Konformitätserklärung gemäß Richtlinie Radio Equipment Directive (RED) 2014/53/EU
Declaration of Conformity in accordance with the Radio Equipment Directive (RED) 2014/53/EU
Déclaration de conformité CE (RED) 2014/53/EU

Hiermit wird erklärt, dass das Produkt:
I hereby declare that the product: **SkyWatcher GPS**
déclarons sous notre seule responsabilité que le produit:

Artikelnummer:
Product number: **9270 (EAN: 4250684192706)**
Numéro d'article: **H4819**

Bei bestimmungsgemäßer Verwendung den grundlegenden Anforderungen nach Artikel 3 und den übrigen einschlägigen Bestimmungen der Richtlinie (RED) 2014/53/EU entspricht.
Complies with the essential requirements and the other relevant provisions of the Directive (RED) 2014/53/EU, when used for it intended purpose.
Est conforme aux exigences des directives et ordonnances suivantes (RED) 2014/53/EU.

In Übereinstimmung mit den folgenden harmonisierten Normen gefertigt:
Manufactured in accordance with the following harmonised standards:
Et a été fabriqué conformément aux norms harmonisées suviantes:

EN 62479:2010
Draft EN 301 489-1 V2.2.0 (2017-03)
Final Draft EN 301 489-3 V2.1.1 (2017-3)
EN 61000-6-3:2007 + A1:2011 +AC:2012
EN 61000-6-1:2007
EN 300 440 V2.1.1 (2017-03)

Directive TSD 2009/48/EC Safety of Toys:
EN71:Part 1:2014, clauses 1-7
EN71:Part 2:2011+A1:2014
EN71Part 3:2013+A2:2017

EN 62115 ELECTRONIC TOYS SAFETY + A2 + A11 + A12- PARTIAL
EN 62115:2005 + A2: 2011 + A11: 2012 + A12: 2015 "Electric toys – Safety"

Hersteller / verantwortliche Person: **drive & fly models, Jürgen Kamm**
Manufacturer / responsible Person: **Drahthammer Str. 22**
Fabricant / personne responsable: **92224 Amberg, Germany**

Jürgen Kamm
Geschäftsführer / *managing director / directeur général*
Ort/ Datum:
place of issue/ date: **Amberg (Germany), 10.06.2018**
Lieu de délivrance/ Date:

EIRP Power (Max.): 2460MHz-2472MHz | 4.38dBm (2.74mW)

The source-based time-averaging power which is below the max permitted sending level of 20 mW, and then the EUT is not needed to conduct SAR measurement.

Frequenzbereich: 2460-2472 MHz

AGES 14+

Sky Watcher GPS

6-Axis Gyro System

N°9270

Manual

drive & fly models
www.df-models.com

Impressum
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Disclaimer & Warnings

1.Please read this Disclaimer & Warning and Safety Guidelines carefully before using our product.This product is not recommended for people under the age of 14.By using this product, you hereby agree to this disclaimer and signify that you have read it fully.You agree that you are responsible for your own conduct and any damaged caused while using this product, and its consequences. You agree to use this product only for purposes that are proper and in accordance with local regulations, terms and all applicable policable polices and guidelines DF MODELS may make avaliable.

2.When using this product,please be sure to strictly abide by the specification requirements and safety guidelines stated in this document. Any personal injury property damage, legal disputes and all other adverse events caused by the violation of the safety instructions or due to any other factor, will not be DF MODELs responsibility.

. The drone is designed for 14+
. Adult supervision is always advisable with any from of flying toy
. Always ensure your flight area is free of all obstacles before taking off, and ensure the drone is always flown in excess of 1.5 meters from yourself and others
.Remove all batteries from the drone and controller when not in use
.Never overcharge
.Never leave to charge unattended
.Never touch the drones motors during or after as they can get hot
.Never touch the blades when they are in rotating
.If the drone becomes damaged, stop using it immediately
.Do not dispose of any parts of the drone or controller in the normal rubbish,all parts should be taken to your local recycling centre
.The battery in the drone should never be exposed to any form of high temperature or disposed of in a fire

Safety Guidelines

1.Check Before Use

(1).This product is not a toy, but it is a high precision drone that integrates various electronic stability and control mechanisms.Please be sure to setup this drone carefully and correctly to ensure safe, accident-free operation.
(2). Please be sure that the batteries of the drone and transmitter are clean, undamaged and have enough power.
(3). Please be sure that all the propellers are undamaged and are installed in the right orientation.
(4).Please do a thorough check of the product before each use.Check for firmness of the parts,any signs of cracks and wear of the propeller, battery power and effectiveness of the product until the issue has been taken care for.

