



14+
AGES

USER MANUAL



CX-23

Please read and follow all instructions and warnings in the manual prior to set up or use. Do not discard the manual.

Basic Aircraft Specification

Flying Environment: Outdoors
Battery: 7.4V 1200mAh 20C
Aircraft Weight: 230g
Image Resolution: 720X1080
R/C Range: Around 500m
Propeller Diameter: 100mm
Distance between Shafts: 200mm

Motors: 1306
ESCs: 10A
Receiver: RX-23
Transmitter: TX-23
Monitor Resolution: 272X480
Aircraft Size: 90mm
Flying Time: 13 minutes

Main Functions



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

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.

Dear Customers:

We appreciate you for choosing our products.
For the safety reasons, please read the manual carefully. Keep the manual for future references.

1.Warning:

This is not a toy. It is a sophisticated hobby product equipped with electronic and mechanical parts. It must be operated with caution and common sense. The pilot should take all reasonable steps in order to protect: himself, other people, animals and property. We take no responsibility for any kind of accidents which are caused by incorrect operation, or incorrect installation of parts. The product is suitable for hobbyist who are over 14 years old. Please fly in areas where flying is permitted.

We take no responsibility of operations, usage and etc. after the aircraft is sold, please contact your local dealer for parts and repair consultations.

2. Safety Precautions

(1) It is a high-risk product and we recommend always operate it in open spaces away from people, vehicles and property. Always keep a safe distance in all directions around the device while it is in operation to avoid collisions or injury.
(2) The accidents (physical injuries or property damages) may be caused by: incorrect aircraft's parts installations; damaged aircraft's parts; defective electronic equipment; unfamiliar operations of the aircraft. The pilot should pay attention to the safety while operating the CX-23. The pilot is responsible for the accidents.

Flying CX-23

1. Make sure all the batteries are fully charged: transmitter battery and aircraft battery.
2. Plug aircraft's battery and then turn on the transmitter. After the flight, unplug the aircraft's battery and then turn off the transmitter. Wrong sequence of this procedure may cause the aircraft to fly away or be out of control causing injuries and damages.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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3. Operate the product in open spaces away from: obstacles, people, power lines, high buildings etc. Pay attention to the weather conditions – strong wind, rain and thunder are the potential risk factors which can lead to a loss of control.

4. Avoid water exposure to this product. Keep all the parts dry.

5. Replace broken parts of the aircraft.

6. Obey the local UAV laws and regulations. CX-23 piloting requires specific skills and should be learned under direct supervision of an experienced adult. We recommend to use computer simulative software in order to get basic flying experience before taking CX-23 to the field.

7. Always keep the device in sight during operation.

8. Do not fly the aircraft while under the influence of alcohol. Keep away from the rotating blades (rotating blades may cause bodily injuries, or damage the property).

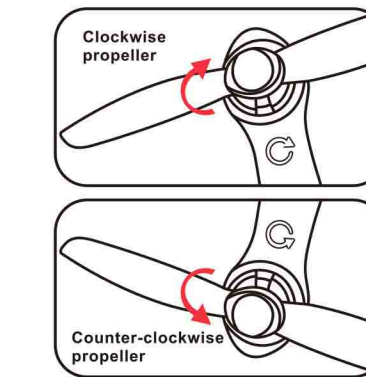
9. CX-23 is build out of: metal, fiber, plastic and electronic components. Therefore, keep away the aircraft from heat sources in order to avoid damages.

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1.Assembly Instructions

1.Installing the Propellers

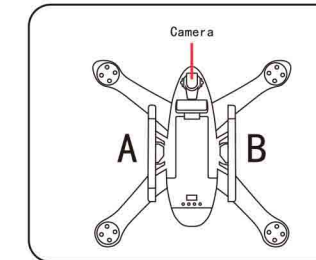
- (1) Remove the propeller nut from the motors using the wrench supplied.
- (2) Fit the clockwise propellers, they are labeled M2 and M4. Tighten the nuts counter-clockwise.
- (3) Fit the counter-clockwise propellers, they are labeled M1 and M3. Tighten the nuts clockwise.



Attention: Improper propeller installation can cause aircraft damage and accidents.

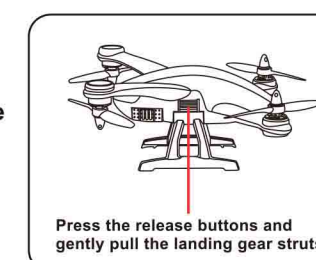
2 Installing the Landing Gear

- (1) Locate the landing gear struts by pushing them down. Refer to the image.



