



STORMRC
HOBBY

Instruction Manual



Warning

RC models, including STORMRC helicopters are not toys! RC models consist of various high-tech electronic components designed to provide superior performance. Potential damage and injury may occur if operated improperly. The model is not suitable for children under the age of 14 years. We recommend that you seek the assistance of an experienced pilot when flying for the first time. It is mandatory to follow the instructions and read all warnings before flying. Please ensure you are conscious of the safety of yourself and others around you when you operate all STORMRC HOBBY products. STORMRC HOBBY international reserves the right to modify the model without prior notice.

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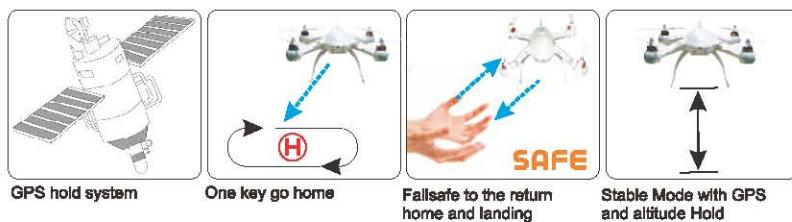
1.Introduction

Thanks for purchasing X3 series products, To ensure your safety, please read the whole instruction manual carefully before any assembly and use. Please keep the manual properly for future repair and adjustment refer.



Specification:

Main Rotor :8045
Gross Weight:685g w/battery
Motor Size:2212
ESC:18 A
Receiver (6 channels)
Transmitter (i6S 6 channels)
GPS Module
Battery (2200mah)
Kit/ARF/RTF:RTF
Minimum Age Recommendation:14 years
Experience Level:Advanced



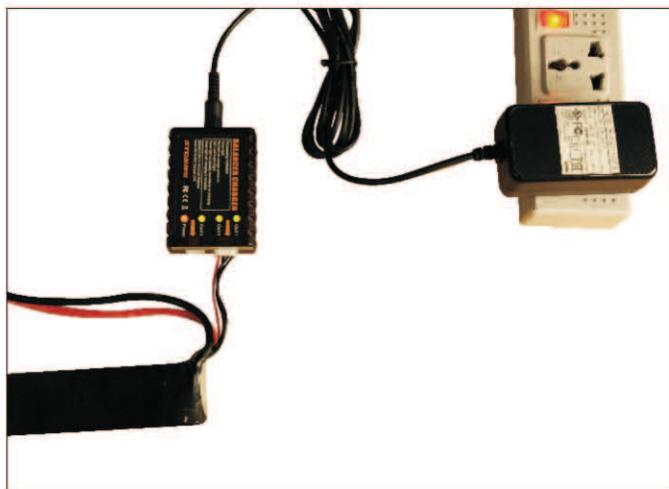
2.General safety precautions and warnings

- *Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- *Always operate your model in open spaces away from full-size vehicles, traffic and people.
- *Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- *Always keep all chemicals, small parts and anything electrical out of the reach of children.
- *Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- *Never place any portion of the model in your mouth as it could cause serious injury or even death.
- *Never operate your model with low transmitter batteries.
- *Always keep aircraft in sight and under control.
- *Always move the throttle fully down at rotor strike.
- *Always use fully charged batteries.
- *Always keep transmitter powered on while aircraft is powered.
- *Always remove batteries before disassembly.
- *Always keep moving parts clean.
- *Always keep parts dry.
- *Always let parts cool after use before touching.
- *Always remove batteries after use.
- *Never operate aircraft with damaged wiring.
- *Never touch moving parts.

3.Charging the Flight Battery

The STORM X3 RTF comes with a DC balancing charger and 3S Li-Po battery. You must charge the included Li-Po battery pack with a Li-Po specific charger only (such as the included charger). Never leave the battery and charger unattended during the charge process. Failure to follow the instructions properly could result in a fire. When charging, make certain the battery is on a heat-resistant surface. Charge the flight battery before binding the aircraft (2.4Ghz only) or performing control tests.

- (1). Input Voltage DC15~20V
- (2). Input Current1 000 mA



Charging is complete after 150 minutes then enter into the balancing status. the balancing will be completed when all of the green led indicators off.

The Battery Charging Process:

1. Charge only batteries that are cool to the touch and are not damaged. Look at the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured.
2. Connect the charger to a 15V power source noting proper polarity.
3. Red light on:charger power on.
4. Cell 1,cell 2,cell 3 light:green light on steadily,the battery on charging.green light off,charging is complete.



CAUTION Overcharging a battery can cause a fire.



