

## iDrones1 user manual

Please carefully follow the "user manual" iDrones1 instructions for use

### Important safety information

**Operation** Please be careful operate the idrones1. This product contains sensitive electronic components. If idrones1 fall, damaged or exposed to the water, it might damage. Please do not use damaged idrones1, such as the broken screw propeller, in order to avoid possible damage.

**Maintenance** Do not disassemble it or attempt to repair it yourself which may result in iDrones1 damage or cause personal injury. If iDrones1 damage, malfunction, or come into contact with the liquid, please contact iDrones1 or authorized dealer.

**Battery** Please do not disassemble, extrusion, collision, burning, dropped or trample iDrones1 intelligent flight battery. Be sure do not short circuit or metal item contact the battery terminals. Don't make the battery exposed to temperature more than 60 degrees. Be sure to use iDrones1 original charger for smart flight batteries. Please store the battery where is not easy to find and keep dry

Please read the 《Disclaimer》 before using the idrones1

### Reading tip

Symbol description



Warning



Important



Hints and Tips



Reference

### Appointment

This manual introduces iDrones1 functions, in addition to special instructions, all functions are described in iDrones1 work mode.

Please watch the teaching video and the 《Disclaimer》 first. 《abecedarian Precautions》 help the user to a quick start. 《iDrones1 User manual》 provide detailed instructions.

## Product profile

IDrones1 is a high-tech small quadcopter aerial vehicle. Equipped with high precision two-axis stable gimbals, 16 million pixels actions camera and advanced intelligence flying control system. Smart mobile device can control the camera by the Smart Drone APP make the long distance real-time video and image transmission. Drones1 will help you easily to make a stable clear picture aerial video and photos.

### 一、introduction

iDrones1 make up by aircraft, camera, gimbals, power systems, flight control system, figure modules. The flight control system in the aircraft fuselage. Figure 2.4GHz transmission module is used for aircraft image transmission.

The remote control device

remote-2.4GHz

2rocker, 7channel

## **Aircraft function explanation**

1. One-key return ("RTH") : When meet with difficulties in the process of flight, press the "RTH" button, the aircraft will auto fly to starting point.
2. Out of control and return: Record return point first, In flight process, if the remote control signal loss, the aircraft will hover; When remote control signal loss, aircraft will automatically return, return to the take-off point.

### **Take-off/landing steps**

- (1) Set iDrones1 on the floor that is flat and spacious, and assure that battery level indicator towards to you.
- (2) Firstly, open the switch of the remote control, then, connect the power supply of the aircraft.
- (3) Waiting for the green(blue) flight indicator light flashing slowly to enter (half) safety flight states; and the green light being on steadily to enter GPS intelligent mode. (If the green light is not on, then it has no positioning and returning function.)
- (4) Pull up the throttle lever slowly, and let the aircraft take off smoothly.
- (5) While descending is needed, pull down the throttle lever, and let the aircraft land on the flat ground.
- (6) After the aircraft lands on the ground, pull left the throttle lever to the lowest level for 3-5 seconds, then the electric machine stops running and the descending process is completed.
- (7) Unlock/lock state: don't move the remote control switch to the "GPS Ori" position, or the unlock and lock may be failed.

## **safety precautions**

Because iDrones1 is not a common toys, requires the user of this product to be at least 18 years of age. Please carefully read the user instructions, online teaching video, disclaimer before flight .The user must be skilled through long-term practice, users must seriously treat every flight and responsible for the flight safety. Please be sure to abide by the items listed below before flying the iDrones1:

1. Please be sure to open the remote control power supply first (pay attention to the "Big D/R" button, in case action too sharp when start flying). Ensure the rocker position right before the aircraft power supply is connected.
2. Need to avoid the propeller after opening the battery, high-speed rotating propeller may cause accidents.
3. Please concentrate in the process of the flight.
4. Please select the open space as a training ground and pay attention to the surrounding environment without obstacles. Aircraft flying is not suitable in the crowded place, keep away from the traffic arteries and the crowd in the process of flight.
5. Please don't flying in bad weather. Such as high wind (wind speed level 4 and above), the heavy rain fog.
6. Please don't flying more than 120 meters altitude.
7. Please ensure that the aircraft in front of you and always keep a certain distance with you in flight process.
8. Don't attempt to catch the aircraft in the process of flying in order to avoid damage.

9.After the flight, please disconnect the power of the aircraft before the transmitter closed, otherwise, the propeller may start at full speed and can cause injuries.

10.If you meet with difficulties in flight, please slow down the accelerator or directly dial the return key.The aircraft will landing.

11.Don't put the charger in damp places. If the battery charge full,please unplug the power before you leave the charging position. Don't put the battery near combustibile in order to prevent fire.A little fever belongs to the normal phenomenon when use it.

