



Ages 14+  
Read the instruction manual carefully



# THE HUBSAN X4 PRO

## REAL TIME FPV

# Hubsan X4 PRO

V1.0 2015.01

Read the instruction manual carefully.

## IMPORTANT SAFETY NOTES READING INSTRUCTION

### IMPORTANT SAFETY NOTES

#### OPERATION:

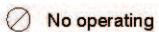
Be carefully when use the X4 Pro. There are subtle electronic components, which will damage if you crash down and broke the X4 Pro or drop in water. Do not use broken X4 Pro, such as X4 Pro with broken propellers, to avoid damage.

#### Flight:

- Be responsible for you and others safety when you fly X4 Pro
- X4 Pro cannot fly in crowded place, it need enough space to operate.
- Do not fly it in bad weather
- Never try to catch the X4 Pro while it in flight
- Only for age 14+ to play this products
- Always take off the battery after you stop the flight, to avoid injuries when accidentally power on the motors
- Always avoid body near the propellers, the flight system will automatically operate after power on no matter the transmitter is power on/ off, the speedy rotation propellers are very dangerous.
- Power off X4 Pro after flight, or the propellers may still rotating to cause injuries.

## READING INSTRUCTION

### SYMBOL EXPLANATION



No operating

Important Notice



Instruction



Explanation, reference

### USAGE ADVICE

Hubsan provides you three files for X4 Pro:

1. "Disclaimer"
2. "Hubsan X4 Pro Instruction Manual"
3. "Ground Station Instruction Manual"

Read the teaching video and Disclaimer firstly, then read the manuals.

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## GENERAL INTRODUCTION

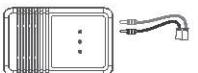
Hubsan X4 Pro is a high-tech middle quad copter, which can display aerial photography. It equipped with high accurate and stable 3 axis gimbal, 1080P HD aerial photography camera, and advanced smart flight control system. High-Integrate Android transmitter can realize long distance camera control, video transmission, grand station auto flight, FPV flight, and social network sharing, etc. functions. Hubsan X4 Pro will help you easily shoot stable HD videos and pictures.

- FPV:** First Person View, users can feel all the positions when the X4 Pro is flying, provide real experience in flight.

### 1. ACCESSORIES INCLUDED

Check all the accessories in the package before use.

S/N	Part Name	Photos	Q'ty	Remarks
1	The X4 Pro		1PCS	equipped with GPS, compass and terrestrial magnetism
2	Propellers		8PCS	Propeller A 4pcs, Propeller B 4pcs
3	3 axis stable gimbal		1PCS	3 axis stable gimbal
4	Propeller removal wrench		1PCS	to remove propellers
5	Transmitter		1PCS	H7000 Smart Transmitter, equipped with a 7.4V 5400mAh rechargeable Li-Po battery
6	Parachute		1PCS	Standalone control system, can protect the X4 Pro's safety after accident crash. (EXCLUDED, need buy from Hubsan)
7	Li-Po battery for X4 Pro		1PCS	inserted in the X4 Pro
8	Adapter		1PCS	110-240V

9	Balance charger		1PCS	use to recharge the Li-Po battery
10	Propeller guard		4PCS	Ensure the safety of the X4 Pro
11	Micro-USB cable		1PCS	To read the camera data
12	User Manuals		4PCS	Disclaimer Hubsan X4 Pro Instruction Manual Camera Instruction Manual Parachute Instruction Manual
13	1080P camera		1 PCS	HD camera module

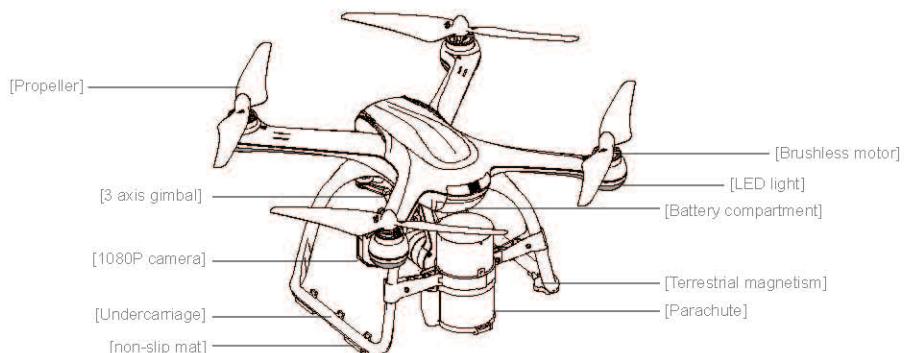
## 2. INTRODUCTION

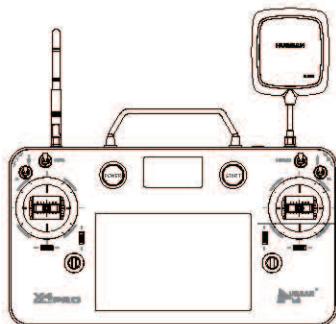
The Hubsan X4 consist of quad copter, camera, gimbal, parachute, propeller guard, power system, flight control system, and radio transmission system.

**Transmitter equipment:** dual data transmission, map and track display, waypoints set/ auto-flight, FPV transmitter operate video and picture shooting

**X4 Pro equipment:** 3 axis gimbal, camera, power system(brushless motors and propellers), parachute, propeller guard

**X4 Pro working Mode:** Altitude Hold MODE, Fix Position Mode, Waypoint Mode, RTH Mode, Headless Mode





[H7000 Smart Transmitter]  
equipped with a 7.4V 5400mAh rechargeable Li-Po battery; Hanging robe, LCD hood

## PREPAR FOR USE

Thanks for buying HUBSAN products.

### 1 PREPARE THE LI-PO BATTERY

Make sure the following equipment is full powered before use.

EQUIPMENT	SUPPLIED POWER
Transmitter	7.4 V 5400mAh rechargeable Li-Po battery
Camera	3.7 V 650mAh rechargeable Li-Po battery
X4 Pro with gimbal	Both powered by 11.1V 7000mAh rechargeable Li-Po battery
Parachute	3.7 V 380mAh rechargeable Li-Po battery

#### 1.1 LI-PO BATTERY IN THE X4 PRO

The X4 Pro is equipped with a 11.1V, 3 cells, 2300mAh rechargeable Li-Po battery. Always charge the Li-Po battery with Hubsan provided Charger

##### BATTERY SPECIFICATIONS

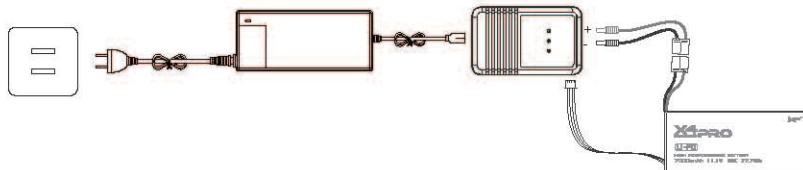
Charging temperature: 0°C~40°C

Discharging temperature: - 20°C~50°C

Charging/ Discharging humidity: < 80%

#### 1.2 CHARGING

Connect battery to balance charger and wall charger, the two LED lights will turn red whilst charging and turn green when chrging is finished, charging time is around 180 min.