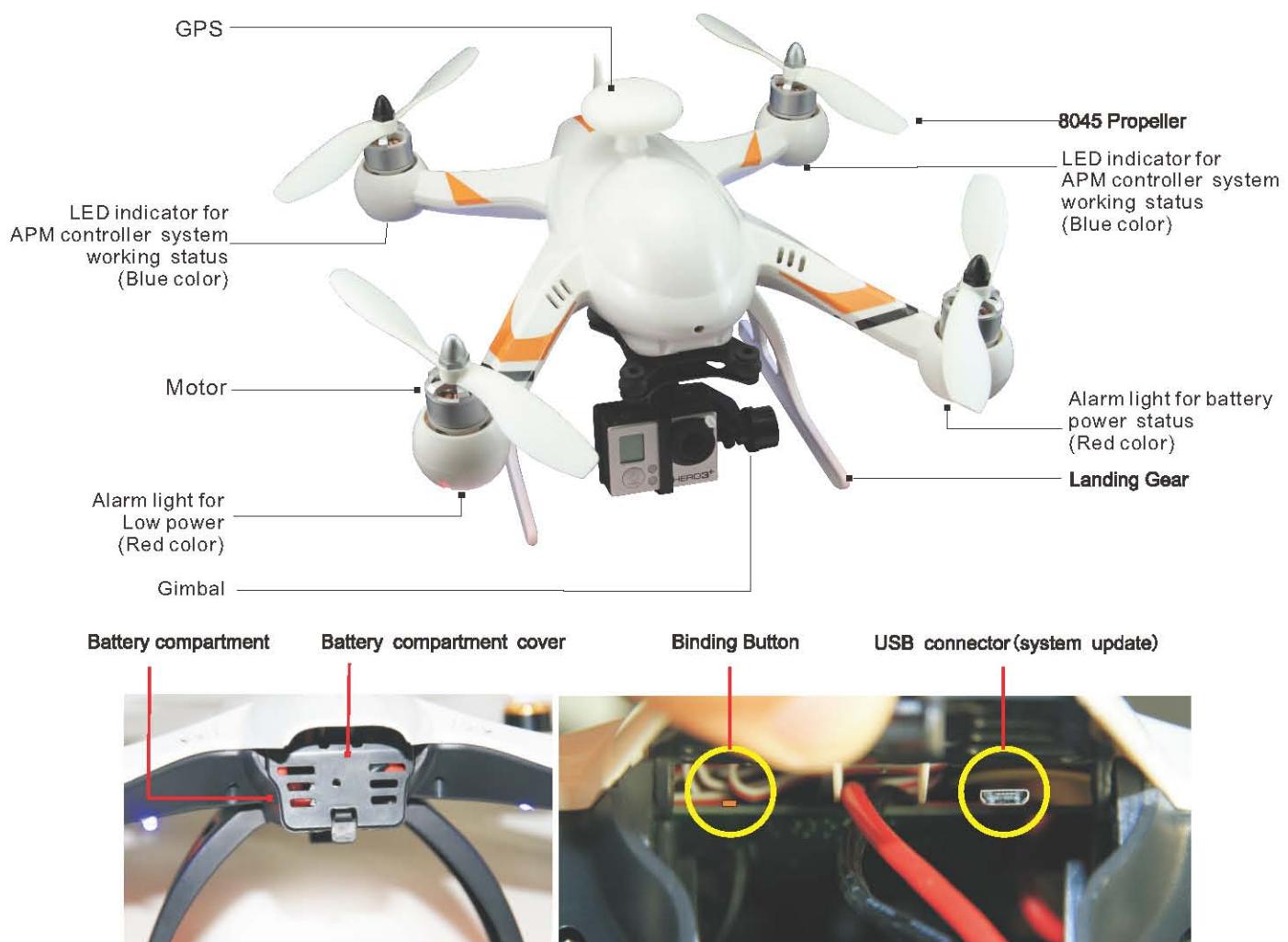
WARNING Failure to use the proper charger for a Li-Po battery can result in serious damage, and will cause a fire. ALWAYS use caution when charging Li-Po batteries.



WARNING Selecting a charge rate higher than 1x (one times) the battery capacity may cause a fire.

4.Table of Contents

Contents: Multi controller box, Gps & compass module,Transmitter& receiver, brushless motor&ESC,LED indicator, system update Connector, binding connector.



5.The rotating direction of the propellers



Make sure the propeller is in good condition before any flight, do not use the damaged propeller to flight the aircraft.
Make sure that every propeller mount should be tightly and tighten the screws is enough.



