

Ages 14+

UdiRC[®]



UA21

Operation Guidance

Suitable for 720P/1080P.

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

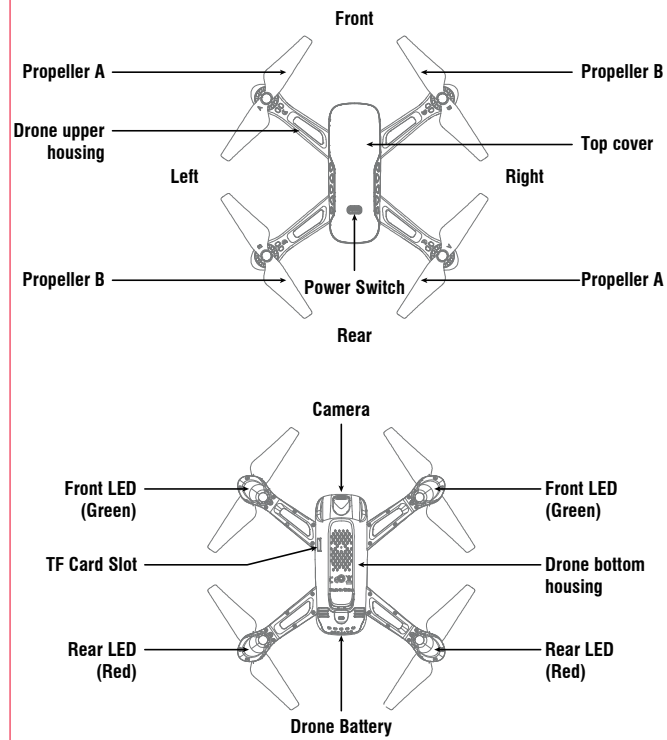


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Instruction for Drone and Transmitter