**(1) Overcharge protection**

Overcharging will damage the battery, charging will stop when the battery charge to 12.8V

**(2) Over-discharge protection**

Over-discharging will damage the battery, the X4 Pro will cut off power when the battery power is 8.4V

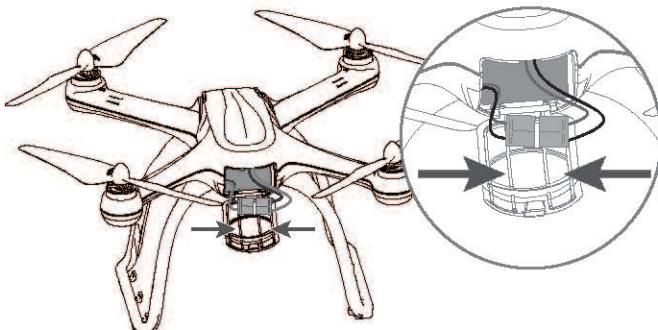
**(3) Short circuit protection**

when detect Short circuit protection, the X4 Pro will power off to protect the battery

### 1.3 POWER ON/ OFF THE X4 PRO LI-PO BATTERY

**Power on:** Put the battery into the battery compartment, connect the battery plug with correct polarity, then the X4 Pro is power on. The LED on X4 Pro will circularly blink blue.

**Power off:** Disconnect the battery plug, the X4 Pro is power off, the LED will turn off.



### 1.4 CHECK THE LI-PO BATTERY POWER

After the X4 Pro and the Transmitter finish pairing, the battery power will display on the tablet.

BATTERY POWER	BAT 65%	TIME 00:19
	TX 35%	DIST 0m
	RF 88%	ALT + 3m
	GPS 0	DIR NE
	ALT Hold Low Battery TX	Headless

#### Always partially charge your lipo battery before storage

LiPo batteries retain a charge over a reasonable period; It is not normally necessary to recharge stored LiPo batteries unless stored for periods longer than 3-6 months.

If your LiPo battery has been over-discharged, it will not be possible to recharge it again.



#### LiPo Battery Disposal & Recycling



Lithium-Polymer(LiPo) batteries must not be placed in with household trash. Please contact your environmental or waste agency or the supplier of your model for local regulations and the location of your nearest LiPo battery recycling center.

## 2 SAFETY NOTES

### 2.1 IMPORTANT NOTES

This X4 Pro is not a toy. Any improper use of this product will result in serious injury. Be aware of your personal safety, safety to others and your surrounding environment. We recommend beginners learn to fly with more experienced pilots playing nearby before attempting to fly the X4 Pro for the first time.

### 2.2 LI-PO BATTERY SAFETY NOTES

The X4 Pro is powered by a lithium-polymer(Li-Po) battery. To avoid risk of fire or damage, never recharge your battery while it is inserted in the plane. If you do not plan to fly the plane for a week or more, store the battery approximately 50% charged to maintain battery performance and life.



### SAFETY ADVISORY NOTICE

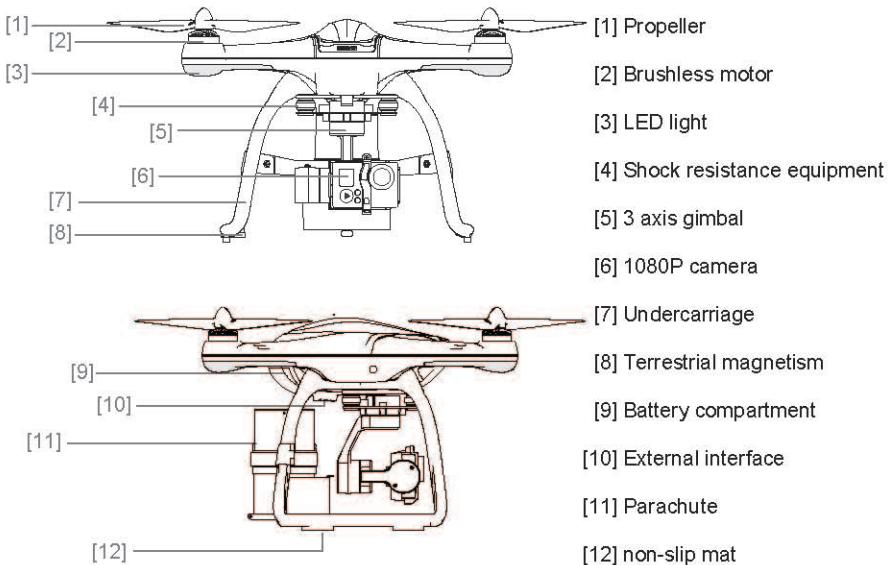
#### Lithium-Polymer (LiPo) Batteries

LiPo batteries are different from conventional batteries in that their chemical contents are encased in a relatively lightweight foil packaging. This has the advantage of significantly reducing their weight, but does make them more susceptible to damage if roughly or inappropriately handled. As with all batteries, there is a risk of fire or explosion if safety practices are ignored:

- Charge and store LiPo batteries in a location where a battery fire or explosion (including smoke hazard) will not endanger life or property.
- Keep LiPo batteries away from children and animals.
- Never charge the LiPo battery that has ballooned or swelled .
- Never charge the LiPo battery that has been punctured or damaged.
- After a crash, inspect the battery pack for the sign of damage. Discard in accordance with your country's recycling laws.
- Never charge the LiPo battery in a moving vehicle.
- Never overcharge the LiPo battery.
- Never leave the LiPo battery unattended during recharging.
- Do not charge LiPo batteries near flammable materials or liquids.
- Ensure that charging leads are connected correctly. Reverse polarity charging can lead to battery damage or a fire or explosion.
- Have a suitable fire extinguisher (electrical type) OR a large bucket of dry sand near the charging area . Do not try to extinguish electrical (LiPo) battery fires with water.
- Reduce risks from fire/explosion by storing and charging LiPo batteries inside a suitable container.
- Protect your LiPo battery from accidental damage during storage and transportation. (Do not put battery packs in pockets or bags where they can short circuit or can come into contact with sharp or metallic objects.).
- If your LiPo battery is subjected to a shock (such as a crash), place it in a metal container and observe for signs of swelling or heating for at least 30 minutes.
- Do not attempt to disassemble or modify the LiPo battery.

### 3 PREPARE THE X4 PRO

#### 3.1 INTRODUCTION THE X4 PRO



##### 3.1.1 FLIGHT CONTROL SYSTEM INTRODUCTION

Hubsan X4 Pro is easy to operate and very stable, it support moving forward/backward, left/right, ascending and descending basic flight action, and also support lost control protection, power alarming and IOC functions.