2.Safe flight Environment

Fly in Open Areas | GPS signal is good | Maintain Line of Sight | Fly Below 393.6 feet(120 m)

1.Make sure the surrounding area is free of all people,pets or other obstacles before you start to fly your drone.
2.Your drone is designed for indoor or outdoor use.However,it is not recommended to fly the drone inside if there is limited space, or outside if there is any wind.
3.Keep a safe playing distance between you and the drone at all times.

3. Use of Battery

(1) Please ensure batteries are fitted in the correct orientation as shown in the instruction manual.

(2) Avoid short circuits by fiting the batteries incorrectly, and do not crush or squeeze the batteries as this could carry the risk of an explosion.

(3) Do not mix new and old batteries as this can lead to a poor performance of the product.

(4) Dispose used batteries carefully.

(5) Please keep dead batteries away from heat and fire.

(6) If the device is not going to be used for an extended period of time, remove batteries to prevent potential damage from battery leakage.

(7) It is recommended to only use the USB charging cable that comes with the drone to charge the battery.

(8) Don't connect the battery directly to wall outlets or car cigarette-lighter sockets.

(9) Don't attempt to disassemble or Modify the battery in any way.

(10) Don't use the battery if it gives of an odor, generates heat, becomes discolored or deformed,or appears abnormal in any way. If the battery is in use or being charged, remove it from the device or charger immediately and discontinue use.

Li-Po Battery Disposal & Recycling

Waste 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.

Specification

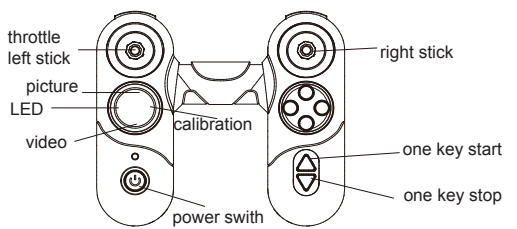
Drone

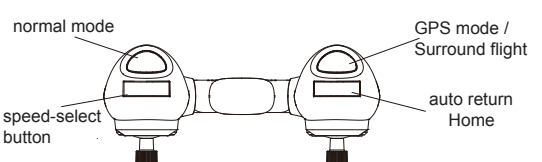
Item no.:H4819
Weight: 178.0g
Battery: Li-po,7.6v 750mAh
Max Flight Time: 15-18 mins
Charging time: 150-200 mins
Hovering: Enabled
Operating Temperature Range: 0° to 40°C
Dimensions: 380x 380x 65mm

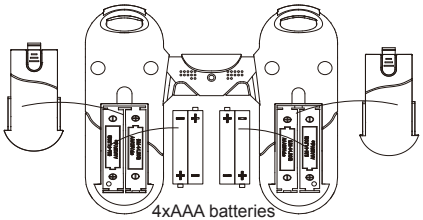
Transmitter

Operating Frequency: 2.4GHz
Max transmission distance: 200m
Battery: 1.5V AAA
Operating Temperature: 0° to 40°C

Controller functions





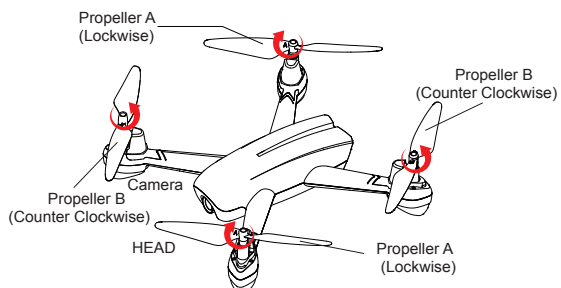


4xAAA batteries
(not included)