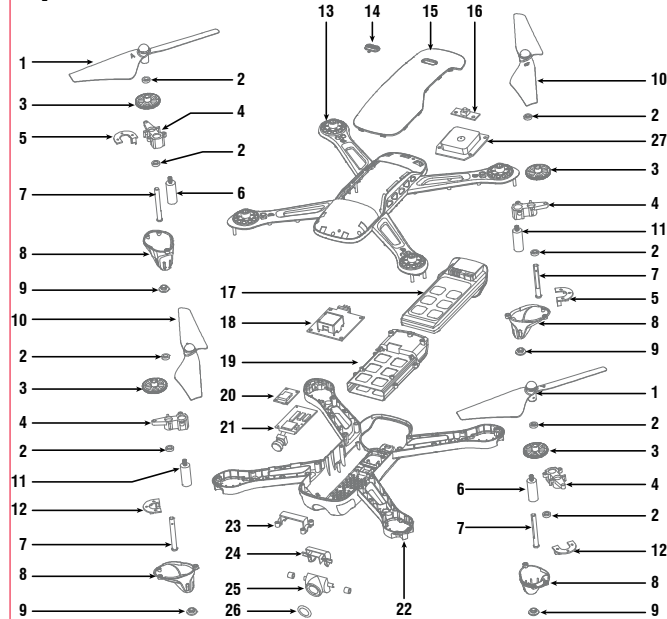
Drone



Main parameter

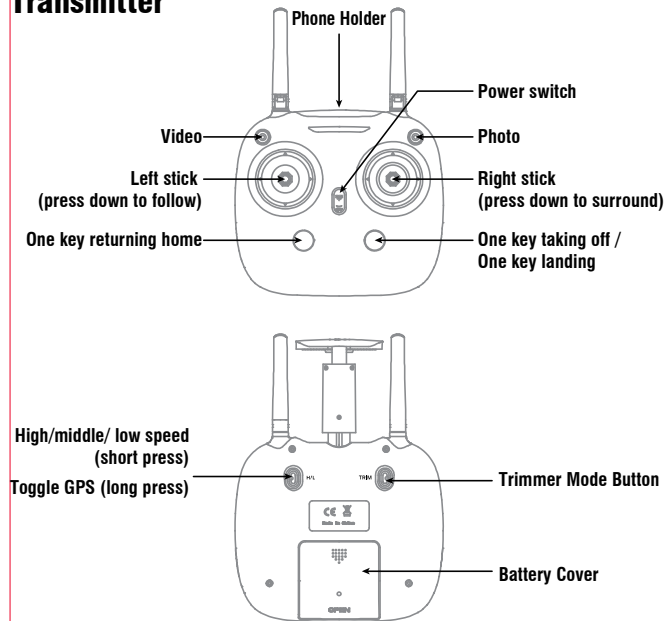
| | | | |
|---------------------------------------|--------------|-----------------------------------|---|
| Drone size | 180x160x63mm | Flight distance and radius | 100~150m (In the non-interference state) |
| Weight of drone | About 180g | Drone control mode | 2.4GHz |
| Flight time | 11~12mins | Pattern transmission | 5.8GHz |
| Drone battery | 3.7V 1500mAh | 720P Camera pixels | 1280x720P |
| Charging time of drone battery | 180~200mins | 1080P Camera pixels | 1920x1080P |

Exploded View



| No. | Name | No. | Name |
|-----|---|-----|-----------------------|
| 1 | Propeller A | 15 | Top cover |
| 2 | Bearing | 16 | Switch board |
| 3 | Gears | 17 | Lipo battery |
| 4 | Motor holder | 18 | Receiver board |
| 5 | Red LED motor board | 19 | Battery holder |
| 6 | Counter clockwise motor (White connector) | 20 | Magnetic plate |
| 7 | Transmission shaft | 21 | Wifi camera board |
| 8 | Lampshade | 22 | Drone bottom housing |
| 9 | Cushion | 23 | Camera holder part |
| 10 | Propeller B | 24 | Camera bottom housing |
| 11 | Clockwise motor (Red connector) | 25 | Camera top housing |
| 12 | Green LED motor board | 26 | Acrylic plate |
| 13 | Drone upper housing | 27 | GPS module |
| 14 | Switch button | | |

Transmitter



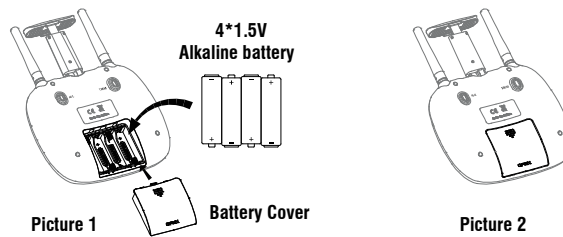
Key Function

| | |
|--|--|
| Left control rod: | To control the drone up / down / left / right |
| Right control rod: | To control the drone forward / backward / left side flying / right side flying. |
| Power switch: | Pull up the key of power switch to turn on the transmitter, turn off it when returns. |
| One key returning: | When GPS mode, hold this button about 1 second, then the drone starts to return. During returning and press down this button again, then exit from returning. |
| One key taking off / one key landing: | After unlock the motor, press the key for a while, the drone will take off automatically; While flying, press the key for a while again, it will land automatically. |
| Photo: | Click the key, it takes one photo, and to take more photos, you just click the key continuously. |
| Video: | To start camera, just click the key. While videoing,click the key again, it exists. |

| |
|--|
| Encircling key: Press down the key, the drone enters the function of encircling, press it again to exist. |
| The key to follow: Press down the key, the drone enters the function of following, press it again to exist. |
| High/middle/low speed (short press): Short press the key to have the switch of high/middle/low speed mode |
| GPS switch (long press): Long press the key to turn on/turn off the function of GPS. |
| Fine tune mode key: Press down the key, the control rod is pushed to the position where it needs to be fine-tuned, thus you can fine tuning to the direction wanted, and release the key to exit. |

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).

