If you do contact, immediately rinse with plenty of water and seek medical help.
11. If the drone falls into water during flight, please take the battery out immediately and place it in safe place. Stay away from the battery until it is dry. Please don't use the battery again and dispose it according to below section 'Disposal'.
12. Put out any battery fire using sand or a dry powder fire extinguisher.
13. Store the battery in a dry environment with an appropriate room temperature.
14. The battery performance will be affected after long time storage at a low battery level.

## Charging

1. Follow the stipulations of Charging methods in our company's <<Users Manual>>.
2. Please place aircraft or charger on cement floor , keep away from Flammable, combustible materials. Please pay attention on battery while charging to prevent accidents.
3. The perfect charging temperature is 15°C ~ 40°C. Do not charge the battery after flight immediately. Charging in the heat of a battery may shorten battery life , even catch fire.
4. Disconnect the power and remove the battery when the charging is finished.

## Storage and Transport:

1. Keep batteries out of the reach of children.
2. DO NOT leave the battery near heat sources, the ideal storage temperature is 22°C-28°C.
3. Storage of batteries should be kept dry, keep the battery away from the damp environment.
4. Do not transport or store the battery together with metal objects such as metal necklaces,watches etc.
5. Do not transport damaged batteries.
6. Please follow the relevant regulations of the local airline before bring the battery to the flight.

## Disposal:

Dispose of the battery in specific recycling boxes only after a complete discharge. Batteries are dangerous chemical goods. DO NOT place the battery in regular trash containers. Strictly follow your local regulations regarding the disposal and recycling of batteries.

## Limitation of Liability

**Wingsland accepts no liability for damage(s), injuries or any legal responsibilities incurred directly or indirectly from the use of this product in the following conditions, and this limitation of liability applies to wingsland suppliers, dealers and service providers:**

1. Any more you paid in amount for this product than the actual purchase price.
2. Any costs and expenses with access to alternative goods, services or rights.
3. Costs, expenses increased, loss caused by the data loss, data corruption or data interruption.
4. Any loss caused by the violation of the provisions of local laws and regulations or the civil aviation administration laws.
5. Any loss caused by the usage of product without abiding by the User Manual.
6. Any loss caused by the age, physical and mental condition of the Operator who is not in the proper condition.
7. Damage(s), injuries or any legal responsibilities cause by using a third party alteration products or fake Wingsland products.
8. Any loss caused by improper use in a strong magnetic field or in a bad environmental condition (such as in the temperature higher than 40 degrees or below 0 degrees Celsius, and in a wind speeds exceeding 5m/s,etc.).
9. Any loss caused by Force Majeure.

## Firmware Upgrade

When new firmware is launched, wingsland will publish the new firmware on the our official website. Please subscribe to our official website: [www.wingsland.com](http://www.wingsland.com)

Please go to wingsland official website [www.wingsland.com](http://www.wingsland.com) for user registration, when a new firmware update, we will inform you by e-mail.

## Appendix

### Specifications:

#### Aircraft

- Model Four-axis
- Diagonal wheelbase 120 mm
- Total weight 70g (with battery)
- Maximum ascending speed 1 m / s
- Maximum descent speed 0.6 m / s
- Maximum pitch angle 30°
- Optical hover accuracy level +/- 0.5 meters
- Maximum flight time 7 minutes
- Maximum flight distance 100 meters
- Altitude 0 to 4000 meters
- Best working environment 5°C ~ 40°C

#### Camera

- Adjustable lens range 0° ~ ±15 °
- Photo resolution 640x368
- Video resolution 640x368

#### Biography

- Image transmission type Digital
- Image transmission range 50 meter
- Image transmission mode WiFi
- Image transmission resolution 640x368

#### Battery

- Battery capacity 600 mAh
- Battery voltage 3.7 V
- Battery type Lipo 1S
- Charging time About 50 minutes
- Charging voltage / current 5 V / 1 A
- Best charging temperature 15 ° C to 40 ° C

#### APP

- Version requirements Android 5.0 or higher  
IOS 9.0 or more

### After-sales service information:

Tech Support: +1 866-944-8840    [support@wingsland.com](mailto:support@wingsland.com)    Website : [www.wingsland.com](http://www.wingsland.com)



★ Information in this User Manual could be amended without notice. Please download the latest version from the technical support page on our website: [www.wingsland.com](http://www.wingsland.com).

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