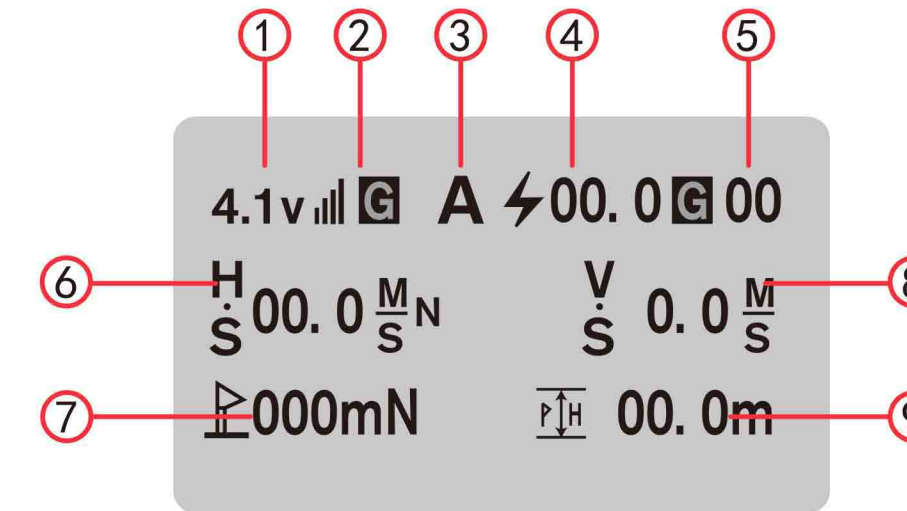
Landing gear Removal:

- (1) Press the release buttons and gently pull down the landing gear struts. Refer to the image.



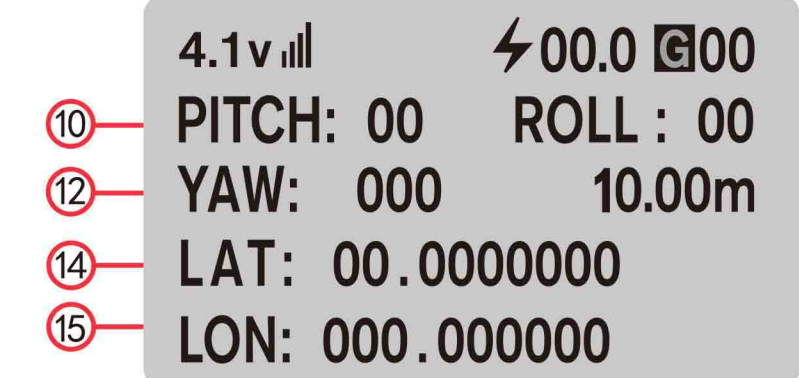
3

2.Display



- 1.Transmitter battery voltage
- 2.Signal strength
- 3.Mode: A(height hold); B(GPS); C(circle around)
- 4.Aircraft battery voltage
- 5.GPS satellites
- 6.Speed m/s
- 7.Distance (meters)
- 8.Ascend/descend speed m/s
- 9.Height (meters)