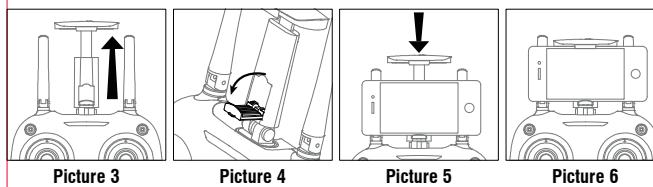


Notice:

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

The installation methods of mobile phone

1. Pull up the clip on the mobile phone (Picture 3). Firstly, open the clip of the clip (Picture 4), then pull the clip to the position where mobile phone stands.
2. Place the mobile phone to the clamp position, loose the tight handset clips, the clamp will automatically tighten the mobile phone (Picture 5/6).



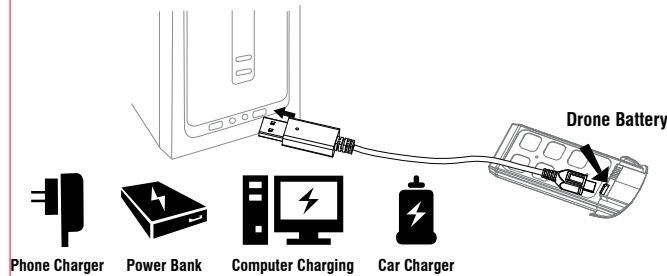
Notice: Do not pinch the buttons on the mobile.

Parts installation

Charging Instruction for Drone Battery

1. Connect the drone battery with USB cable first and then choose one of the method as below picture shown to connect with USB plug.
2. The red USB indicator light keeps bright when charging and the light turns green when fully charged.

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



Drone Battery Li-Po Battery Disposal & Recycling

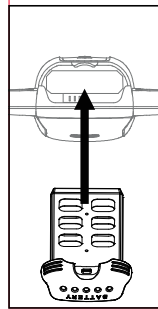
Wasted Lithium-Polymer batteries must not be placed with household trash. Please contact local environmental or waste agency or the supplier of your model or your nearest Li-Po battery recycling center.



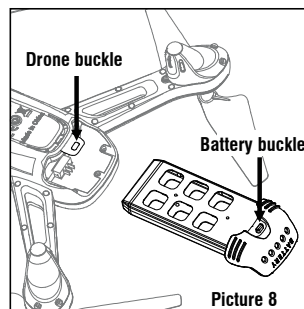
Drone battery installation

When install, insert the drone battery to the drone as per diagram (picture 7) and the battery sticker should be in upper side.

When remove, pinch the grips at the rear of the battery and then pull out the battery (Picture 8).



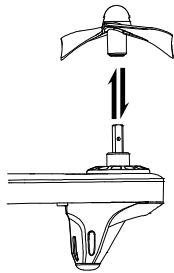
Picture 7



Picture 8

Propeller installation diagram

1. To remove the screw by screw driver in counter clockwise, and remove the damaged propeller upwards (picture 9).
2. To install the new propeller, make sure the propeller rotated direction is correct first, and then mount propeller on transmission shaft of the motors and press down, and then tighten the screw.

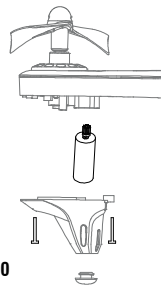


Picture 9

Motors Replacement

1. To remove the motor, remove the screw from the lampshade first, then take the lampshade out, unplug the motor connector from LED board and then take the damaged motor out.
2. To install the motor, plug the required motor connector into the LED board socket, and put the motor into motor holder. Put on the motor cover and tighten the screw.

Notice: The motor is consumable. If it's damaged, please contact with local seller or distributor to buy the new motors for replacement.



Picture 10

Suggestions for motor using:

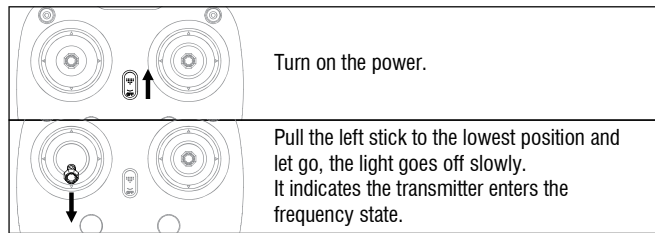
It's normal that after using for a period of time, the motor performance will decrease, so please purchase a new one for replacement.