6.Transmitter

MODEL 1



MODEL 2



Bind	Press the button and power on the transmitter for binding.
Mode 1	Press the button, then there are Bi Bi Bi... sounds, it indicate the radio change to mode1 mode.
Mode 2	Press the button, then there are Bi Bi Bi... sounds, it indicate the radio change to mode2 mode.
D/R	Power on the transmitter, then press the button, it indicate the travel value changed to 60%(slow flight) when the sound Bi. and it indicate the travel value changed to 100% (fast flight) when the sounds Bi Bi.

7、Description of switch location and function :

Sw1 location

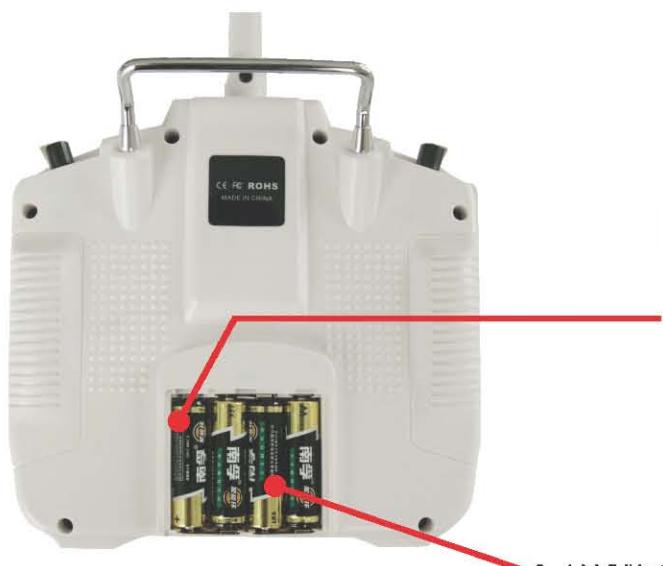


Sw2 location

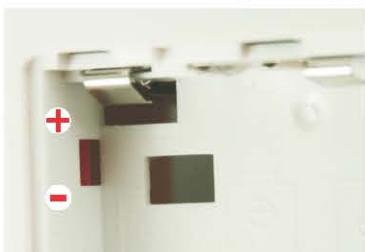


SW1	SW2	Function
0	0	Stabilize mode
1	0	Altitude hold
2	0	Direction lock
0	1	GPS loiter
0	2	GPS RTL
CH7	Rolling	
CH7	Tilting	

8、Transmitter battery:



1. 2cells 7.4V LI-Po battery with JST plug.



2. 4 AA 5 # batteries, or optional NiCd or NiMH 1.5 volt AA rechargeable batteries.

9 .Transmitter and Receiver binding

X3 RTF version has been binded & tested well at factory, please refer to the following binding process if you need rebinding.

