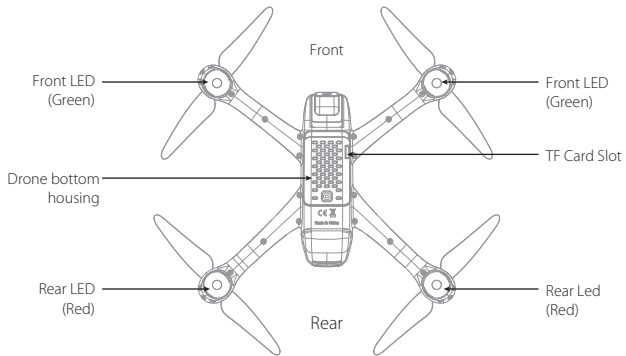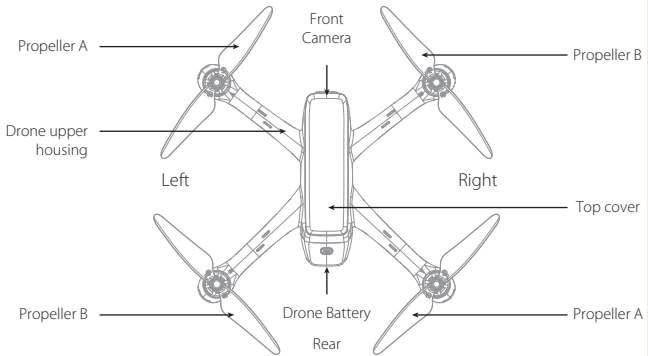**Ages 14+**

Potensic®

D60
Operation Guidance

This product supports GPS positioning and is recommended for outdoor flight!
* This wifi camera pinpoint is 5G, please confirm whether the phone is supported.

Catalog

Instruction for Drone and Transmitter

Drone

Propeller A

Front Camera

Propeller B

Drone upper housing

Left

Right

Top cover

Propeller B

Drone Battery

Propeller A

Rear

Front

Front LED (Green)

Front LED (Green)

TF Card Slot

Drone bottom housing

Rear LED (Red)

Rear Led (Red)

Rear

Main parameter

Drone size	296x221x90.5mm	Flight distance and radius	About 500m (In the non-interference state)
Weight of drone	About 390g	Transmission distance and radius	About 300m (In the non-interference state)
Flight time	14~18mins		
Drone battery	7.4V 1800mAh	Drone control mode	2.4GHz
Charging time of drone battery	About 300mins	Pattern transmission	5.8GHz
		1080P Camera pixels	1920x1080P

3

Exploded View
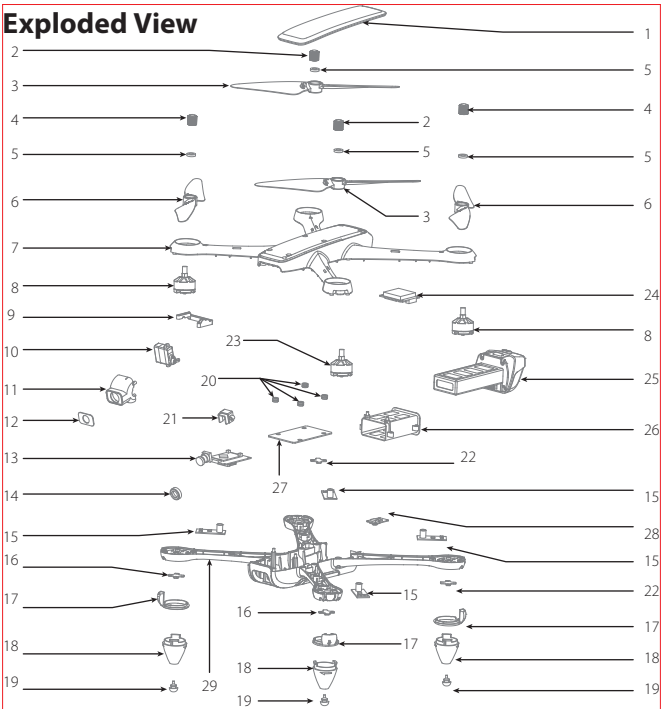
No.	Name	No.	Name	No.	Name
1	Top cover	11	Camera hood	21	Camera presses
2	Propeller A Concave lock cap	12	Lens board	22	Red LED motor board
3	Propeller A (Clockwise)	13	Photographic plate	23	Clockwise Motor
4	Propeller B Flat lock cap	14	Camera shock absorber	24	GPS module
5	Silicone gasket	15	Electric palette	25	battery
6	Propeller B (Counter Clockwise)	16	Green LED motor board	26	Battery box
7	Drone upper housing	17	Lampshade holder	27	Receiver board
8	Counter Clockwise Motor	18	Lampshade	28	Optical Flow Board
9	Servo presses	19	Cushion	29	Drone bottom housing
10	The steering gear	20	Receiving plate damping ring		