Modules on flight control system	Function
Main control Module	CPU of the flight control system, connect all the modules, central control
IMU Module	Include inertial sensor, which can detect the flying condition; include barometer to measure the flying altitude
GPS & Compass Module	Position hold and Navigation
LED indicating lights	Indicating the flight control system's condition

#### 3.2 PREPARE THE CAMERA

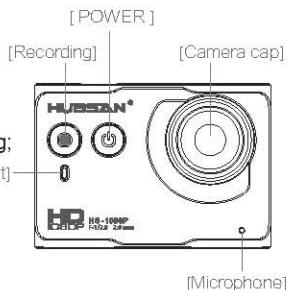
Insert battery into the camera and fix the camera on the gimbal, power on the camera, users can press the buttons on the camera to shooting pictures and videos. Users can also use H7000 transmitter for recording and play back the videos.

Camera specifications			
Recording resolution	<b>1920*1080 Full HD</b>	Battery	<b>3.7V 650mAh</b>
Recording frame rate	<b>30FPS</b>	Working temperature	<b>10 ~ +70°C</b>
Video format	<b>MOV</b>	Working humidity	<b>30% ~ 80%</b>
Image Sensor	<b>3 million pixel MJPG</b>	Working power	<b>1.9W</b>
Image pixel	<b>4032*3024 pixel</b>	Standby power	<b>1.33W</b>
Lens format	<b>1/3"</b>	Storage temperature	<b>- 40 ~ +125°C</b>
Lens FOV	<b>170 ° ( MAX )</b>	Storage humidity	<b>30%-90%</b>

### 3.2.1 CAMERA BUTTONS INSTRUCTION

Power on/off: Press the power button(<2sec), power on;  
Hold down the power button(≥2sec ), power off.

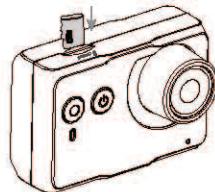
Video shooting: Press the video button(<2sec), start shooting;  
Hold down the video button(≥2sec ), shooting stop. [ Indicating light]



### 3.2.2 MICRO-SD CARD

Insert the Micro-SD card into the camera before shooting as the Picture 9 shows, always insert/remove the Micro-SD card after power off.

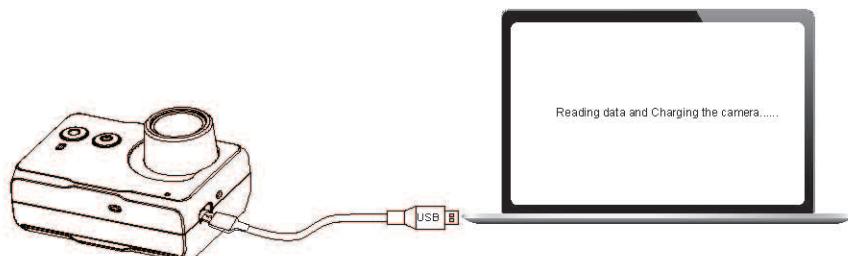
The Micro-SD card is not included in the package, users need prepare brand Micro-SD card(class4-6, over 4GB), support 32GB(MAX) Micro-SD card. Need format the Micro-SD card before use.



- 🚫 • Do not insert/ remove the Micro-SD card when the camera power on.
- Format the SD card on the computer first. Need choose 32KB for the size of each allocation unit, or the camera cannot identify the SD card.

### 3.2.3 READING DATA AND CHARGING THE CAMERA

Use the Micro-USB connect to the PC when the camera is power on, copy the pictures/videos from the camera and charging the camera at the same time.



- ⚠**
- Need power on the camera, then copy. The camera is only recharging when it is power off and connect to the PC. The camera cannot shooting when it connect to PC.
  - Remove the camera USB connector from the camera when it is shooting, the camera will be still shooting. Other conditions, the camera will be automatically power off if USB connector disconnect the camera.
  - The camera will be recharging while connect to the X4 Pro or the PC, charging circuit is about 500mAh, the camera battery is 3.7V/ 670mAh.

### 3.2.4 CAMERA INDICATING LIGHT

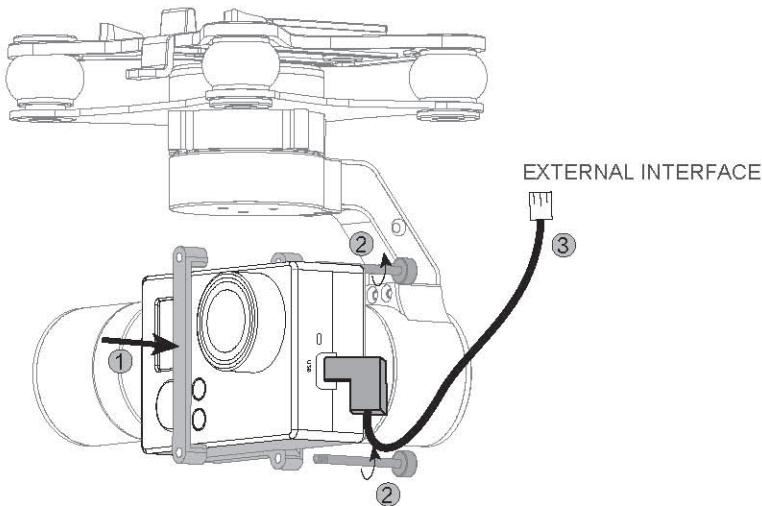
Use the Micro-USB connect to the PC when the camera is power on, copy the pictures/videos from the camera and charging the camera at the same time.

Camera indicating light	Camera condition
Blue light turns on	Standby
Blue light turns on, red light blinks once every second	Recording
Blue light turns on, red light turns on	Camera module is faulty
Blue light blinks every second	Micro-SD card will be full/ no SD card/ faulty SD card
Blue light blinks quickly	Micro-SD card is full
Red light blinks quickly	Battery power is low

### 2.2.5 INSTALL THE CAMERA

Method: 1. Unscrew the fix set for camera, remove the fix set.

2. Put the camera on the slot(camera facing outside), install the fix set, fix it with screws.
3. Plug the camera data wire into the USB interface, plug the other end into the X4 Pro external interface (see more details on 2.3.1) .