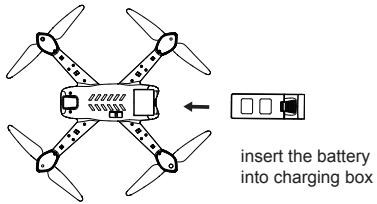
- Always use alkaline batteries
- Never mix old and new batteries

1.Unscrew the battery cover,and insert 4xAAA batteries(not included), making sure you insert them following the correct polarity as shown
2.Re-attach the battery cover

Drone's details



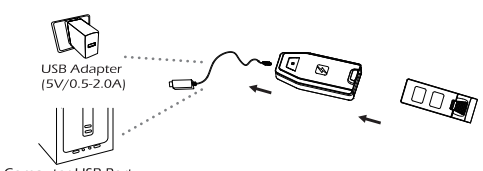
It is crucial that all the propellers are installed in the correct position
(Pay attention to the letter A or B printed underneath each propeller.)



insert the battery
into charging box

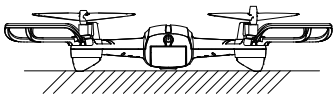
Charging the drone battery

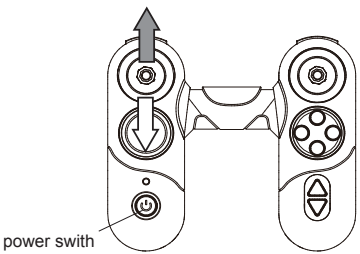
1.Remove the battery from the drone and insert the battery into the charging box.
2.Connect the charging box with USB charging cable, and insert the battery charging wire into the USB slot of the computer. The battery is under charging when the indicator led on the charger box lights up RED.)
3.The battery is fully charged when the indicator led on the charging box lights up GREEN.



WARNING
Do not leave the battery unattended while charging & only use the supplied battery or plug charger.

Pairing your drone to the controller





Outdoor flight GPS mode

Don't fly the drone in rainy, foggy, snowy, windy (wind speed above 4 meters) days!

1. Firstly, switch on the remote and then LED on the remote will become red and start flashing. Secondly, switch on the drone and place the drone standing on the floor, the code transmitted from the remote will be successfully paired by the receiver from the drone once the remote sounded "di,di" twice.)

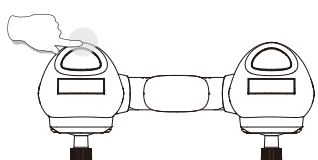
2. Push the left joystick on the remote control to the top for two seconds, then pull the left joystick to the bottom for two seconds.
(At this time, the remote control indicator light turns to green color and flashes slowly.) Release the left joystick, when the front and rear lights of the drone flash quickly at the same time, the frequency pairing is successful.

3. When both of the front and the back indicator leds stop flashing and stay stable, then the drone is successfully matched GPS signal and ready to fly.

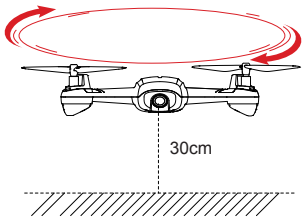
4. When the end user firstly fly this drone, he or she will need to recalibrate the geomagnetism before reflying if the drone can not fly stably after many crashes or changing engines.

5.How to Calibrate magnetic compass:

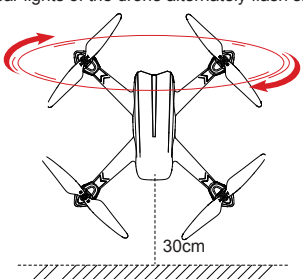
(1).Press and hold the normal mode button, the red lights on the rear of the drone will be off, and the front green lights will flash quickly to enter the calibration. The normal mode button can be released at this time.



(2).Pick up the drone to keep it in the air horizontally, then slowly rotate the drone clockwise, and wait for the green lights to flash slowly to indicate that the horizontal alignment is complete.