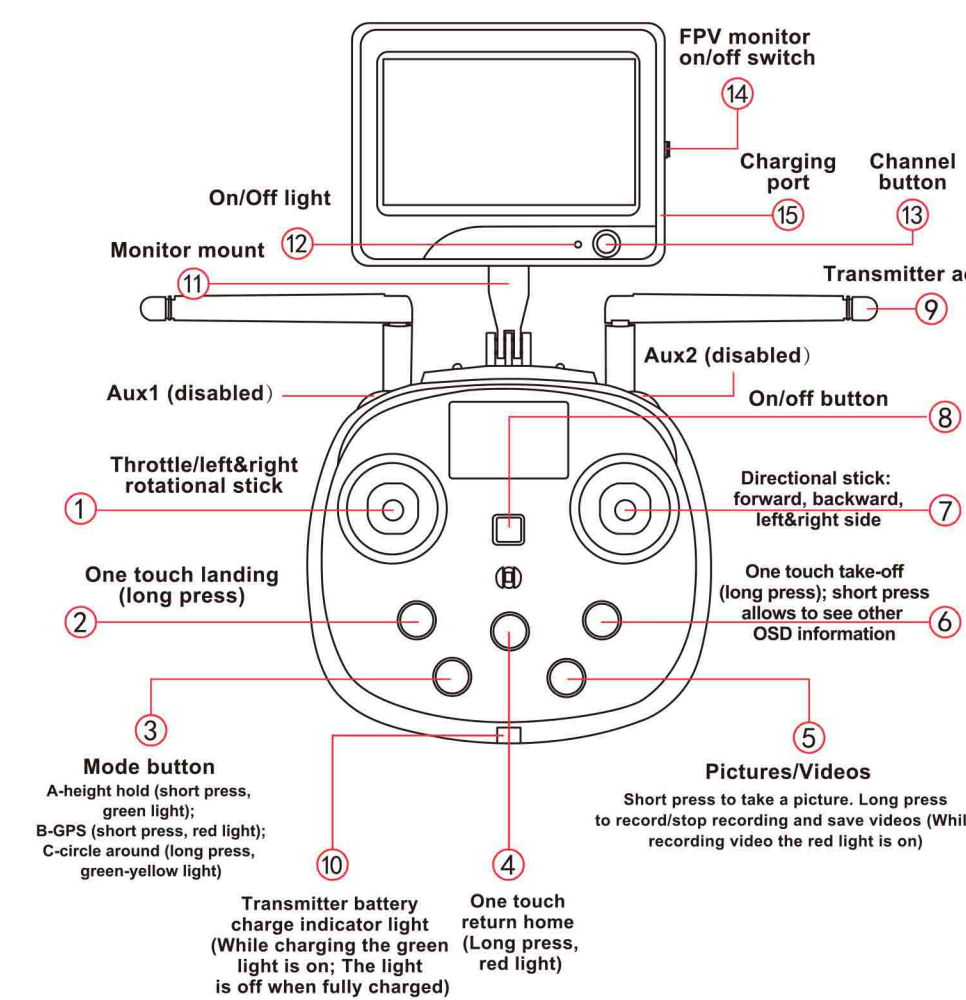
4



- 10.Pitch
- 11.Roll
- 12.Yaw
- 13.Flight time (minutes)
- 14.Latitude
- 15.Longitude

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2.Transmitter Functions and Settings (Left-handed throttle)



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3.Preparation for Flight

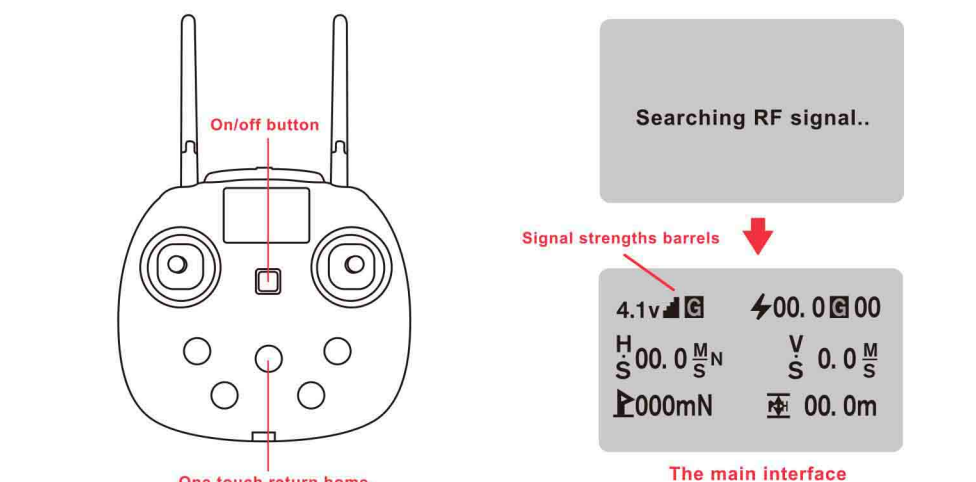
Aircraft Battery On/Off Button

After the short press on the button. The indicator lights will power up for few seconds (checking the battery power). In order to power on, press down on the button for 4-6 secs. The indicator lights will power up. While already on, pressing down on the button for 4-6 secs will power off the battery, the battery lights will turn off as well.

Pairing Procedure

1.ATTENTION: please make sure to follow the first pairing procedure correctly. First pairing procedure. Install a charged battery into the battery bay at the bottom of the aircraft. After, press and hold the Return Home button and turn on the transmitter by pressing on the on/off button. The message "Searching RF signal.." will appear on the transmitter's display. Turn on the aircraft's battery and place the aircraft on a flat surface. After successful pairing the signal strengths barrels will appear as shown on the picture.