### 3.3 PREPARE THE 3 AXIS STABLE GIMBAL

Features of the gimbal	
Control accuracy	$\pm 0.03^\circ$
Control range	Pitch angle: $+65^\circ \sim -125^\circ$ Horizontal angle: $\pm 145^\circ$
Stabilized design	$\pm 40^\circ$ rotation, rotate automatically when the X4 Pro tilted to ensure stable shooting

#### 3.3.1 INSTALL THE 3 AXIS GIMBAL

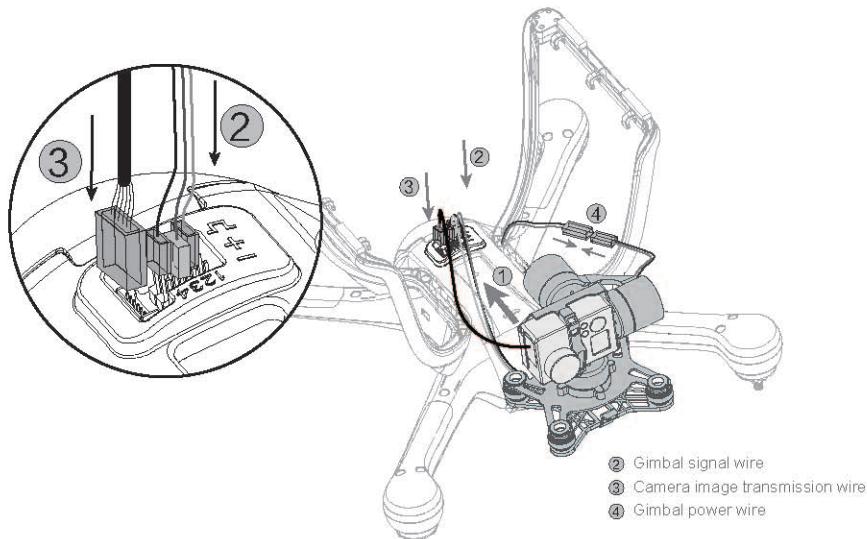
Step 1: Take out the 3 axis gimbal from the box, aim at the bottom slot with Shock Resistance Equipment slot, levelly slip into the bottom;

Step 2: Connect the gimbal signal plug with one of the external interface;

Step 3: Insert the image transmission plug into the left slot;

Step 4: Connect the power plug.

After the installation, power on the X4 Pro, the 3 axis gimbal will power on and adjust automatically. Slip the side rotary switch can easily control the gimbal rotation.



#### 3.3.2 GIMBAL INSPECTION AND EXCEPTION HANDLING

- ⚠ • Gimbal engine abnormal, due to the unlevel surface had contact the gimbal, or the gimbal crashed or hit. Put the X4 Pro on a level and open surface before flight, do not collide the gimbal after it power on
- Flying in fog or cloud will cause Dew Formation and lead to faulty gimbal. The gimbal will be normal after the it is dry.

### 3.4 PREPARE THE PARACHUTE

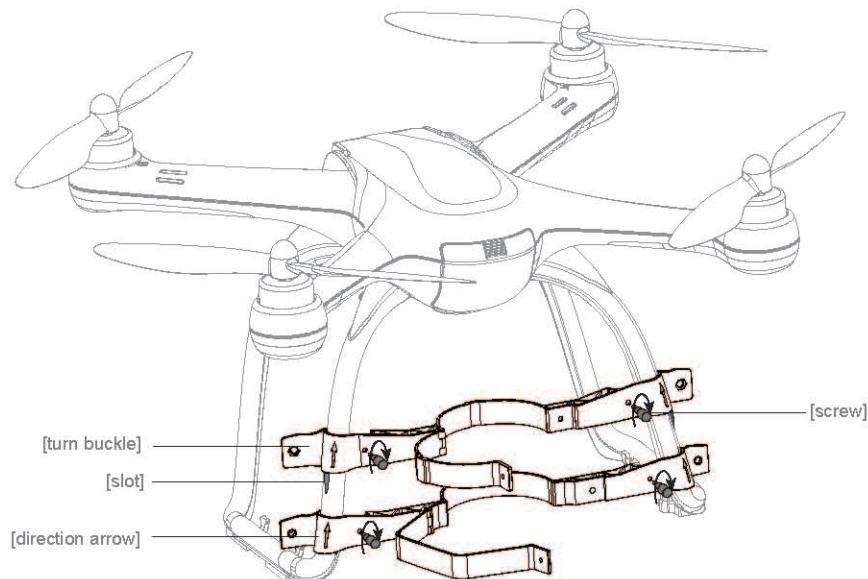
Refer to THE PARACHUTE INSTRUCTION MANUAL

Hubsan X4 Pro includes parachute set. The power of the parachute is standalone, which means even when the X4 Pro Li-Po battery power running out, the parachute can still work. There is an inner sensor inside the parachute, when the X4 Pro goes abnormal the sensor will detect it and work immediately: commanding the parachute to open automatically, so that the X4 Pro can land safely to avoid causing damages.

#### 3.4.1 INSTALL THE PARACHUTE (EXCLUDED , NEED BUY FROM HUBSAN)

Step 1: Install the fix set

Take out the parachute set from the box, remove the screw from the fix set, open the turn buckle; Make sure the direction of the fix set is up straight as the arrows show. Put the fix set onto the undercarriage until it reach the slot position; Fix the screw to the fix set as the picture shows;



- ⚠** • Pay attention to the direction of fix set, do not install wrongly(the arrow on the fix set should be direct up straight)  
• Make sure the fix set reach the slot position before fix the screw, or it will cause unstable and the X4 Pro will shake during flying.

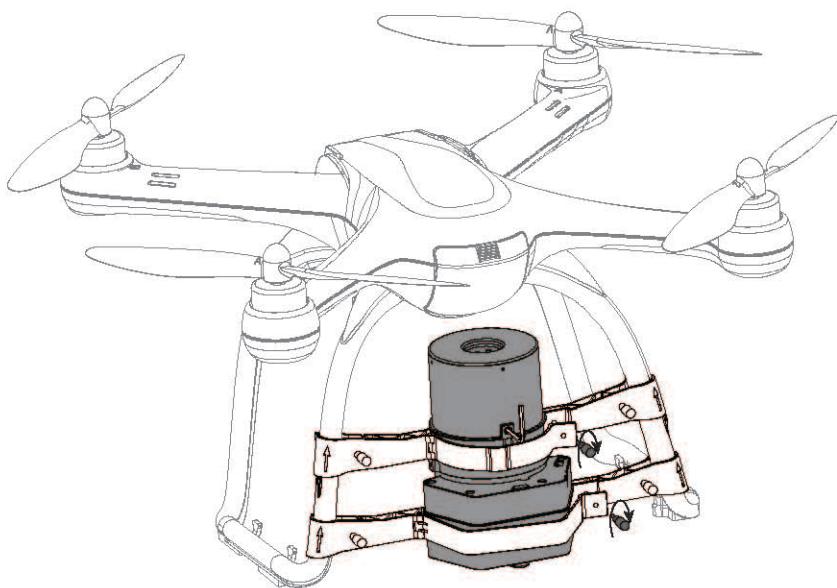
## PARACHUTE

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Step 2: Install the parachute main set

Fix the triggering state parachute set onto the fix set, tight the screw.

After the parachute set triggered, open the middle screws to re-install the parachute cloth. (Refer to the Parachute Instruction Manual for more information)



### 3.5 PREPARE THE PROPELLER SET

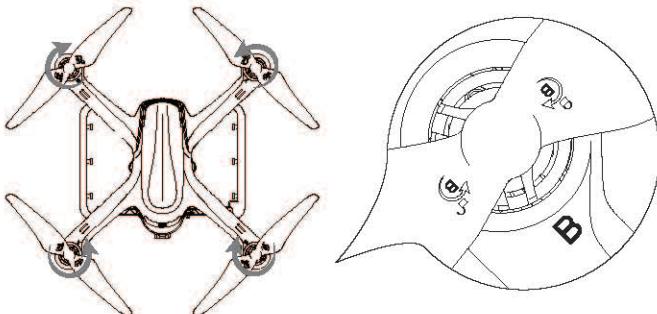
Hubson X4 Pro equipped with 9 inch propellers—black and grey colors. The propellers are easily damaged, please purchase spare propellers from Hubson.