(3).Hold the drone in the air vertically (drone's head points at the ground), then slowly rotate the drone clockwise, and wait for the red lights to flash slowly to indicate that the vertical alignment is complete.(At this time, the front and rear lights of the drone alternately flash slowly.)



(4).Place the drone horizontally on the ground, and wait for the front and rear lights on the drone to flash quickly, to indicate that the calibration is complete.

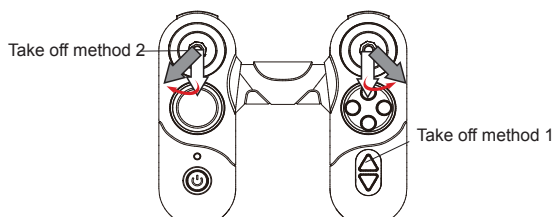
6.Gps search satellites

The drone must has enough GPS signal to fly in outdoor GPS mode. The normal outdoor satellites searching time is about 1-2 minutes. When the front lights of the drone are green ON, that indicate there are at least 6 statellites searched in the GPS signal, then the drone can fly outdoor. The longer the GPS signal searches, the better the GPS signal gets.

The drone's flying will be more stable and the auto return and landing will be more accurate when the GPS signal is strong.

When the drone takes off, its flight altitude will be higher if the GPS signal is stronger, it can fly at about 5 meters high when the drone searched about 13 statellites.

7.How to take off



1) Press the one key start button for 2 to 3 seconds, and the drone will fly up to 1 meter high automatically, the flight mode is defaulted as normal flight mode.Press the GPS mode button,the drone will fly on GPS mode.(When the drone takes off, its flight altitude will be higher if the GPS signal is stronger, it can fly at about 5 meters high when the drone searched about 13 statellites.)

2) At the meanwhile, please pull the remote throttle to the bottom, pull the left joystick on the remote to left direction at the angle of 15 degrees and the right joystick on the remote to right direction at the angle of 15 degrees.The drone paddle rotates slowly and enters into standby speed flight mode, then push the remote control throttle, the drone start fly

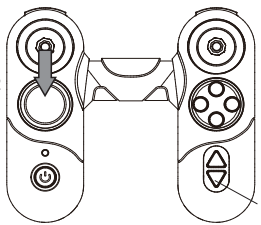
8.Landing

Method 1:
Press the “one key stop” button for 2-3 seconds,the drone will land by itself.

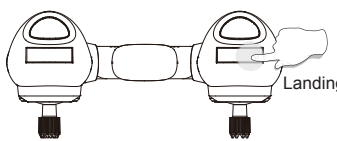
Method 2:
Push the “throttle left stick” lever down until the drone lands.

Method 3:
Press auto return home button for 2 to 3 seconds, the drone will return to the position where GPS mode started.

Landing Method 2

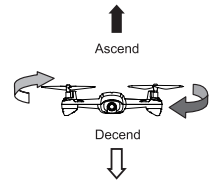


Landing method 1

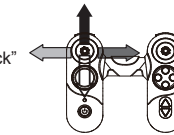


Landing method 3

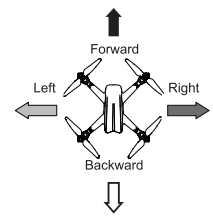
Altitude & rotate:



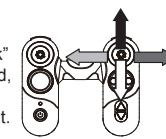
Use “throttle left stick” lever to control the altitude & rotation during flight.



Forward / backward / left / right:



Use “throttle right stick” lever to control forward, backward,left & right movement during flight.



Indoor flight non-GPS mode

1.First turn on the power button of the remote control, the red light of the remote control flashes quickly and makes two beeps; long press the power switch of the drone, the lights on the drone will flash slowly.

2.Push the left joystick on the remote control to the top for two seconds, then pull the left joystick to the bottom for two seconds; The remote control indicator light turns to green color and flashes slowly.

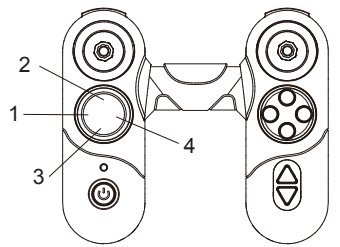
3. Release the left joystick, when the front and rear lights of the drone flash quickly at the same time, the drone is ready to fly.