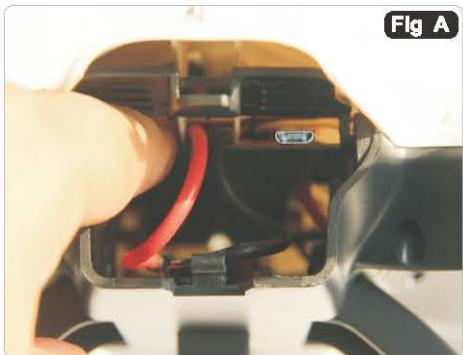


Fig A

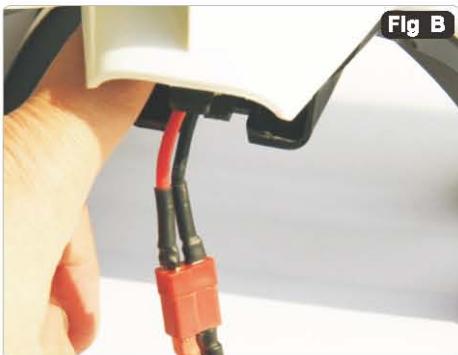


Fig B



Fig C

Mode 2

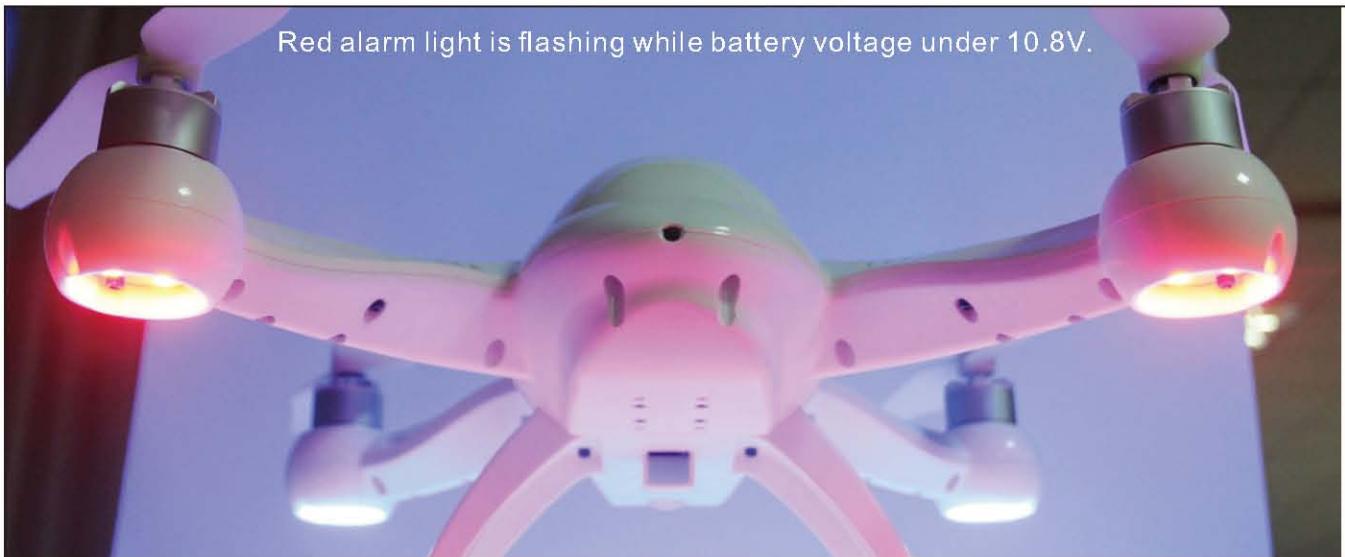


Fig D

- 1、Press the Bining Button as shown Fig A.
- 2、Then connect the flight battery and release the Binding Button.
- 3、Push the throttle sticker to the lowest position.
- 4\Press the BIND switch, turn on the power switch, keep waiting for 10 seconds, and then release the BIND switch. It indicates Binding success if the RED light on receiver is steady on .

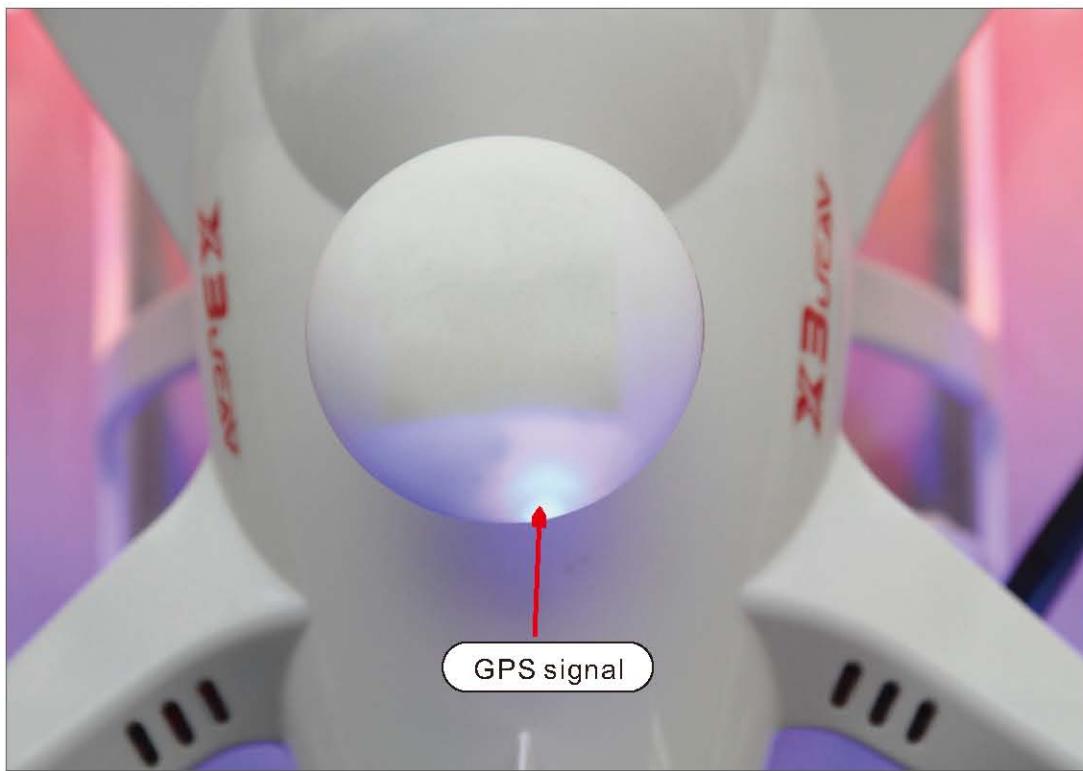
10、Lower voltage warning & Auto landing function:

Lower voltage warning & AUTO Landing function: X3 controller box can automatically inspect the battery voltage. The Battery power indicator is blinking red when battery voltage below 10.8V. X3 will automatically launch landing program when battery voltage under 10.5V. During the automatic landing, the transmitter still can control Aileron, Rudder, forward and backward.