#### 3.5.1 INTRODUCTION

	propeller A	propeller B
Diagram		
Installation Position		
Symbol explanation	 <p>LOCK: In this direction, tighten the propeller onto the motor shaft          UNLOCK: In this direction, remove the propeller from the motor shaft</p>	

#### 3.5.2 METHOD

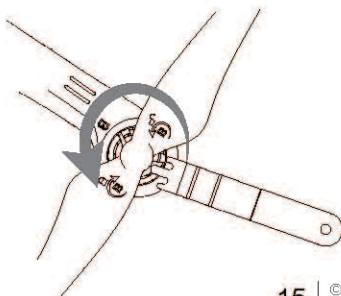
Take out the 4pcs propellers, install them tightly onto the accordance motor shafts.



- ⚠ • The propellers are designed to automatically tighten up, do not screw it too tight. Do not use screw glue.
- Make sure the black and grey propellers installed correctly, it cannot fly if the propellers installed wrongly.
- Wear gloves when install the propellers to avoid scratches as the propellers are thin and sharp.

#### 3.5.3 REMOVE PROPELLER

Hold the motor with the Propeller removal wrench, rotate the propellers in unlock direction to remove the propeller.

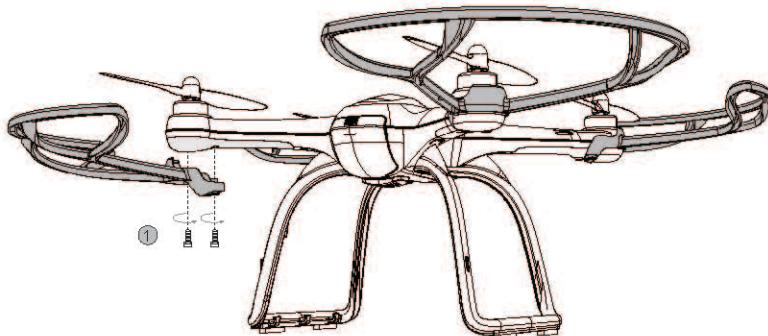


- 
- ⚠**
- Check if the propellers installed correctly before every flight.
  - Check if the propellers are in good condition, need to exchange if propellers broken or aging.
  - Do not touch or near the speedy propellers or motors to avoid scratches or injuries.
  - Always use Hubsan propellers to ensure best flight experience.
- 

### 3.5.4 PREPARE THE PROPELLER GUARD

As for beginners, we recommend that users use the Hubsan X4 Propeller Guard to enhance the safety of flying. The Propeller Guard is optional.

Method: Fasten the screw to install the propeller guard as the below picture shows.



## 4 PREPARE THE SMART TRANSMITTER

H7000 is a new kind smart FPV transmitter. It combines the Transmitter with the Android Tablet which achieves a lot of innovating function, such as displaying the X4 Pro's location and the flight course. It equipped with 7" highlight 1280 x 720 resolution IPS LCD screen and 1GHz dual-core processor.

**💡** For more information to operate the Transmitter, please refer to "*Ground Station Instruction Manual*".

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**📋** Compliance Version: H7000 meets the standard of CE and FCC (Refer to FCC ID)

Operation Mode: The Transmitter has MODE 1 and MODE 2.

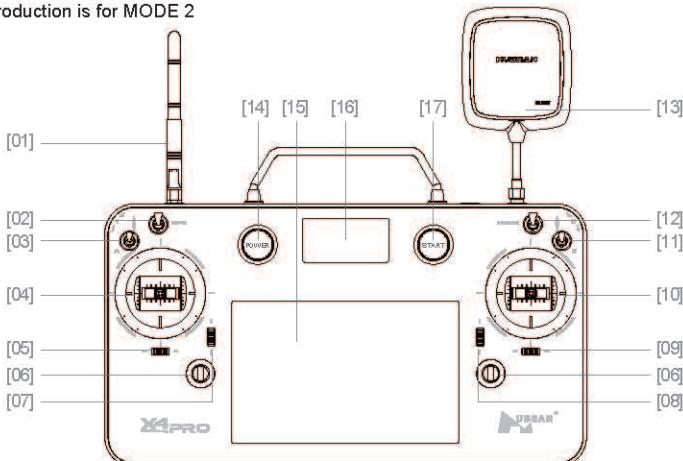
MODE 2: The left stick is the Throttle stick.

MODE 1: The right stick is the Throttle stick.

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## 4.1 INTRODUCTION

Below introduction is for MODE 2



### [01] 2.4 GH Antenna

The flight control signal transmitting antenna

### [02] Switch S2 (Altitude Mode and Position Mode)

Push: Altitude mode and Position mode

Pull down: Exit the Altitude Mode and Position Mode

### [03] Switch S1 (Headless Function)

Push: Headless Function

Pull down: Normal Function

### [04] Throttle/Rudder Stick

Move the stick forward or backward to make the X4 Pro ascend or descend. Move the stick left or right to rotate the X4 Pro's fuselage left or right.

### [05] Rudder Trim

Rudder trim adjusts for drift of left and right rotation or yaw.

### [06] Hook

For hanging the transmitter and fixing the sunshield.

### [07] Throttle Trim/ Elevator Trim (Mode 1)

Throttle trim normally left at neutral. Hold down the trim for a few seconds will turn LEDs on/off. Elevator trim adjusts for forward and backward drift.

### [08] Elevator Trim /Throttle Trim (Mode 1)

Elevator trim adjusts for forward and backward drift. Hold down the trim for a few seconds will turn LEDs on/off.

### [09] Aileron Trim

Aileron trim adjusts for left and right drift.

### [10] Elevator/Aileron Stick

Move the stick forward or backward to make the X4 Pro move forward or backward. Move the stick left or right to make the X4 Pro drift sideways left or right.

### [11] Switch S4 (Flight Course)

Push: Enter the flight course.

Pull down: Exit the flight course.

### [12] Switch S3 ( RTH Function)

Push: Enter the RTH function.

Pull down: Exit the RTH function.

### [13] 5.8GHz Antenna

Video and image signal transmitting antenna.

### [14] POWER Button

Power on/off the transmitter.

### [15] Android System LCD Screen

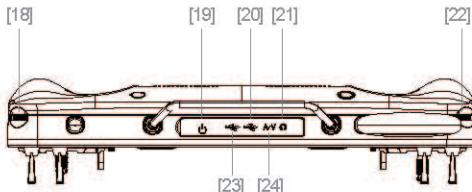
Display waypoints, video image and so on.

### [16] Transmitter OLED Screen

Display the Transmitter values.