4.Press and hold the One Key Start button for 2-3 seconds, the drone will fly 1m high by itself. During the flight, the green lights on the drone will flash slowly and the red lights will be bright.

5.Press and hold the One Key Stop button for 2-3 seconds, the drone will land on its own. Or the drone will slowly descend after the throttle stick is pushed down.

Because the indoor GPS signal is very poor and unstable, the drone can only fly indoor in non-GPS mode. So NO auto return/no waypoint/ no follow me function.

Features



1.LED:

Press LED button once, the 4 leds of the drone will light off. Press LED button once again, all the leds will light on.

2.To take a photo:

Press once, take one picture.

3.To record a video:

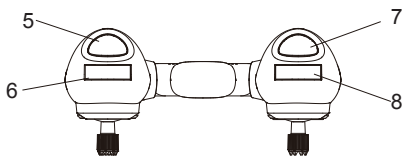
Press once to start the video mode, press one time again to stop the video mode.

(Remark: because the drone comes with a wifi camera, it can only take pictures or video after connected with mobile phone. Since the wifi board is built with a memory card slot, so the pictures and videos can be stored in both mobile phone and memory card inserted in the card slot.)

4.Pairing drone:

Press and hold the button , at the same time, turn on the remote control power switch and then release the two buttons (the remote control indicator light flashes quickly).Press and hold the drone power switch for three seconds, wait for the front and rear lights of the drone to flash slowly and then release the power switch button.Push the left joystick on the remote control to the top for two seconds, then pull the left joystick to the bottom for two seconds.

(At this time, the remote control indicator light turns to green color and flashes slowly.) Release the left joystick, when the front and rear lights of the drone flash quickly at the same time, the frequency pairing is successful.



5.Normal Mode Button

Press the Normal Mode Button, the drone will fly in the normal mode, no GPS function

6.Speed-select button

Two speeds for the drone, fast and slow.

7.GPS mode

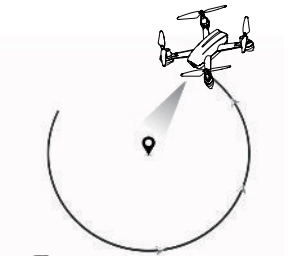
After the drone is paired sucessfully and started to fly, press the GPS mode button, the drone will fly in the GPS mode.

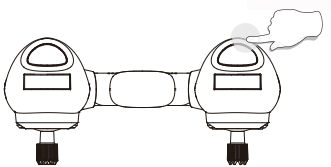
8.Auto return home

When the drone is flying in the GPS mode, press the return button for 2 to 3 seconds, the drone will return to the position where GPS mode started.

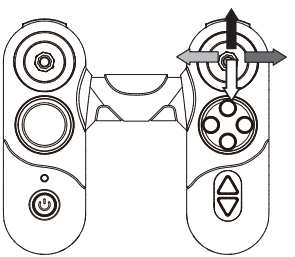
GPS mode /Surround flight:

During the flying, the end users can enjoy the surround flight mode by pressing the GPS mode button for 2 to 3 seconds until the remote beeps "di, di" twice. During surround flying, the drone will fly in the 15 meters radius semicircle range.





During the surround flight, the consumer can adjust the flying radius of the drone by pushing the direction joystick up or down, and the speed of the drone can be adjusted by pushing the direction joystick to the left or right.

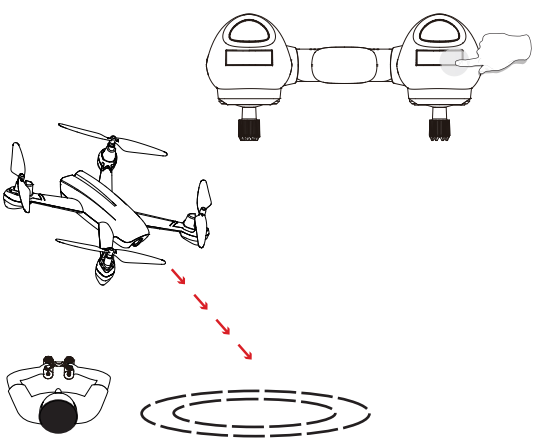


Auto return home:
When the drone flies too far in GPS mode, consumers can't tell the directions of the drone, then consumers can operate it in below 2 ways to fly back the drone to the takeoff place:

1. Long press the auto return home button 2-3 seconds, the drone will fly back to the takeoff place automatically;

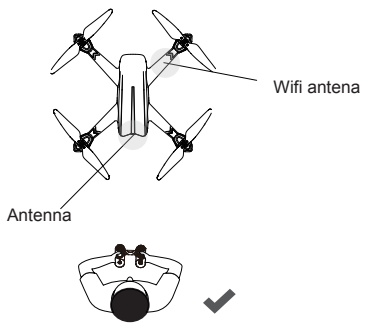
2. Directly turn off the remote control power switch, the drone will return to the take-off place.

Remark: When the drone is out of range of controller, the drone will fly back to the take off place automatically.



For outdoor flying, we strongly recommend the end user to choose an open area, as the GPS signal will be strong enough. The GPS signal will be too wake to have a enjoyful flying if the end user choose to fly the drone in residential area, as example, because there are too many buildings, and the glass will refract.

Because the launch module of the drone is 2.4G, the 2.4G launch will be different because of the different environmental conditions of the site. The maximum flight distance in normal flight is 200 m, and it is normal for the drone to return automatically during the flight while flying in GPS mode.

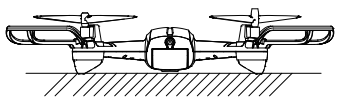


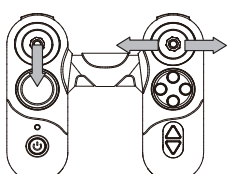
The direction of control when the drone is paired.

Don't turn your direction

Calibrate gyroscope

When the flight of the drone is unstable or deviated from the left and right after take-off, the consumer can correct the gyroscope and the flight will be more stable after the correction.



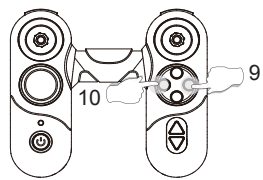


1.Place the drone on a flat ground, then pull the left joystick to the bottom, while turn the right joystick left and right horizontally quickly and without stop until the lights on the drone start flashing slowly. (The front and rear lights on the drone flash slowly to indicate that calibration has been entered, DO NOT move the drone at this time.)

2.Waiting for the front and rear lights of the drone to flash quickly which indicates that the calibration was successful.

Left and right hand throttle switch

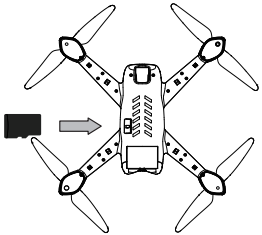
The remote control throttle of the factory products defaults to the left-handed joystick. Consumers can switch between left and right hand mode according to the following operations. Consumers only need to switch once, the remote control can save it automatically, no need to switch it again in next flying.



Left hand mode to right hand mode:
Press and hold button 9, and turn on the power switch of the remote control and then release the 2 buttons (the remote control indicator light flashes quickly), then push the right joystick to the top for two seconds, when the remote control indicator light turns RED and flashes slowly, pull the right joystick to the bottom for two seconds. Waiting for the remote control indicator light to turn to a green light, that indicates the switch is successful.

Right hand mode to left hand mode:
Press and hold button 10, and turn on the power switch of the remote control and then release the 2 buttons (the remote control indicator light flashes quickly), then push the left joystick to the top for two seconds, when the remote control indicator light turns RED and flashes slowly, pull the left joystick to the bottom for two seconds. Waiting for the remote control indicator light to turn to a green light, that indicates the switch is successful.

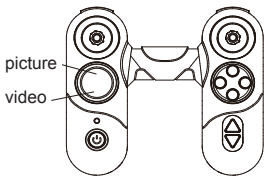
Insert the SD card



Insert the SD card (not included) to the slot in right direction. If the SD card was inserted upside down, it will get stuck and the camera will not work.