Basic pairing procedure. Install a charged battery into the battery bay at the bottom of the aircraft. After, turn on the transmitter by pressing on the on/off button. The main interface screen will appear on the transmitter display. Turn on the aircraft's battery and place the aircraft on a flat surface. After successful pairing the signal strengths barrels will appear as shown on the picture.

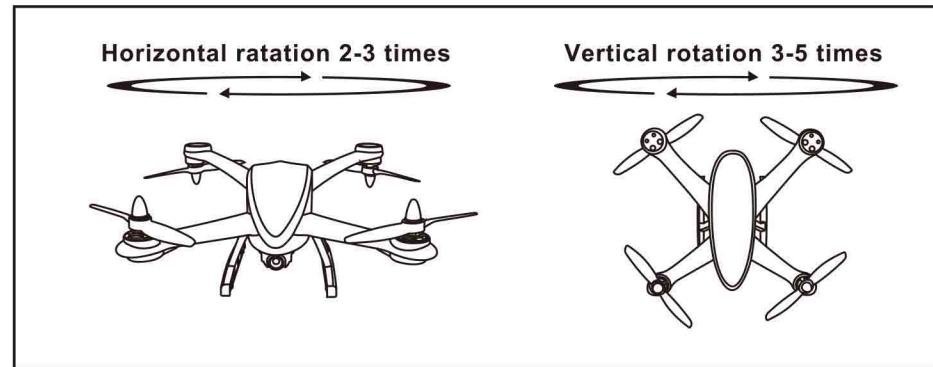


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Compass Calibration

Please note: performing a calibration is highly recommended before every flying session.

1. After the aircraft and the transmitter are paired. Place the aircraft on a flat surface and continuously press MODE until the transmitter displays "Rotate Horizontal" (the green light at the back of the aircraft will flash rapidly). Rotate the aircraft clockwise 2-3 times until the transmitter displays "Rotate Vertical" (the green light at the back of the aircraft will start flashing slowly).
2. Hold the aircraft vertically, with nose down and tail up. Rotate clockwise for 3-5 times until the message "Rotate Vertical" is no longer shown on the transmitter display. On successful calibration, the transmitter display will return to the main interface.
3. Now place the aircraft on a flat surface. Power off the aircraft battery and turn off the transmitter. Calibration is now complete. You may re-pair the transmitter with the aircraft and fly.
4. If the aircraft becomes unstable or unsteady during a flight, it may need to be re-calibrated by repeating the above procedure.



Accelerometer Calibration

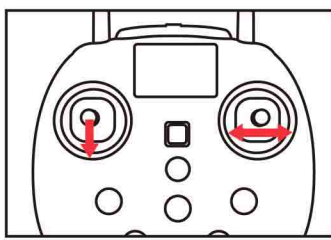
If your aircraft begins to be unstable during flight or drifts quickly to one direction, please calibrate the accelerometer.

1. Turn on the aircraft/transmitter. The aircraft should be placed on a flat surface.
2. Push the throttle down and hold the position. Move the directional stick quickly to right and left, until the back light on the aircraft flashes (red-green-blue). Then release the sticks.

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3. Wait until the aircraft's lights stop flashing rapidly. This is an indication that the calibration was successful (the back light on the aircraft flashes green).

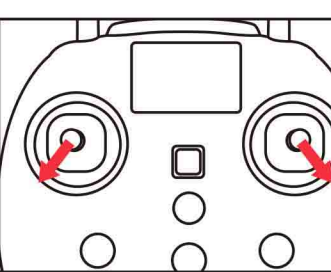
Attention: the aircraft should be placed on a flat surface; during the calibration procedure do not move the aircraft.



Attention: if the back light of the aircraft flashes red-green-blue then the accelerometer calibration is needed.

4.Arming and Disarming Motors

Arming: after successful pairing, arm the motors by pushing both sticks at the same time (push the left stick to the bottom-left corner and the right stick to the bottom-right corner) and hold for 2-5 seconds and the motors will start spinning. Slowly push the throttle stick up and the aircraft will ascend. Disarming: after descending the aircraft, disarm the motors by pushing both sticks at the same time (push the left stick to the bottom-left corner and the right stick to the bottom-right corner) and hold for 2-5 seconds, the motors will stop spinning.



Attention: the aircraft should be placed on a flat level surface; the back light of the aircraft should be slowly flashing green.