### [17] START Button

Press this button with the power button at the same time, the transmitter will bind to the X4 Pro and relieve the binding. If just press this button only, will power on/off the X4 Pro.



[18] T1 Rotary Switch

Control the horizontal rotation of the gimbal.

[19] Android System Button

[20] Android System USB Connector

[21] Earphone Socket

[22] T2 Rotary Switch

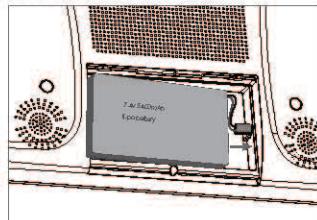
Control the pitch rotation of the gimbal.

[23] Transmitter USB Connector

[24] Videos Glasses Connector

## 4.2 THE INSTALLATION OF TRANSMITTER BATTERY

The H7000 Transmitter is equipped with a 7.4V, 2 cells, 5400mAh rechargeable Li-Po battery. Install the Li-Po battery before using.



(1) Remove the battery cover by pressing down it as the remark directed.

(2) Connect the battery with the power interface of the battery compartment in the right side, put the battery into the middle of the battery compartment.

(3) Pushing up the battery cover and make sure it stick tightly

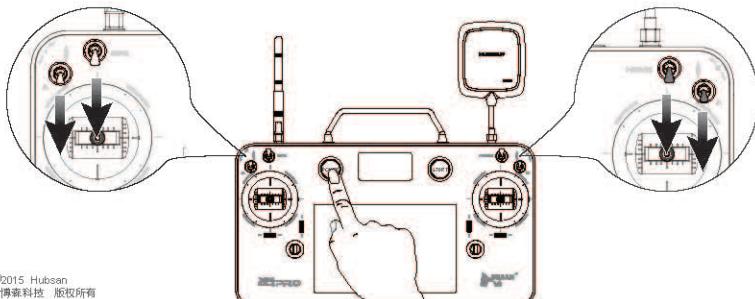
- Ⓐ • The battery connector has reverse polarity protection, when you cannot plug into the interface means you have inserted wrongly. Do not plug the connector forcefully.
  - If the battery cover can't stick tightly, please check whether the battery is in the middle position.
  
- ⚠ • Every time, before using the battery, please make sure the power is full. If the voltage is too low, the Transmitter will alarm, please charge immediately.
  - Please use the correct Micro-USB to charge.
  - If the Transmitter remains idle for a long time, which may lack of power, please charge before using.

## 4.3 START THE TRANSMITTER.

(1) Pull down the Switch S1, S2, S3, S4 into the lower position.

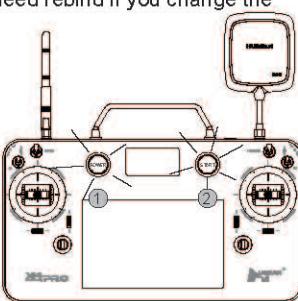
(2) Hold down the POWER button for a few seconds, the transmitter will power on.

(3) There is a tone once the transmitter is on, the OLED will be on and display the current parameter and the POWER button will light on.



## 4.4 METHOD TO BIND THE TRANSMITTER AND X4 PRO

H7000 Transmitter had already bind with the X4 Pro receiver in factory. Power on the X4 Pro, press the POWER button to power on the H7000 transmitter. If the OLED shows "Data Link Lost", indicating the X4 Pro and the transmitter not binding. Need rebind if you change the transmitter or the X4 Pro.



## METHOD OF BINDING

Press both POWER button and START button until the OLED displays "System initialize". Power on the X4 Pro when the OLED displays "Bind to Plane". The binding will be finished in 3 seconds.

## 4.5 INTRODUCTION OF THE LCD INTERFACE FUNCTION

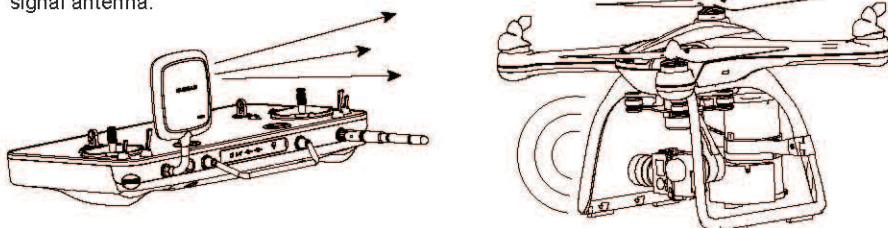
[X4 Pro Battery]	BAT	65%	TIME	00:19	[Time]
[TX Power]	TX	35%	DIST	0m	[Distance between X4 Pro and TX]
[TX signal]	RF	88%	ALT	+ 3m	[Altitude]
[GPS Signal]	GPS	0	DIR	NE	[Direction]
[Altitude Hold]	ALT Hold				
[TX Low Battery Alarm]	Low Battery TX		Headless		

H7000 is a new kind smart FPV transmitter based on the Android System, for more information to operate the Transmitter, please refer to "*Ground Station Instruction Manual*".

## 4.6 ANTENNA SIGNAL INSTRUCTION

The live video distance is around 1000 meters. In order to gain the furthest communication distance, make sure the transmitter's antenna pointed vertically and no obstacles between it and the X4 Pro when in flight.

Keep the antenna vertical and let the signal surface(the logo side) towards the X4 Pro video signal antenna.



Bend the transmitter antenna vertically, and keep the signal surface towards the X4 Pro video signal antenna; Ensure there is no obstacles between the two, or the X4 Pro will lose control.

# PREPARATION FOR FLYING

When the installation is finished, please do some practices and training (For example: use some imitator to do some fly training or ask some professional guidance.) Please choose the suitable place to play the X4 Pro.

## THE FLIGHT ENVIRONMENT FOR X4 PRO

- (1) Fly the X4 Pro in an open place. The GPS signal may become weaker and the position holding and RTH function may lapse when the X4 Pro fly around trees and buildings.
- (2) Do not play the X4 Pro in the bad weather. Such as, strong wind, heavy snow, rainy day and foggy day.
- (3) When play the X4 Pro, please keep away from the barrier, people, high-line cable, trees and so on.
- (4) Do not play the X4 Pro in places such as station and launch tower, to avoid interaction.
- (5) Can not play in the south and north pole.
- (6) Do not place the X4 Pro in the forbidden place.

## CHECK BEFORE FLYING

- (1) Make sure the power is full of the Transmitter, X4 Pro, parachute, and camera.
- (2) Make sure the propellers install correctly.
- (3) Make sure the gimbal vibration setting is completely and the installation is correctly.
- (4) Make sure whether the plug of the parachute is in or out, and make sure the power of the parachute is full.
- (5) Make sure insert the Micro-SD card when do shooting and recording.
- (6) Make sure when the power on, the camera and gimbal can work normally.
- (7) Make sure whether the motor can work normally or not.

## 1.COMPASS CALIBRATION

After the X4 Pro power on, the blue LED of the X4 Pro will blink circularly, put the X4 Pro on a level surface, do not move it. Then the OLED will show "Check Compass", indicating the X4 Pro is checking the compass. Keep the X4 Pro in a level surface, slowly rotate it until the "Check Compass" disappear.