Precautions before flying

1. Make sure the transmitter and the battery of the drone are saturated.
2. Before starting, please confirm that the left stick of the transmitter is in the middle position.
3. While turning on the drone, the order of power switch must be obeyed. Before turning off the drone, turn on the power switch of the transmitter first, then turn on the power switch of drone;The power switch of the drone should be shut down first,then turn off the transmitter. Incorrect switching sequence may cause the drone out of control, it may do harm to the safety of yourself and others. So please form the right habit of turning on and turning off the machine.
4. Make sure that the connection between batteries and motors and other parts is solid and reliable. For there's continuous vibration in flight,it may cause the power connector loosen,thus the drone may out of control.
5. Improper operation may cause the crash, then the motor or propeller may not work smoothly or produce noise. Also it may cause the state of flight to be affected or incapable while flying. So we advise you to purchase new components from the local distributor for replacement so as to make the drone returns to its best state.

Flying steps

Opposite frequency



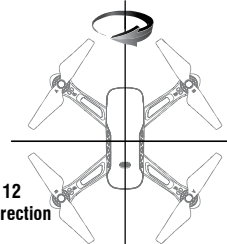
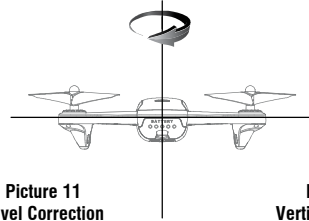
Press the key of power for two seconds to start the drone, it makes the right frequency successfully. Then the left navigation light keeps shiny, while the right navigation light is off. Thus shows that it enters the state of compass level calibration.



Compass calibration

Rotate the drone horizontally (Picture 11) till it sounds long deep, it indicates that horizontal correction is completed. The left navigation light turns to long bright and when the right navigation light keeps shiny, it enters the state of vertical correction.

Vertical rotating the drone (Picture 12) until it sounds long deep, it indicates that the vertical rotating is completed. Now the four navigation lights rotate and flicker.



Tips: It's a must to have the right compass adjustment first each time you start the drone, or it can't work normally.

GPS Signal search

After the successfully right frequency, the drone enters the search of GPS signal automatically.

When the left blue indicator of transmitter turns from shiny to long bright, it indicates the connection to GPS signal is successful finished. If not, the drone can't fly up.

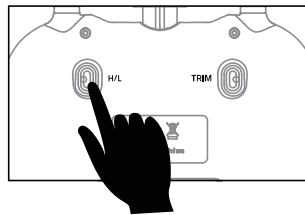
Turn on / turn off GPS signal

GPS defaults to be on.

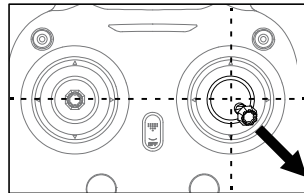
Turn off: Long press the key, the transmitter will make the sound of "di", the blue indicator of the transmitter is out to indicate that the function of GPS is off. (The function is suitable for using in the situation of weak GPS signal or indoors; When the the function of GPS is off, so is the fixed function.)

Turn on: Repeat above action after five seconds, you can restart the function of GPS.

* The function can only be used when the motor is locked.



Calibration (This action is used when flying abnormally)



After finishing the compass adjusted, push the right control rod to the bottom right 45 degrees, the drone fuselage lights flash and when you release it, this means the gyroscope is calibrated.

Tips: When the drone doesn't appear to use the trim correction flight status, or being hit hard (or falling abnormally), thus cause the difficulties in controlling. Now frequency making and adjustment are needed again, and remember that it's a must to put the drone on the horizontal ground.

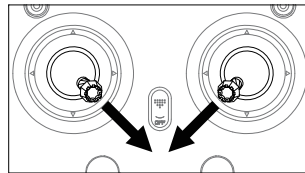
Unlocking/locking the motor

Unlock the motor:

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

Lock the motor:

The operation will cause the motor stop running immediately before the drone takes off.