Transmitter

Phone Holder

Power switch

Photo/video

Gimbal adjustment

Left stick
(press down to follow)

Right stick
(press down to surround)

One key returning home

One key taking off /
One key landing

High/middle/ low speed

Trimmer Mode Button

Battery Cover
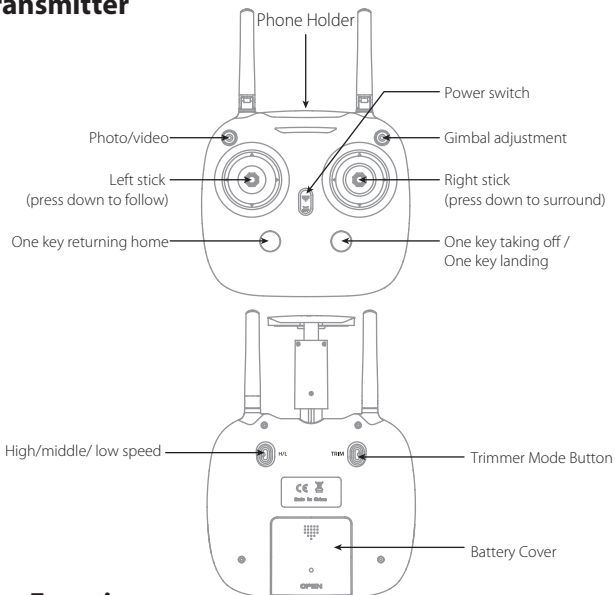
Key Function

Left control rod:	To control the drone up/down/Rotate left /Rotate right
Right control rod:	To control the drone forward/backward/Move left/Move right
Power switch:	Slide up the power switch to turn on the transmitter
Return Button:	Under GPS mode, Press the return button for a second & the drone will fly back. Press again, the drone will hover until you are ready to control it.
One key taking off / one key landing:	To begin flying, click the take off button to start the drone; To land press the same button again.
Photo:	Click the camera button to take a photo. If you click it continuously, it will take several photos.
Video:	Click the video button to record. Click again to finish recording.
Gimbal Gear Adjustment Key:	Press down the key to adjust the camera angle up and down.
360° Function:	Press the right rod to activate the 360° Function, which allows your drone to circle around your desired point of interest.
Follow Function:	Press the left rod to activate the follow function. Press again to stop.
High / middle / low speed mode:	Click H/L button to change your speed from High, Medium. or Low.
Trim Button:	Hold down the trim button while controlling the rod dials to slowly move in the direction you want. Release the button to stop.

The installation method of battery

Open the battery cover on the back of the transmitter. According to the electrode instructions of the battery box, put in 4 AA5 alkaline batteries (battery needs to be purchased separately) .Close the battery cover(Picture 2).

5

4*1.5V
Alkaline battery

Battery Cover
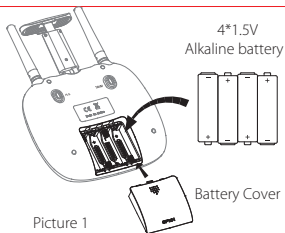
Picture 1

Picture 2

Notice:
1.Make sure the electrodes are correct.   3.Do not mix different kinds of batteries.
2.Do not mix new with old batteries.   4.Do not charge the non rechargeable battery

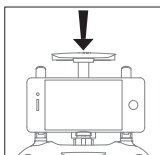# Attaching your phone to the transmitter

1. Pull up the phone holder clip on the transmitter (Picture 3). Pull down the little phone ledge (Picture 4).
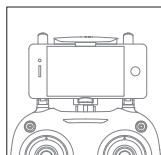2. Place your phone between the clamp and ledge. It will tighten automatically (Picture 5/6)
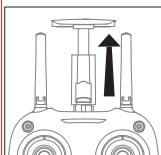
Picture 3
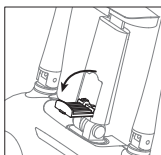
Picture 4

Picture 5

Picture 6

Notice：Do not pinch the buttons on the mobile.