11、GPS signal

When outdoor flying under GPS mode, firstly searching the satellite, GPS hold & return to landing mode can work while satellite exceed 6pcs. Blue LED light start flashing when satellite exceed 6pcs. If satellite below 6pcs, there is no light.



Gps & compass calibration notes

If in GPS ATTI. Mode, place the aircraft in an open space without buildings or trees. Take off the aircraft after 6 or more GPS satellites are found (Blue LED lighting on solid).

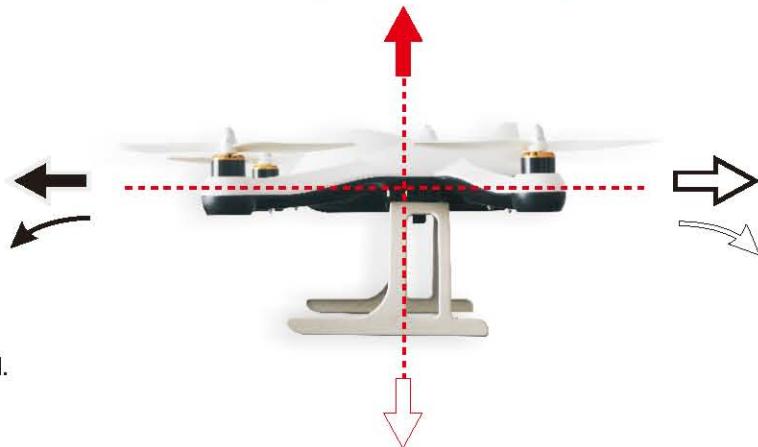
The GPS module has a built-in magnetic field sensor for measuring the geomagnetic field, which is not the same in different areas. The GPS module will not work unless the Compass Module has been connected. Make sure the Compass Module connections are correct. Please always keep the compass module away from the magnet. If this situation occurs please change the compass module before flying. Otherwise it may damage the compass module and lead the aircraft to work abnormally or even be out of control.

Calibrate the compass before the first flight or when flying in a different area. Make sure to keep away from ferromagnetic substance and other electronic equipment when calibrating or flying. If you keep having calibration failure, it might suggest that there is magnetic interference or other ferromagnetic substance, please avoid flying in this area.

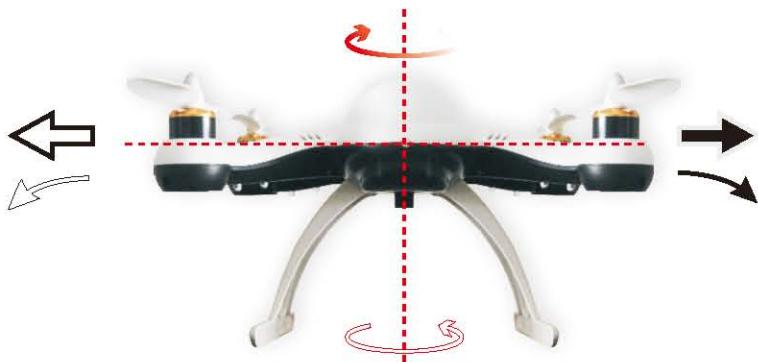
12. Stability and Agility Mode Control Inputs

MODE 2

Front/back/left/right control. Command stick controls the angle of the Aircraft. Stick neutral position is for 0°, its endpoint is 45°.



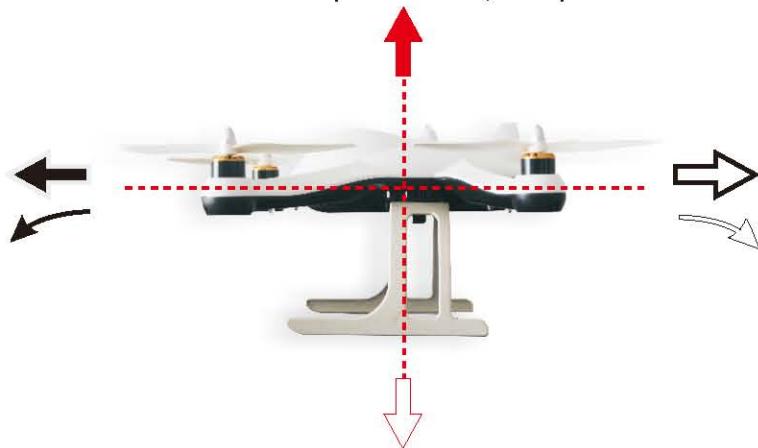
Throttle stick is for aircraft up & down control.
Elevator stick is for aircraft front & back control.