To download your photo and video files:

- Remove the SD card from the drone and plug it into the card reader (not included).
- Plug this into your computer to access the files.



Adjust Camera

The camera can be manually rotated 90 degrees.

Install phone holder

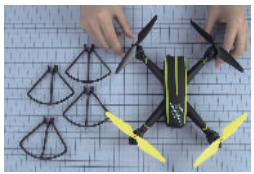
1.Insert the phone holder to the middle of remote controller.

2.Use the screws which behind the phone holder to adjust the tightness between the holder and the remote.

3.Pull out the holder and place the phone on the holder.

Install the protection ring

Insert the protection ring to the motor arm correspondingly



Trouble flying

WARNING!

1.The consumer must turn off the power of the drone after flight.
2.Because the drone does not have the function of automatic return at low voltage, consumers should fly the drone back to the safe visual range after the remote controller has a low voltage alarm. Drone battery low voltage and remote control power low voltage will lead the remote control to alarm, consumers should immediately replace the battery.
3.Consumers should pay more attention to the altitude of the drone when flying, in order to avoid crashes caused by collision obstacles.
4.Geomagnetic correction for the drone, it is required (a must) when consumer first buy/fly the drone or after changing the propellers/motors. (Outdoor flying is to use the gps satellites for geomagnetic landmark positioning. Positioning and auto return will be more accurate after a new geomagnetic correction.)

5.When the power of the remote control or the drone is insufficient, the remote control distance will be affected.
6.If the drone power is insufficient, it will be difficult to fly the drone or even take off the drone.
7.If the drone is damaged or deformed, please repair it in time. If the blade is broken or damaged, do not fly, otherwise it may cause injury.
8.Remove the battery from the remote control when it is not in use for a long time. Avoid damage to this product caused by battery leakage.
9.Never allow the drone to crash or crash badly from high altitude, which can damage the drone or shorten its service life.
10.In order to ensure the stability of the drone, when the drone hits the object and suddenly drop, please put the drone on the horizontal ground and stay for 2-3 seconds, after the automatic test level, then to try to fly the drone again.

problem	possible cause	solution
The indicator lights of the drone are flashing and does not respond to the transmitter.	1.Transmitter is not synced to the drone. 2.Insufficient battery power.	1.Refer to the preparation for FLIGHT and pair again. 2.Recharge the battery.
The propellers spin,but the drone cannot take-off.	1.Insufficient battery power. 2.The propellers are installed in wrong orientation. 3.The propellers are distorted.	1.Recharge the battery. 2.Install the propellers in right orientation. 3.Replace the propellers.
The drone sways sharply.	The propellers are distorted.	Replace the propellers.
Drone cannot stay balanced in flight.	1.The propellers are distorted. 2.The motor doesn't work properly.	1.Replace the propellers. 2.Replace the motor.
The drone is out of control after crashing.	Six-axis acceleration sensor losed its balance after crashing.	Restart and re-calibrate the drone.
The drone rotates upwards when pushing up the throttle lever or the drone sways	The motor doesn't work properly	Replace the motor

How to replace the motor

Warning: since this drone uses brush motors which has a finite life span, the normal operation of the drone is able to fly 25 cycles. Therefore, consumers should replace the motor immediately when they have deviation during flight.

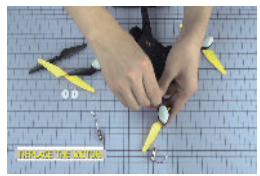
1. Loosen the lamp cover screw and remove the lamp cover.

2. Remove the motor cover from the top.

3. Remove the damaged motor.

4. Install and compact the new motor, connect the new motor's connector to the circuit board's connector.

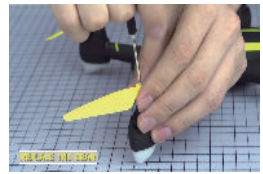
5. Install the motor cover.



6. Install the lamp cover and lock the covers with screw.

How to replace the gear

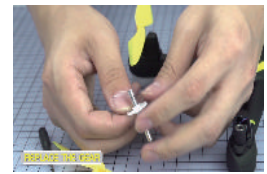
Warning: since the gear will be in heavy loss after long time flying, consumers should replace the gear in time.