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5.Controlling the Aircraft

Ascend		
Descend		
Left rotation		
Right rotation		
Left		
Right		
Forward		
Backward		

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6.Mode Selection

- 1.Height Hold Mode (On the transmitter display labeled with letter A; Mode button indicator light is red); short press on Mode button. Height Hold Mode allows the aircraft to maintain the same altitude. After take off, reach wanted height and release the throttle (it will automatically return to the middle) and the aircraft will fly at the same height. Allow sufficient space to fly in this mode as aircraft's position can still be affected by the wind and other weather conditions.

Notice: Height Hold Mode is the default mode.

- 2.GPS Mode (On the transmitter display labeled B; GPS Mode button indicator light is red); short press on Mode button. GPS Mode maintains the same altitude and position. After successful pairing, place aircraft on a flat surface in the open area. Press the Mode button once. The transmitter display mode will change to the letter B and the Mode button's light will flash red. After, observe the GPS satellite number on the transmitter's display.

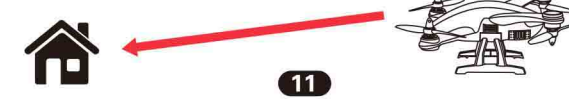
When the number reaches 7 GPS satellites, the aircraft is ready for GPS Mode. After take off and reaching the desired altitude and position, release the throttle stick (it will automatically return to the middle) and aircraft will stay in the same position. The accuracy of the hover point is dependent on the strength of the GPS signal and can be affected by the wind and other weather conditions as well as flying environment.

- 3.Circle Around Mode (On the transmitter display labeled C; Circle Around Mode button indicator light is green-yellow); long press on the Mode button. In Circle Around Mode, the aircraft will circle around the location below if the number of GPS satellites is at least 7. While in Circle Around Mode, the directional stick is used to control the radius and the speed of aircraft: pushing the directional stick backward will increase the radius, pushing it forward will decrease the radius; pushing the directional stick to the right will increase the speed of aircraft, pushing it backward will decrease the speed. Accuracy is dependent on the strength of the GPS signal and can be affected by the wind and other weather conditions as well as flying environment.

Notice: Circle Around Mode requires sufficient space.



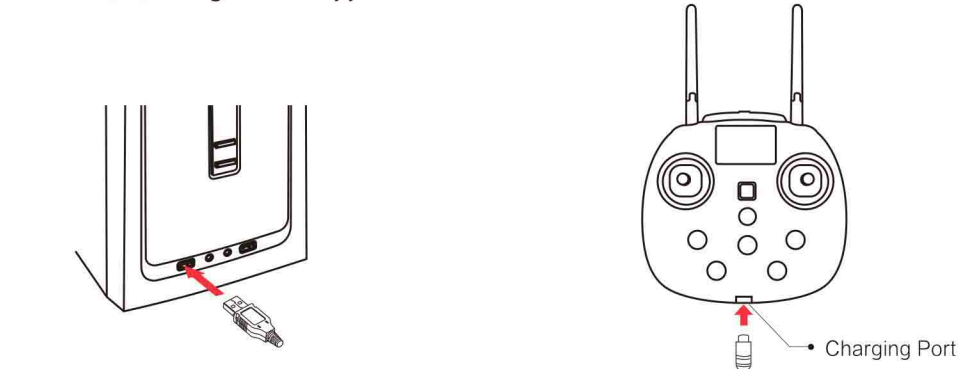
- 4.Return Home Function While in GPS mode (labeled B), long press on the Return Home button and the aircraft will come back to the place where it took off.



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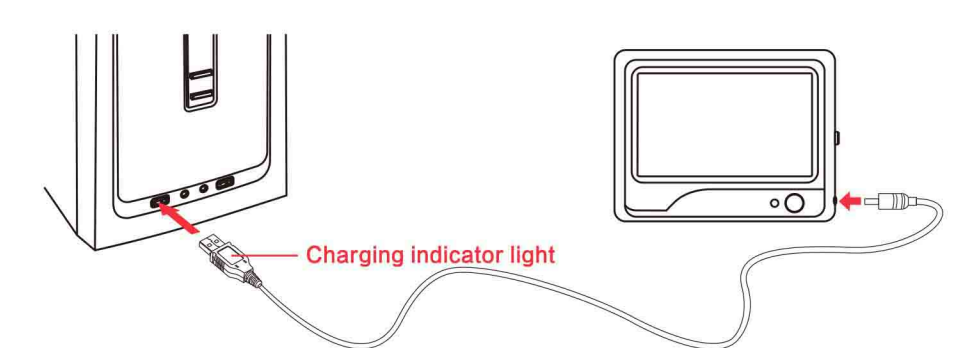
7.Charging Batteries

Aircraft Transmitter
Turn off the transmitter and connect it to the charging cable. Insert the charging cable into computer USB port or other USB charging ports. When charging, the transmitter's green indicator light will be on. Unplug the charger when the light goes off. The USB charging cable can be connected to Apple chargers and other smart phone chargers. It also can be charged using portable batteries and car phone chargers. Only standard +5+0.5v USB chargers are supported.