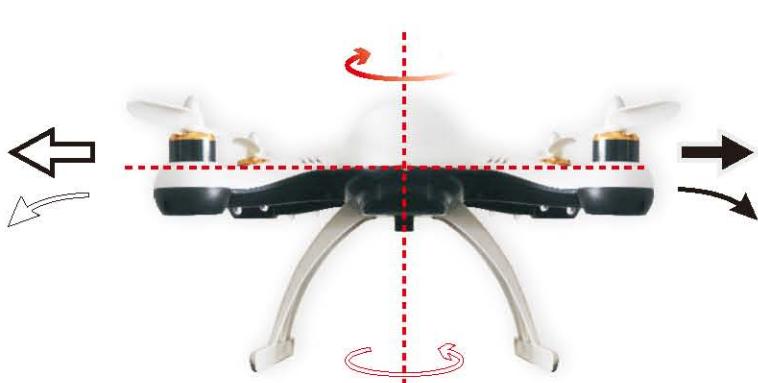
Aileron stick is for aircraft left/right control.
Rudder stick is for aircraft angular velocity

MODE 1

Front/back/left/right control. Command stick controls the angle of the Aircraft. Stick neutral position is for 0°, its endpoint is 45°.



Throttle stick is for aircraft up & down control.
Elevator stick is for aircraft front & back control.



Aileron stick is for aircraft left/right control.
Rudder stick is for aircraft angular velocity

13. UNLOCK process:

After the success of the Transmitter and the aircraft controller system link, you need to unlock the aircraft controller system to flight safety. Unlock process as shown below:

(MODE 2)

SW1&SW2 set at "0"



(MODE 1)

SW1&SW2 set at "0"



Pull the rudder switch and hit the right corner of bottom until the LED flashing in Blue to release.(shows as above picture)



Solid blue LED light indicate successful unlocking. Flashing blue LED light indicate locking.
The propeller can not rotate when controller system is locking.

14 .Stabilize MODE:

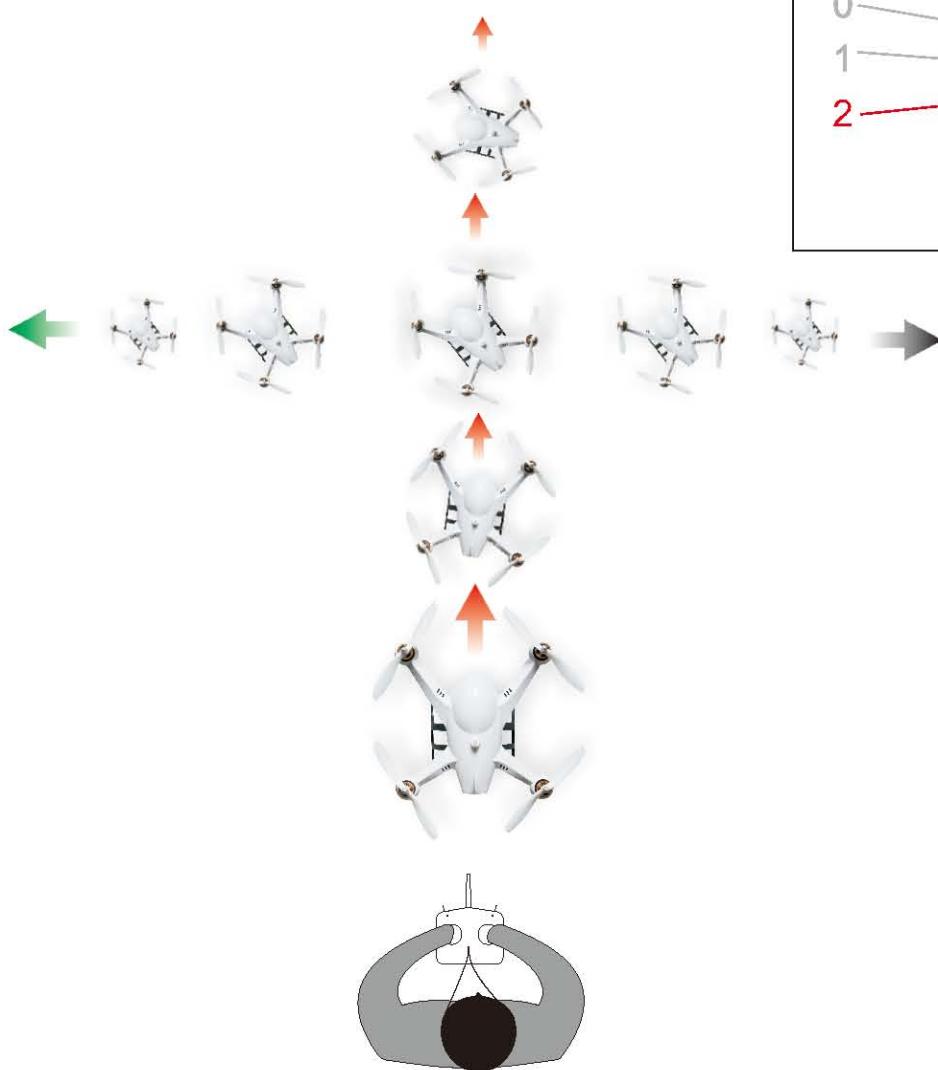
When the Switch of ELEV D/R and FLAP GYRO and F-MODE GEAR is on the original position, the flight with STABILIZE MODE.