Parts installation

Charging Instruction for Drone Battery

1. First, Connect the drone battery with USB cable and then choose one of the following methods to charge.
2. When the USB is charing the light will be red but after it is completely charged it will turn green

* For faster charging, it is recommended to use an adapter with 5V 2A output current (not included) to charge the battery.

Phone Charger   Power Bank   Computer Charging   Car Charger
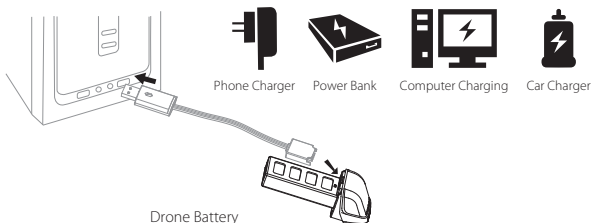
Drone Battery

**Drone Battery Li-Po Battery Disposal & Recycling**

Wasted Lithium-Polymer batteries must not be placed with household trash. Please contact local environmental or waste agency or the supplier of your model or your nearest Li-Po battery recycling center.

Diagram of battery handling

When installing, insert the battery into the drone as per diagram (on picture 7) and the battery sticker should be facing upward.
When removing, press the button on the battery and pull out the battery.

Press the button to pull out the battery.

Sticker upwards
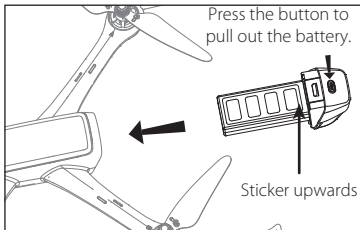
Picture 7

Propeller installation diagram

A Propeller:

When installation,put the propeller and propeller lock cushion down on the motor shaft in order. After fixing the propeller, tighten the lock cap counterclockwise; When disassembled, turn the concave lock out clockwise and take out the propeller upwards.

B Propeller:

When installation,put the propeller and propeller lock cushion down on the motor shaft in order. After fixing the propeller, tighten the lock cap clockwise; When disassembled, turn the concave lock out counterclockwise and take out the propeller upwards.

Note: The propeller is marked "A" and "B", and the Concave lock cap must be corresponded to A propeller and bracket A; And the Flat lock cap must be corresponded to B propeller and bracket B; If you get it wrong, the drone can't take off normally!

A Concave lock cap — Silicone gasket

Bracket A

Propeller A

B Flat lock cap — Silicone gasket

Propeller B

Bracket B
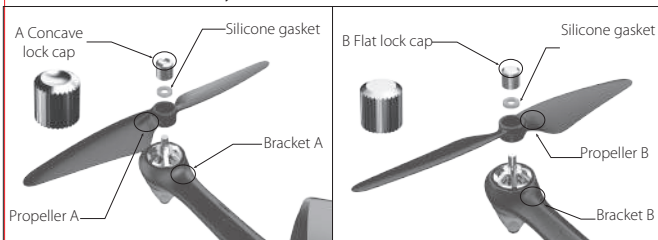
Precautions before flying

1. Make sure the transmitter and the battery of the drone are charged.
2. Before starting, please confirm that the left stick of the transmitter is in the middle position.
3. Please follow the correct steps to turn on the drone /transmitter. Before flight, turn on transmitter and then the the drone. After flight, turn off the drone and transmitter. Turning ON/OFF incorrectly may cause the drone to lose control.
4. Make sure to correctly install the battery, motor, etc.
5. Improper operation may cause drone crash, which may cause a motor defect, prevent you from flying, and other issues. Please go to the local distributor to buy new parts for replacement so that the drone will return to its best status.

Flying steps

Syncing Frequencies
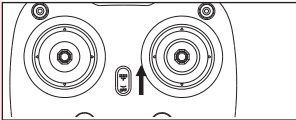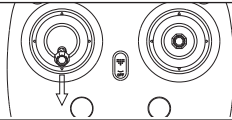
Turn on the power.	Push the left transmitter stick completely downwards. Then the light will flash slowly. This means that the transmitter is ready to sync.

Insert the battery into the drone, then turn on the drone. The light on the drone will be solid for 2 seconds and then flash quickly. That means the frequency is successfully. the indicator light on the left is flashing & there is no light on the right, it comes to level correction.

It must be placed on a flat surface!