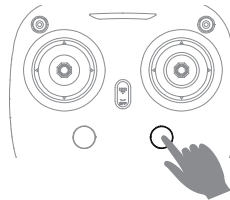


One key taking off/one key landing

After unlocking the drone, press the key for about one second, the drone will fly up to 1.2 meters high above the sky automatically.

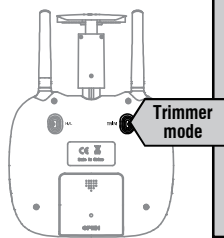
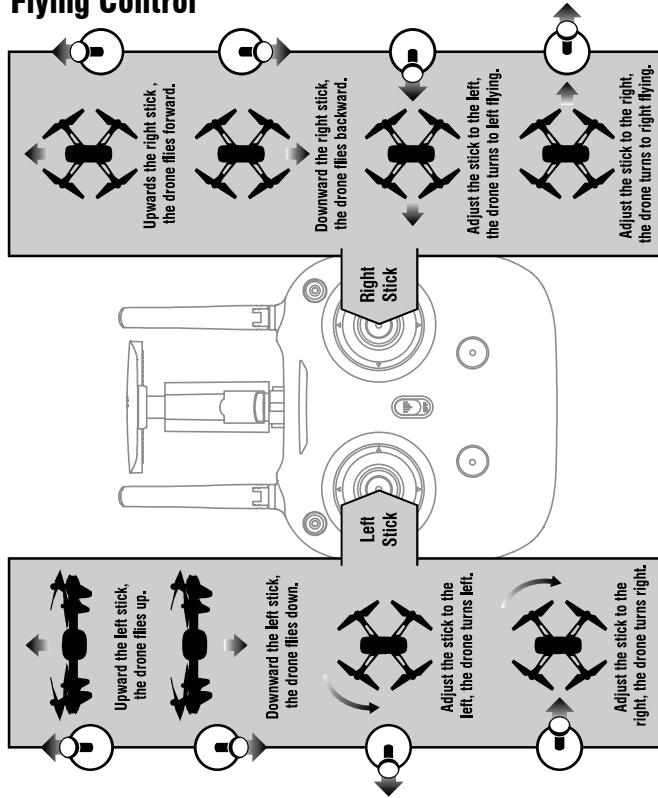
While flying, press the key for about one second, then the transmitter will make the long sound "di", at this time the drone starts to land.

While landing, you mustn't push up the left stick upwards for it may stop the landing function.



Tips: When you're operating the function of "one key taking off", please make sure that you've already unlocked the drone first; If not, it can't be operated by you.

Flying Control



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.

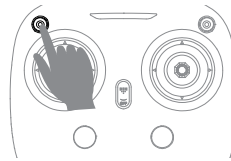
Left / Right Rotates Trimmer

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

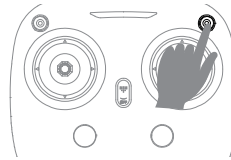
Video

While taking videos, click the key to start videoing. The transmitter will make the sound of "di" to indicate you to operate it. If you want to stop it, you can click it again.



Photo

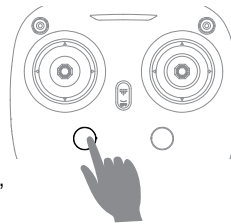
While taking photos, press the key of taking photos once, you can take one photo; If you press the key continuously, you can take several photos (While taking photos, click the key, the transmitter will make the sound of 'di' to indicate you).



One key returning

During flying, press down this button for 1 second, then the transmitter will beep a long sound " di ", it shows the drone starts to return. (When returning, the transmitter will beep " di" constantly to remind) Return to the beginning.

* During returning and press down this button again, then exit from returning.)

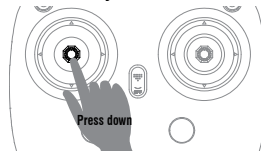


Notice: While returning, the control lever of the transmitter can not control the drone, it must be waited for the drone to go back to the take-off point. And after the direction of the drone is directed at the direction of taking off, in this way the control lever can control the drone.