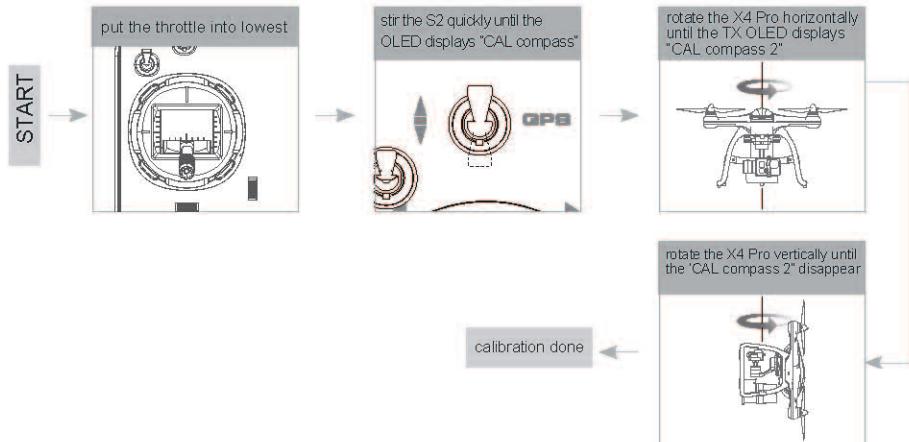
If the X4 Pro sense abnormal of the compass sensor, it will enter into the state of compass calibration, the transmitter OLED will show "CAL compass 1", levelly spin the X4 Pro until the OLED shows "CAL compass 2", then vertically spin the X4 Pro until the "CAL compass 2" disappear, indicating successful calibration.

If the compass data is wrong, you can also pull the Switch S2 to calibrate the compass. Below is the method:

-  • Do not do the calibration in the magnetic field, such as in parking lot, magnetite, places with underground reinforced and so on.  
• Do not bring the keys, magnetic thing, and mobile phone when you do calibration.  
• Do not do the calibration nearby the metal area.

## 1.1 CALIBRATION

Method of calibration: Hold the Throttle Stick in the bottom down, quickly move the Toggle Switch until the OLED shows "CAL compass 1", levelly spin the X4 Pro until the OLED shows "CAL compass 2", then vertically spin the X4 Pro until the "CAL compass 2" disappear, indicating successful calibration.



## 1.2 CHECK GPS CONDITION

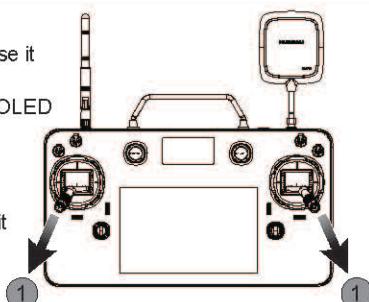
Fly the X4 Pro after the GPS value changed into 5 or above 5, then the position hold function will be work and the X4 Pro can record the take off position, so the RTH function will be activated.

## 2. START/ STOP THE MOTORS

### Start the motors

Method 1: Pull the two sticks as the picture shows, release it after the motor start;

Method 2: Press the START button for one second, the OLED will indicate the status of the X4 Pro.



### Stop the motors

Method 1: Pull the two sticks again as the picture, release it after the motor stop;

Method 2: Press the START button for one second, the motor will stop.

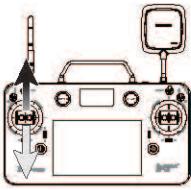
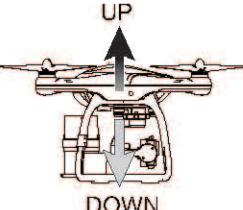
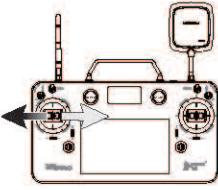
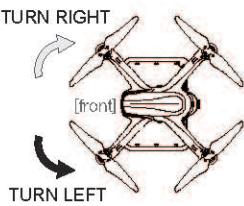
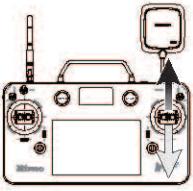
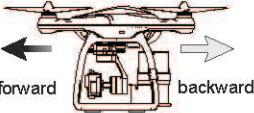
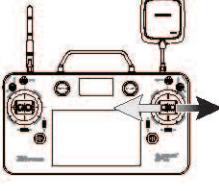
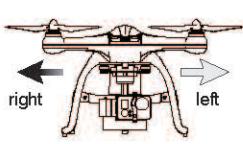
Do not stop during the flight, or it will lead to falling danger.

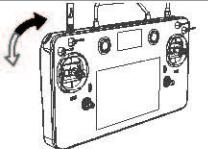
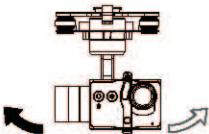
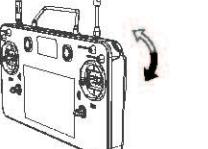
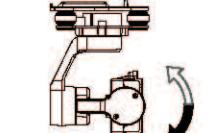
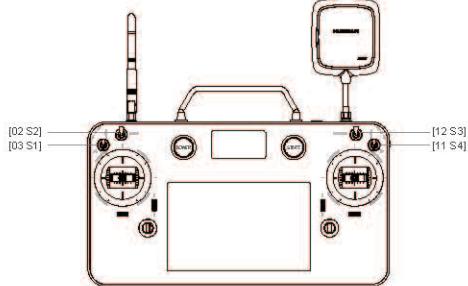
- Move the stick as brisk and rapid as you can, release the stick after the motor starting or stop
- Turn the throttle to the lowest position gently, the throttle stick will be locked, then the X4 Pro will descend slowly, move the throttle stick upward to unlock the throttle.

### 3 BASIC FLIGHT

The operation mode for the transmitter is Model 2, the manual will take the Model 2 as example to illustrate the transmitter's operation.

- The stick return to the center: The transmitter's stick is in the center.
- Stick's rudder offset: The offset of the transmitter sticks from the center.