Compass calibration

Level Correction: Rotate the drone horizontally(Picture 8), the transmitter makes a beeping sound & the left light of the drone turns bright, it means that it has successfully calibrated and comes to vertical correction.
Vertical correction: Rotate the drone vertically (Picture 9), the right indicator lights will turn on. When the transmitter makes the long beeping sound, the drones lights will begin its rotating ash, indicating that it has finished calibration.
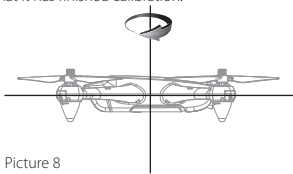
Picture 8
Level Correction
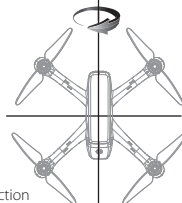
Picture 9
Vertical correction

Tips: It has to do the the compass calibration each time you start the drone, or it can't work normally.

GPS Signal search

After successfully calibrating the frequency, the drone will automatically search for the GPS signal. The blue light on the left of the transmitter is the GPS connection indicator, if it keeps long bright, that means the connection to GPS. The drone can't work without GPS connection.

Calibration (This action is used when flying abnormally)
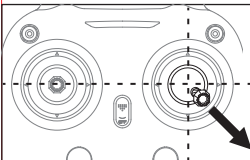
After making right frequency, please push the right stick lever of the transmitter to the lower right angle of 45 degrees, please release it when the drone fuselage flash quickly, it means you've finished compass calibration, now the drone can fly normally.

8

Tips: When the drone is out of use, it can not be used to fine tune the light status, or be hit by a violent impact (or abnormal fall). These all leads to the difficulties in controlling, now you should make the right frequency and calibrate it again. The drone must be placed on a flat surface!
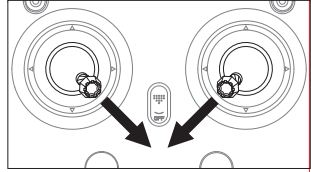
Unlocking/locking the motor

Unlock the motor:
Push the left and right stick inward to the 45 degree angle simultaneously.

Lock the motor:
The operation will stop the motor from running immediately before the drone takes off.

One key taking off/one key landing

After unlocking the drone, press the key for around one second, & the drone will fly up to 1.2 meters high. While flying, press the key for about one second, then the transmitter will make a beeping sound, at this time the drone will start to land.
While landing, you shouldn't push up the left stick or it may stop the landing function.
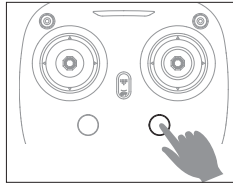
Tips: When you're operating the "one key take off", make sure that you've already unlocked the drone; If not, you can't operate it.

Flying Control

Upwards the right stick, the drone will fly forward.

Downward the right stick, the drone will fly backward.

Adjust the stick to the left, the drone will fly left

Adjust the stick to the right, the drone will fly right.

Right Stick

Upward the left stick, the drone will fly up.

Downward the left stick, the drone will fly down.

Adjust the stick to the left, the drone will rotate left.

Adjust the stick to the right, the drone will rotate right.

Left Stick

Trimmer mode

Forward / Backward Trimmer
When taking off, if the drone tilts forward , press the trimmer button, and push the right stick backward. Otherwise push it forward.

Left / Right Tilts Trimmer
When taking off, if the drone tilts to the left, press the trimmer button, and push the right stick to the right. Otherwise push it to the left.

Left / Right Rotates Trimmer
When you take off, if the drone head rotates to the left, press the trimmer button, and push left stick to right. Otherwise please push it to the left.

Function Introduction

Photo、Video

While taking photos, press the photo key once to take one photo. Press the key continuously, and you can take several photos (While taking photos, clicking the key, will make the transmitter beep).
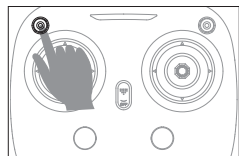
While taking videos, press the key 1 second to start recording. The transmitter will beep indicating you to operate it. If you want to stop it, you can press the button 1 second again.

Gimbal Adjustment

Press the key of gimbal adjustment,
the gimbal will move upward and downward, release the key to stop it when it move to the angel you want.
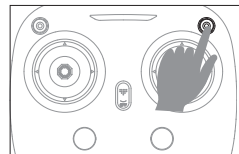
One key returning

While flying, press the key for about one second, the transmitter will beep", then the drone will start returning to the take-off point. (While returning, the transmitter will continuously beep).
* Press the key again to stop the return.