SW1&SW2 set at "0"



15 . Direction Lock:

Unlock head toward direction is the lock direction for flight.

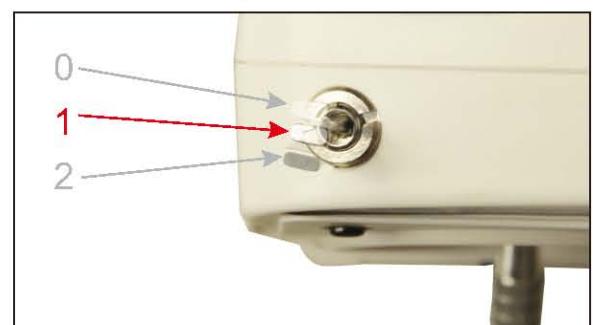


16 . ALTHOLD:

Warning: please push the throttle sticker to the central position when you off the ALTITUDE HOLDING mode, otherwise the aircraft flight will be up or down too fast.



Sw1set at "1", sw2 set at "0".



17.GPS LOITER

The aircraft will flight at fixed point when you set up the GPS ATTI-fixed point function during your flight.



Sw1 set at "0", sw2 set at "1".



To acquire a reliable GPS signal, it is important the X3 has a clear view of the sky.

Obstructions which can affect the aircraft's ability to acquire an acceptable signal include:

Flying close to or around tall/big buildings

Flying under dense vegetation

Flying indoors or under a structure

If you lose or cannot acquire a GPS lock and home position, the aircraft will not have Stick Relativity, SAFE Circle, Position Hold or Return Home functions available.

It is not possible to use Smart Mode without having GPS enabled. If the X3 is initialized without GPS enabled, it will default to Stability Mode. The aircraft will still be capable of altitude hold.

If you do not have a GPS signal, try maneuvering the X3 by steering with forward elevator and rudder only.

18 . RTL

Home-point: Before takeoff, current position of multi-rotor will be saved as home-point by MC automatically when you start the motors for the first time after 6 or more GPS satellites are found for 20 seconds.

Sw1 set at "0", sw2 set at "2".

NOTE:

1. Please make sure to record the home-point before takeoff, and clearly know where it is.
2. During go-home the nose direction of the aircraft is facing toward the home-point, the aircraft is flying directly from the current position to the home-point.
3. You can regain the control during the aircraft is hovering 15 seconds.



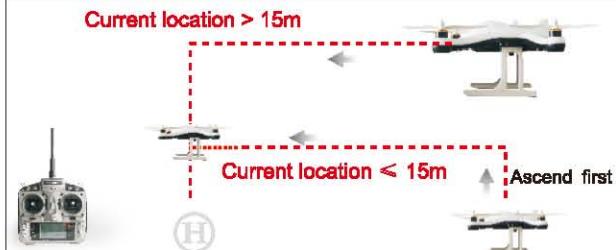
1. Unlock the controller system, then waiting for the GPS to record the Home point.



2. You can set up the Return home function after Flight the aircraft to the desired position or lost the control .



3. The aircraft start to return home.



4. Return home successfully.



19 . Why need failsafe function

This function is control by GPS locking, the controller system and GPS compass module will get the aircraft return home automatically when you lost the signal.

The following status need start the Failsafe function.

- 1.the transmitter turn off during your flight.
- 2.You lost your controller signal.

20.Quick start step



Assembly the flight battery note:

We have designed a flexible battery compartment, and you can choose the flight battery from 2100mAh to 3600mAh.

1. assembly the battery for the aircraft without Gimbal, please push the flight battery as front as you can.
2. assembly the battery for the aircraft with Gimbal, please set the flight battery at rear location.