Following Function

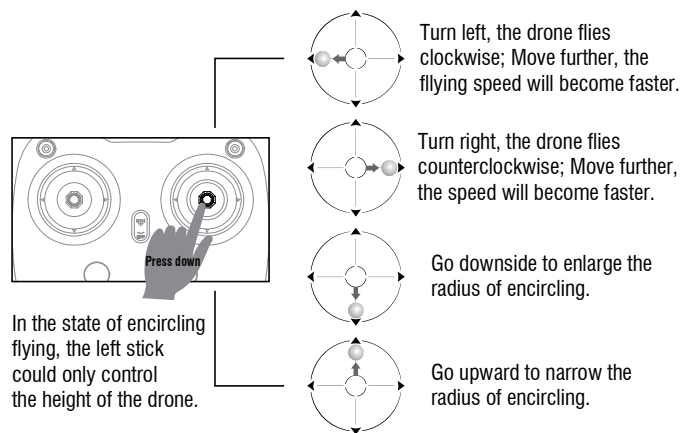
The function is standard by the mobile phone APP signal, so it's a must to make the drone and APP connected normally, turn on the mobile location service at the same time, otherwise this function is invalid.

While flying, press down the key, the drone sounds deep, it enters the function of following. Now it can be controlled by the user.



Encircling flight

Press down the right stick, the transmitter will make the sound of "di", then it goes to the function of encircling flight. The drone will fly to a default radius then it waits for the direction controlled by the user. Adjust the speed and direction of the drone by manipulating the right stick. It is the minimum radius of the default radius acquiescently, so drone flies only in the sub range.



Constant Height Mode

Intelligent flight control can calculate the suspended height, it has more stable control performance to make the beginner operate it easily. So please release the rocker, the drone can automatically suspended to meet the needs of single hand manipulation. The aerial photograph is more clear.

Notice: If there's propeller deformation or motor damage, then the fixed height function can not be used. Atmospheric pressure instability or typhoon weather, high altitude function can not be used normally also.

Fixed Point Mode

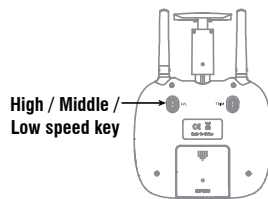
Intelligent flight control can calculate the suspended height.

The aim of fixed point mode + constant height mode = spot hover is to let the flight more flexible, to take photos more clear, to be operated more easily.

*** This section is GPS location fixed-point. So before flying, please make sure that it has connected to GPS signal normally. Or it will become invalid.**

High / middle / low speed mode switch

Press down the key, it will make the sound of “di”, this indicates to the low speed mode “L”; Press it down again, it makes the sound of ‘di’ twice, that comes to the middle speed mode “M”; Press down the key again ,it makes the sound of ‘di’ for three times, it comes to the high speed mode “H”.



1. Low speed mode “Low”:

It's suitable for the beginner to operate it in the state of no wind.

2. Middle speed mode “Middle”:

It's suitable for the practitioner to operate it in the state of breeze.

3. High speed mode “High”:

It's suitable for the professionals to experience flight in outdoor wind resistant conditions.

Low Battery Alarm

When the battery power of the point remote is quickly exhausted, it will make the sound of “di”“di”“di” constantly to alarm you, now you should land the drone as soon as possible to replace the battery.

While flying, in case that the battery of the drone is quickly exhausted, it will make the sound of “di”.“di” to alarm you, the drone's indicator lights turn from long to bright. After alarming you, the drone automatically returned to the 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

When the drone flying out of the max remote control distance, the transmitter will beep “didi...didi...didi...” to alarm the user to fly back the drone within range immediately.

Out of Control Protection

Out of control protection refers to the flight control system automatically controls the drone to fly back to the return point after receiving the remote control signal (ie, out of control), and a function of landing, which can reduce the loss or fall of the drone.

The drone does not have the function of avoiding obstacles during the uncontrolled return flight. The user can set the return altitude value to avoid obstacles on the way back.