Notice: While returning, the control lever of the transmitter can not control the drone, wait for the drone to go back to the take-off point. After indicating the direction of the drone during of taking off, the control lever can navigate the drone.
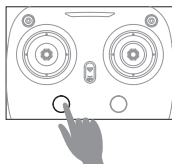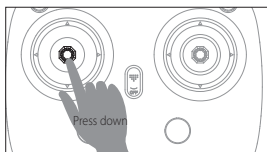
Following Function

Because the following function is based on the APP signal of the mobile phone, before operating it, make sure that the mobil phone is connected, or the function won't work.

While flying, press down on the key, the transmitter will beep, indicating that the following function has been activated.

360 ° Function.

Press down on the right stick, the transmitter will beep, then it will enter the 360 ° function. The drone will fly to a default radius & wait for the user's directions. Adjust the speed and direction of the drone by manipulating the right stick. There is a minimum radius of the default radius ,the drone flies only in the sub range.
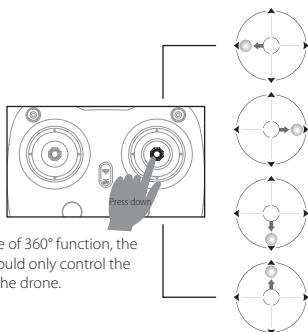
Turn left, the drone flies clockwise; If you move the stick further upwards, the flying speed will increase.

Turn right, the drone flies counterclockwise; If you move the stick further upwards, the flying speed will increase.

Pull downwards to enlarge the circling radius.

In the state of 360° function, the left stick could only control the height of the drone.

Pull upwards to narrow the circling radius.

Constant Height Mode

Intelligent hight control can calculate the suspended height,it has more stable control performance to make the beginner operate it easily. So you do not need to have you hand on the stick to control the drone, making it easer to focus on your aerial photography.

Notice: If propeller or motor is damaged, the constant height function will not work. Due to atmospheric pressure instability or unsuitable weather, the high altitude function will not work either.

Fixed Point Mode

Intelligent flight control can calculate the suspended height.
The aim of fixed point mode+constant height mode=spot hover , which gives the user more flexibility to take clear photos.

* This section is a GPS location fixed-point. So before flying, make sure it is connected to GPS signal or it will not work.

11

High / middle / low speed mode switch

Press down on the key, it will beep, this indicates the low speed mode "L"; Press down again, it will beep twice, for the middle speed mode "M"; Press down again ,it'll beep three times, for the high speed mode "H".

High / Middle / Low speed key
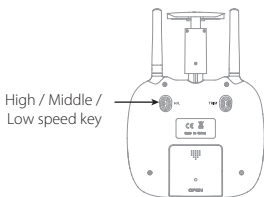
1. Low speed mode "Low":
It's suitable for the beginners to operate in calm weather, with no breeze.

2. Middle speed mode "Middle":
It's suitable for those practicing (hobbyists) to operate, with or without breeze.

3. High speed mode "High":
It's suitable for the professionals in most outdoor wind conditions.

Low Battery Alarm

When the battery of the remote is almost out of power, it will continually beep to alert you, that you should land the drone as soon as possible, to replace the battery.
While flying, if the battery of the drone is exhausted, it will beep to alarm you, the drone's indicator lights will flash. After alarming you, the drone automatically return to your take-off point.
Notice: After low-battery alarm, the drone will return home. Meanwhile, its controllable range will be reached to the 20 meter radius.

Out of Range Alarm

While flying, when the drone goes out of distance, the transmitter will beep to alarm you to fly back the drone within range immediately.

Out of Control Protection

Out of Control Protection means the drone will automatically fly back to the return points (the takeoff place after receiving the GPS signals) when the drone fails to connect to the drone transmitter (out of control). It will reduce the drone losing or crashing accident.
The drone is not equipped with the obstacles avoidance function when returning. Please set the Return altitude to avoid obstacles on the way back.

Under below situations, the out of control protection might be activated.

* The remote control is off.
* The drone flies out of distance.
* There is an obstacle between the remote control and the aircraft.
* The transmitter signal is interrupted.

Stuck Protection

1. When the propeller is stuck and isn't spinning, the LED light will flick to start protection. Meanwhile, the motor stops running.
2. Pull the left stick to the lowest position and then return it to it's normal position, at this time the LED lights will shine brightly, unlocking the protection function, then the drone can take off normally.

Know your APP

Download and install APP: Potensic-GPS

This software is suitable for both IOS and Android systems,check the mobile phone app store to download and install it.

1. The user of ISO mobile phone can surf App Store to search **Potensic-GPS** to download.
2. The user of Android can surf Google Play to search **Potensic-GPS** to download.
3. You can scan the QR code on the right or the QR code on the color box directly to download and install it.
4. For detailed operation, please check the system "HELP"of APP.