1. Loosen the propeller screw and remove the propeller.

2. Loosen the lamp cover screw and remove the lamp cover.

3. Remove the gear and steel shaft.



4. Press the gear and take it off.

5. Re-install a new gear and pressed together with the steel shaft.

6. Re-install the new gear and steel shaft on the motor frame of the drone, the teeth of the motor are fastened and matched with the teeth of the new gear.

7. Install the lamp cover and lock the cover with screw, and then install the propeller and lock it with screw as well.

How to download, install and use the camera's software

For iPhone, please scan the QR Code (Apple Software) on the packaging or below, or type WOWI PRO , to go to the App store to download the software; For Android mobile phone, please scan the QR Code (Android Software) on the packaging or below, or type WOWI PRO, to go to the Android Eloquent Market / Google play to download the software.

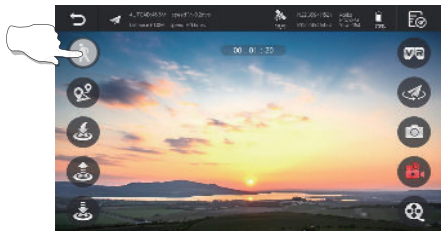
Available on the iPhone App Store

Google play

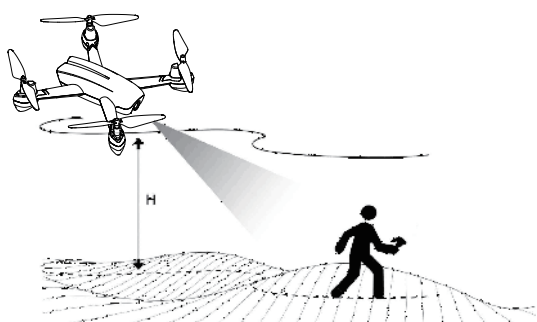
Connect to the APP:

1.Connect your drone.
2.Access the settings of your phone and activate the WiFi connection.
3.Search a WiFi network from your drone and connected to it.
4.Click the icon to access the control interface. At this point you can see the video that captures the drone in real time.

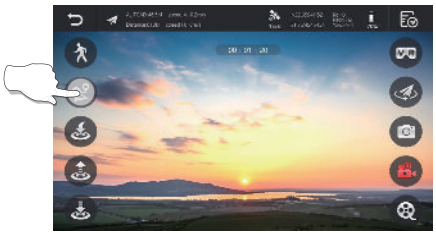
Follow Me



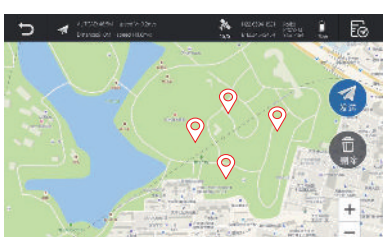
Since the drone has GPS function, when the drone is connected to the smart phone's wifi, when the consumer clicks the follow me icon on the APP shown on the phone, the drone will automatically turn its head towards the consumer, and the drone can follow the smart phone to fly on its own.



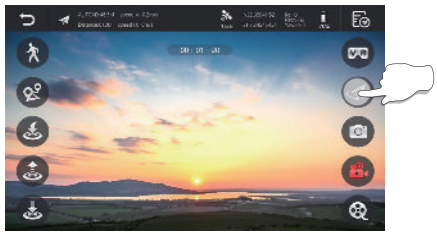
Waypoint flight



Since the drone has GPS function, when the drone is connected to the smart phone's wifi, when the consumer clicks the waypoint flight icon on the APP shown on the phone, the APP will pop up a map interface, and consumer can mark multiple waypoints on the map, and the drone will plan and fly by itself according to the selected waypoints.



Surround flight



Since the drone has GPS function, when the drone is connected to the smart phone's wifi, when the consumer clicks the surround flight icon on the APP shown on the phone, the APP will pop up a map interface, and the consumer can mark the flight on the map, the drone will enter the surround flight according to the radius of the consumer's click.