21.Flight Control Calibration:

The quad copter need to flight calibration If the aircraft flight instability. To calibration as below.

1. Power on the Transmitter and plug the flight battery to the quadcopter.



2. Move the Throttle & Rudder switch to the bottom right corner, after 12 seconds, quadcopter get into flight stabilized control calibration mode when Blue LED change from solid blue to fast flashing. And then take off the quadcopter, keep hovering, the calibration is finished when Blue LED stop fast flashing.



3. The Final step to repeat the Lock and Unlock process again, Then the copter will finish the whole calibration. The quadcopter will fly in stability after you made the above calibration process.



22. Outdoor compass calibration::

1. First, power on the Transmitter, then power on the aircraft, now start operating the Transmitter as shown below pictures within five seconds:



Mode2 Radio, compass calibration process:
Put the throttle stick to the bottom position, and push the Aileron stick to the end corner of right .



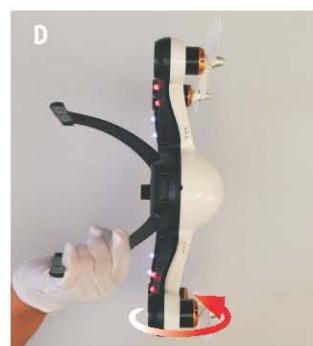
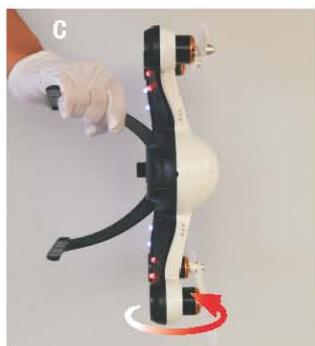
Mode1 Radio, compass calibration process:
Put the Elevator stick to the bottom position, and push the Throttle stick to the end corner of right .

2. Compass get into calibration condition when blue LED is fast flashing.



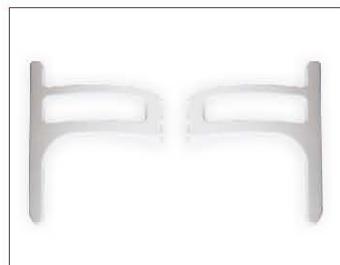
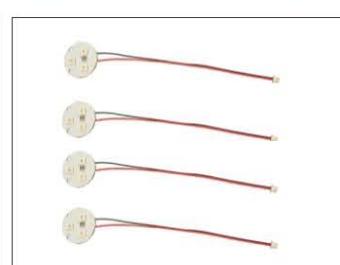
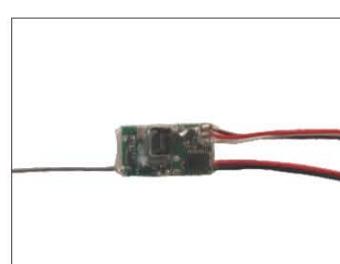
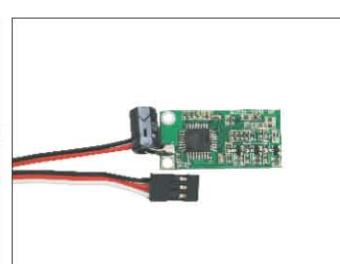
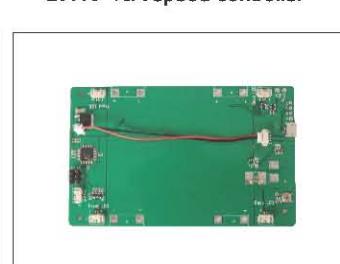
3. Put Each side of the aircraft toward the ground surface and rotated 360 degrees.

NOTE: Each side should rotate over 3 laps, Compass to be able to get more data. Calibration time not less than one minute and more than five minutes.



4. After calibration is complete, disconnect the flight battery of Aircraft , then reconnect the flight battery to aircraft to get the Aircraft flight .

23. Parts list

			
30008 landing gear/black color	30003 landing gear/white color	30010 bottom frame / black color	30005 bottom frame / white color
			
30009 top frame/black color	30004 top frame/white color	30006 hardware	20126 Led light set
			
30001 rotor A/2PCS	30001R rotor A/2PCS	20123 brushless 920KV	20123 brushless 920KV R
			
20112 controller box OF QUADCOPTER	20113 GPS	S803 receiver	20115 18A speed controller
			
Transmitter	16059 11.1V/2200 lipoy battery	USB cable	20130 electric board
			
16013	16015	Balancer charger for 2-3 cell li-po battery	Electricity supplier (usa)

FCC Compliance:

1. 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.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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