Available on the
App Store

ANDROID APP ON
Google play

To take photo and record video

Picture 10

1. Insert the TF card to the slot in accordance with Picture 10. (*TF card is not included)
2. The photos will be saved in your mobile phone & on the TF card, while videos can only be saved on the TF card. But you can download the video to your mobile phone or view it on the phone when it's connected to the drone's WiFi and the TF card is in the drone.
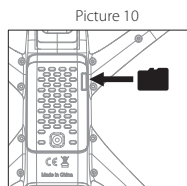
Tip: Click on the video icon to save a video when ending recording, or the video cannot be saved.

3. Power off the drone after you finish taking photos. Take out the TF card and insert it into a card reader. Connect the card reader with a computer USB port. Then view the aerial photography data from "my computer" - " mobile disk" .

Tip: Please play the video or photo after coping all aerial photography data to computer and make sure the play software can support AVI format.

Components (Sold separately)

Drone upper housing	Drone bottom housing	Top cover	Propeller A
Propeller B	Propeller A Concave lock cap	Flat lock cap	Lampshade holder
Lampshade	Cushion	Camera hood	Battery holder
Magnetic plate	GPS module	Flight Battery	USB Charger

| TF Card | Card Reader | Hex Wrench | Screw Driver | Transmitter |

Important Notice

Our company's products are improving all the time, design and specifications are subject to change without notice.

All the information in this manual has been carefully checked to ensure accuracy, if any printing errors, our company reserve the final interpretation right.

Troubleshooting

No.	Problem	Problem Cause	Solution
1	The controller indicator light is off.	1. Low battery.	1. Replace the controller battery.
		2. The batteries are incorrectly positioned.	2. Install the batteries following the polarity indicators.
		3. Poor Contact.	3. Clean the dirt between the battery and the battery contacts.
2	Failed to pair the drone with the controller.	1. Indicator light is off.	1. The same as above.
		2. There is an interfering signal nearby.	2. Restart the drone and power on the controller.
		3. Mis-operation.	3. Operate the drone step by step in accordance with the user manual.
		4. The electronic component is damaged for fiercely crash.	4. To buy spare parts from local seller and replace damaged parts.
3	The drone is under-powered or can not fly.	1. The propeller is seriously deformed.	1. Replace the propeller.
		2. Low battery.	2. Charge the drone battery.
		3. Incorrect installation of propeller.	3. Install the propeller in accordance with the user manual.
4	The drone could not hover and tilts to one side.	1. Improper Calibration.	1. Please refer to the Calibration Instruction.
		2. The propeller is seriously deformed.	2. Replace the propeller.
		3. The motor holder is deformed after violent crash.	3. Replace the motor holder parts.
		4. The gyroscope did not reset after a serious crash.	4. Put the drone on the flat ground for about 10 minutes or restart the drone to calibrate again.
		5. Motor is damaged.	5. Replace the motor.
		6. No proofreading compass.	6. Re proofreading the compass.
5	The drone indicator light is off.	1. Low battery.	1. Recharge the drone battery.
		2. The battery is expired or over discharge protection.	2. Buy a new battery from local seller to replace the battery or charge the battery in accordance with the use manual.
		3. Poor contact.	3. Connect and disconnect the battery.
6	Could not see the picture.	1. There is an interfering signal nearby.	1. Practice and read the cellphonecontrolling instruction carefully.
		2. Camera is damaged.	2. Replace Camera.

7	Hard to control by cellphone.	Not experienced enough.	Practice and read the cellphone controlling instruction carefully.
8	Can't altitude hold.	1. The propeller is seriously deformed.	1. Replace propeller.
		2. The motor is damaged.	2. Replace the motor.
		3. Atmospheric pressure is not stable.	3. Refer to "Altitude Hold Mode"instruction.
9	Can't position hold.	Whether the GPS has connected or not.	Search again to connect the GPS signal.
10	Searched but could not find the GPS signal	1. GPS module is damaged.	1. Please replace a new one.
		2. Poor connection	2. Please check to see if the GPS module is connected normally.

FCC 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 a ntenna.
● 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.

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

FCC Notice:

The equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. Modifications not authorized by the manufacturer may void user's authority to operate this device.

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.
(2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement

The device has been evaluated to meet general RF exposure requirement.
The device can be used in portable exposure condition with out restriction.

www.ipotensic.com

CE

MADE IN CHINA