Possibility of entry into runaway protection mode

- * The remote control is off.
- * Flight distance exceeds the effective distance of remote control signal transmission.
- * There is an obstacle between the remote control and the drone.
- * Remote control signal is disturbed.

Stuck Protection

1. When the propeller is stuck and doesn't turn around, the LED light will make fast flicker to star protection automatically. Meanwhile, the motor stops turning.
2. Reset the left stick to the lowest position and return to the middle position, at this time the LED light keeps bright to unlock protection function automatically, then the drone can take off normally.

Know your APP


Download and install APP: UDIGPS

This software is suitable for mobile phones in the IOS and Android system, please surf the mobile phone application store website to download and install it.

1. The user of ISO mobile phone can surf App Store to search UDIGPS to download.
2. The user of Android can surf Google Play to search UDIGPS 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.



*** Display the photos and video (Suitable for 720P only.)**

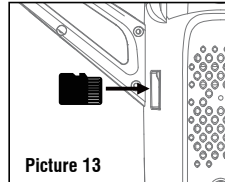
The photos and videos are stored in the phone local gallery, you can display in the phone directly. You also can display it in the APP through shortcut icon  to enter the media interface.

Notice: App must be authorized to access the phone gallery, if not, then may be unavailable to display the video and photos.

*** To take photo and record video (Suitable for 1080P only.)**

1. Insert the TF card to the slot in accordance with Picture 13.

(*TF card is not included)



2. Photos taken will be saved to the mobile phone library and the TF card in the drone, and the video file is saved on the TF card only; When downloading video to the picture library of the mobile phone, it should be noted that the mobile phone must be connected to the drone, and ensure that the TF card is in the camera box.


Tip: Click on the video icon to save a video when ending recording, or the video cannot be saved.















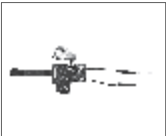
3. Power off the drone first when finish aerial photography. Take out TF card and insert the card to a card reader. Connect the card reader with computer USB port. After a while, view the aerial photography data from "my computer"- "mobile disk".

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)

These are the components for choice below. For your convenient purchase, now we list each part for you, you can purchase ones you want from local distributor.

| | | | |
|---|---|---|--|
|  |  |  |  |
| U52G-01 Drone upper housing | U52G-02 Drone bottom housing | U52G-03 Top cover | U52G-04 Propeller A |
|  |  |  |  |
| U52G-05 Propeller B | U52G-06 Camera top housing | U52G-07 Camera bottom housing | U52G-08 Camera holder part |
|  |  |  |  |
| U52G-09 Motor holder | U52G-10 Switch button | U52G-11 Lampshade | U52G-12 Battery holder |
|  |  |  |  |
| U52G-13 Switch board | U52G-14 Receiver board | U52G-15 Magnetic plate | U52G-16 720P Wifi camera board |
|  |  |  |  |
| U52G-17 GPS module | U52G-18 Front LED board (Green light, white connector) | U52G-19 Front LED board (Green light, red connector) | U52G-20 Rear LED board (Red light, white connector) |

| | | | |
|---|---|--|---|
|  |  |  |  |
| U52G-21 Rear LED board (Red light, red connector) | U52G-22 Clockwise motor (Red connector) | U52G-23 Counter-clockwise motor (White connector) | U52G-24 Lipo battery |
|  |  |  |  |
| U52G-25 USB cable | U52G-26 Gears | U52G-27 Bearing | U52G-28 Transmission shaft |
|  |  |  |  |
| U52G-29 Acrylic ring | U52G-30 Screw driver | U52G-31 Allen wrench | U52G-32 Transmitter |
|  |  |  | |
| * U52G-33 TF Card (suitable for 1080P only) | * U52G-34 Card reader (suitable for 1080P only) | * U52G-35 1080P Wifi camera board (suitable for 1080P only) | |

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 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 cellphone controlling 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. Unplug module plug. | 2. Please check to see if it's 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 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.

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 without restriction.



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