5.8Ghz FPV Monitor

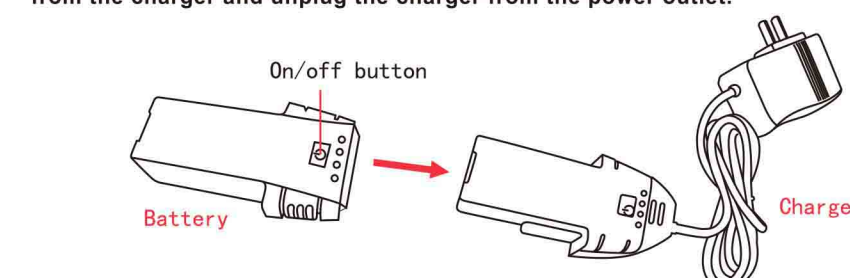
Turn off the monitor and connect it to the charging cable. Insert the charging cable into computer USB port or other USB charging ports. When charging, the charging cable's red indicator light will be on. Unplug the charger when the light goes off. The USB charging cable can be connected to Apple chargers and other smart phone chargers. It also can be charged using portable batteries and car phone chargers. Only standard +5+0.5v USB chargers are supported.



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Aircraft Battery

The battery supplied with aircraft is 2S (7.4V) Li-Po. Only use the supplied charger to charge the battery.
Power on the battery (press down on the button for 4-6 secs) and after the battery lights are on connect the battery to the charger. Plug the AC adaptor into a power outlet. After the battery is fully charged all 4 indicator lights will be on and the indicator light on the charger will change from green to red. Disconnect the battery from the charger and unplug the charger from the power outlet.



8. 5.8Ghz FPV System

Changing Frequency Channels of the Aircraft

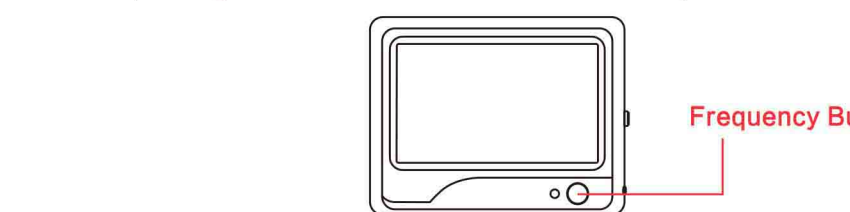
In order to avoid interference of video frequencies, a pilot may change frequency channels on aircraft. There are 32 frequency channels.

- 1 Press and hold the Return Home button and turn on the transmitter by pressing the on/off button. The message "Searching RF signal.." will appear on the transmitter's display. Turn on aircraft's battery and place aircraft on a flat surface. The 5.8Ghz frequency channel will change automatically.

- 2 Above procedure may need to be repeated few times in order to avoid interference with other pilots.

5.8Ghz FPV Monitor

Turn on the 5.8Ghz FPV monitor and the screen will light up. Long press on the channel button and the monitor will start searching the corresponding video transmission channel automatically.



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9.Box Contents

Aircraft	Transmitter	Landing Gear	Battery
Charger	USB Charger lines(X2)	5.8Ghz FPV Monitor	Propeller nuts wrench
Screwdrivers(X2)	SD card and SD card reader	Propellers	Manual

10.Troubleshooting

- Aircraft flips/crashes when taking off
 - ① Check that the propellers have been installed correctly.
- One touch take off function is not working
 - ① Flying Mode C has been chosen. please switch to Mode A or B.
 - ② Aircraft battery needs charging.
- There is no GPS satellites connection
 - ① Poor GPS signal, make sure you are flying in place with a clear view of the sky, and away from: buildings, trees and high voltage lines.
 - ② Re-calibrate the compass.
- While in GPS mode aircraft does not hold the position
 - ① Poor GPS signal, the minimum number of GPS satellites required is 7.
- Aircraft does not return home accurately
 - ① Poor GPS signal, make sure you are flying in place with a clear view of the sky, and away from: buildings, trees and high voltage lines.
 - ② Poor GPS signal, the minimum number of GPS satellites required is 7.
 - ③ Re-calibrate the compass.

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