Transmitter (Model 2)	X4 Pro	Control Ways
		<p>The throttle stick is for controlling the X4 Pro ascend or descend.      The X4 Pro will ascend when move the stick upward, and the X4 Pro will descend when move the stick to the downward, and it will remain unchanged when the stick on the center (fixed-height automatically)      Move the throttle stick upward over the center, the X4 Pro can take off. (Pls move the stick gently, to prevent the X4 Pro from ascending hastily)</p>
		<p>Rudder stick is for controlling the direction of the X4 Pro      The X4 Pro will rotate anticlockwise when you move the stick to the left. The X4 Pro will rotate clockwise when you move the stick to the right.      The rotation angle is zero and the X4 Pro doesn't rotate when the stick is on the center.      The strength for moving the stick is correspond to the angular velocity of rotating, the angular velocity of rotating will be greater if the strength for moving the stick is larger.</p>
		<p>Elevator stick moves the X4 Pro flying forward or backward      Move the stick forward, the X4 Pro will tilt and flying forward,      Move the stick backward, the X4 Pro will tilt and flying backward,      It will be horizontal if release the stick to the center.      If you move the stick to both ends, the tilt angle will be greatest, and flying faster</p>
		<p>Aileron stick moves the X4 Pro flying left or right      Move the stick left, the X4 Pro will tilt and flying left,      Move the stick right, the X4 Pro will tilt and flying right,      It will be horizontal if release the stick to the center.      If you move the stick to both ends, the tilt angle will be greatest, and flying faster</p>

		Camera's horizontal control wheel control the camera rotate horizontal. Turn the wheel clockwise, the camera will rotate to the left. Turn the wheel anticlockwise, the camera will rotate to the right. Stop turning the wheel, the camera will keep the current angle.
		Camera's horizontal control wheel control the camera rotate horizontal. Turn the wheel clockwise, the camera will tilt upward. Turn the wheel anticlockwise, the camera will tilt downward. Stop turning the wheel, the camera will keep the current angle
 position 1 (upward)	 position 2 (downward)	Switch S2 is fixed-position switch When it is on the position 1 (upward), the fixed-position function start. When it is on the position 2 (downward), the fixed-position function close.
	Switch S1 is headless function switch When it is on the position 1 (upward), the headless mode start. When it is on the position 2 (downward), the headless mode close. Switch S3 is airline operation key Switch S4 is flight course switch When it is on the position 1 (upward), the flight course start. When it is on the position 2 (downward), the flight course close.	
	Switch S3 is RTH function switch When it is on the position 1 (upward), the RTH function start. When it is on the position 2 (downward), the RTH function close.	

## 4 LOSE CONTROL PROTECTION FUNCTION

When the X4 Pro lose the signal of the transmitter (lose control), the flight control system will control the X4 Pro to land or return to the departure position and land automatically, it can prevent the X4 Pro from losing or crashing.

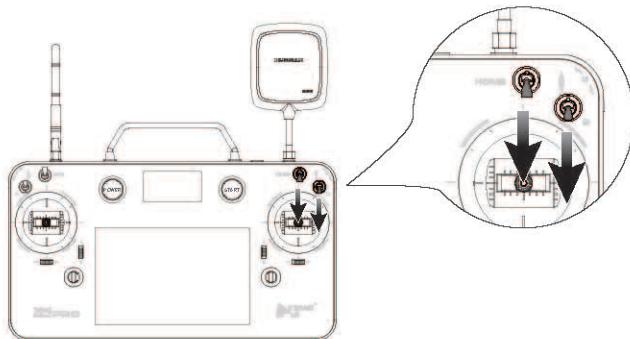
 **DEPARTURE POINT:** When the X4 Pro enter into safe flight state (no GPS) from semi-safe flight states, the X4 Pro will record the position as departure point.

### 4.1 THE CONDITION WHICH CAN ENTER INTO THE LOSE CONTROL PROTECTION MODE

- (1) The transmitter is power off.
- (2) The flight distance is beyond the effective distance of the transmitter's signal's transmission.
- (3) There are obstacles between the X4 Pro and the transmitter.
- (4) The transmitter's signal was disturbed.

## 4.2 EXIT THE RTH MODE

Pull down the RTH function switch(S3) and the flight course switch(S4), the X4 Pro will exit the RTH Mode



- 🚫 • To ensure the X4 Pro can return to the departure point successfully after it lost control, fly after the X4 Pro enter into the safe flight states.
- During the process of losing control & returning, if the quantity of GPS star less than 6, and lasting for 20 seconds, the X4 Pro will descend automatically.
- The X4 Pro can't avoid obstacles when it is in RTH mode, you can set the height value to avoid the obstacles.

## 5 INTELLIGENT BATTERY ALARM FUNCTION

When the voltage of the X4 Pro' battery is lower than 10.8V, the X4 Pro will descend slowly, although the X4 Pro will ascend when increasing the throttle , you should get the X4 Pro back and land as soon as possible.

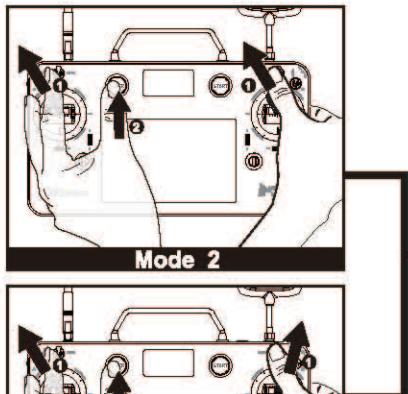
X4 Pro Battery	BAT TX RF GPS	65% 35% 88% 0	TIME DIST ALT DIR	00:19 0m + 3m NE
Transmitter Low battery Alarm	ALT Hold Low Battery TX		Headless	

## FAQ

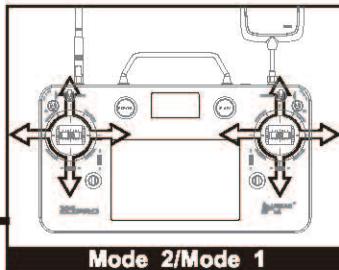
1. The motor doesn't work.  
Recalibrate the transmitter.

**Mode 2:** Put the two sticks to the upper left position and hold, then power on the transmitter. Then rotate Both sticks a couple of times in full circles. Then hold down any trim until the LED on the TX blinks red, signaling a successful calibration. (See the picture below.)

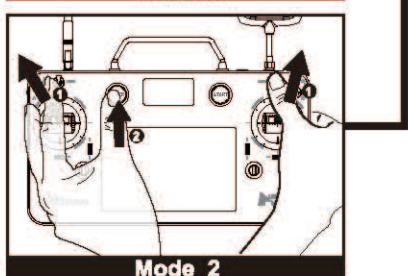
**Mode 1:** Put the left stick to the upper left position and the right stick to the upper right position and hold, then power on the transmitter. Rotate both sticks a couple of times in full circles. Then hold down any trim until the LED on the TX blinks red, signaling a successful calibration. (See below.)



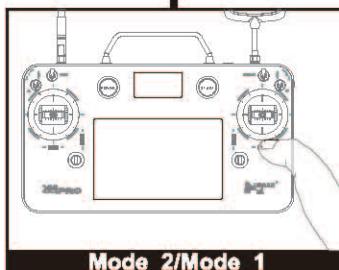
Mode 2



Mode 2/Mode 1



Mode 2



Mode 2/Mode 1

2.X4 Pro shift to other side during flying.

When power on, please keep the X4 Pro steadily for 10 seconds, the purpose of this is to initialize the sensor.

3.GPS position system is not good.

Please check the surrounding carefully, see whether there is other things interfere the GPS signal or not, then calibrate the compass sensor again.

4.The Transmitter sounds “Beep, Beep”

Please check the power of the battery carefully, stop flying and charge the battery.

5.The X4 Pro will sound “Beep, Beep” when power on.

Update the flight control program again.

## **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.



## **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.