12.You should always stay calm, do not panic

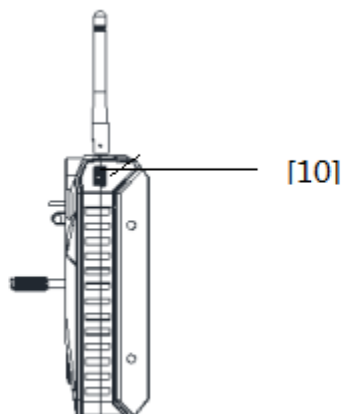
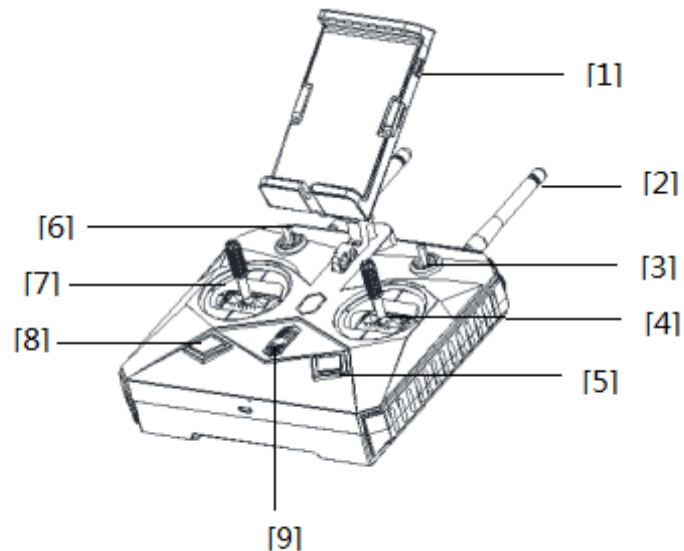
### **3 remote controller**

Prepare the remote controller

(1)Dial up the power switch, the remote control opened.You need unlock the RC if you want to take off for the remote control . Unlock way the same with the motor start way.

(2)After open the RC,the power indicate light is normally on which express the remote control can be normal use.

The RC function introduction(US hand operation method )

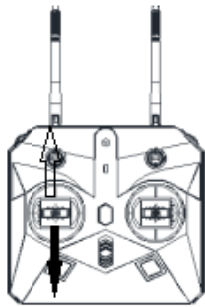


Note: small rudder means touch the rocker the aircraft little movement change;  
Big rudder means touch the rocker the aircraft big movement change.

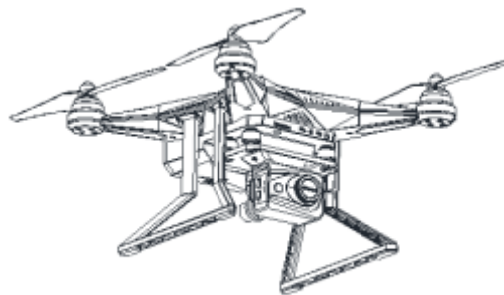
- [1] support
- [2] antenna
- [3] The size of the rudder/Locate
- [4] right rocker
- [5] one key return button
- [6] Cancellation low electric return
- [7] left rocker
- [8] A key to take off
- [9] power switch/figure the control
- [10] the gimbals angle control button

### The RC operation method

The rocker diagram



Aircraft diagram



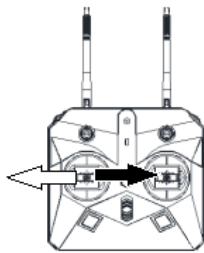
Accelerator rocker used to control the aircraft up and down

Pull up the rocker, the aircraft up;

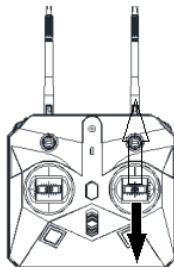
Pull down the rocker, the aircraft down;

The accelerator back to mid-position after unlock, please pull up the rocker over. The aircraft can take off;

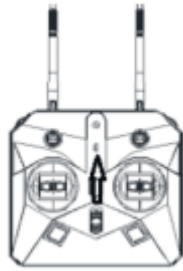
The aircraft remains unchanged when rocker in mid-position (automatic set height);



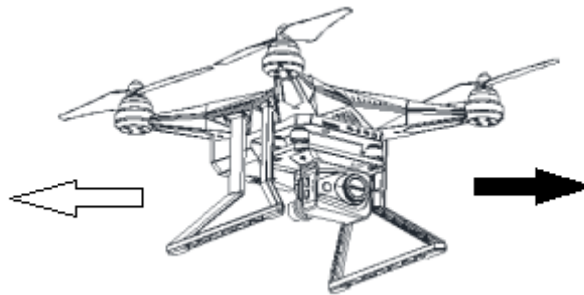
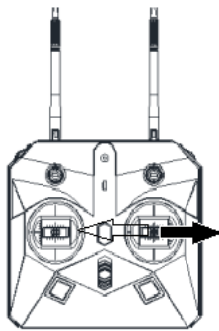
Yaw rocker is used to control the aircraft heading;  
 Pull the rocker left, the aircraft counterclockwise;  
 Pull the rocker right, the aircraft clockwise;  
 In mid-position, Rotating angular velocity is zero, aircraft not rotation;  
 Rocker offset level correspond the rotating angular velocity, the greater level, the higher speed.



Pitch rocker is used control the aircraft front and back;  
 Pull up the rocker; the aircraft flying front;  
 Pull down the rocker; the aircraft flying back;  
 In mid-position, the aircraft front and back direction keep horizontal.  
 Rocker offset level correspond the aircraft front and back tilted Angle;  
 The greater level, the bigger tilted angle (up to 35 degree), the faster speed.



The button for 3 switches, buttons to the top, links image transmission, button pull to mid terminate image transmission.



Cross roll rocker is used control the aircraft left and right;  
 Pull left the rocker,the aircraft left;  
 Pull right the rocker,the aircraft right;  
 In mid-position,the aircraft left and right direction keep horizontal.  
 Rocker offset level correspond the aircraft left and right tilted Angle;  
 The greater level, the bigger tilted angle (up to 35 degree), the faster speed.

## 五、 start/stop the motor

### 5.1 star the motor

Execute the rocker action can start the motor.You need immediately loosen the rocker after the motor rotated.show as figure 2.1.

Step One :The rocker pulled to the right;

Step two : After the motor starts , immediately release the rocker.

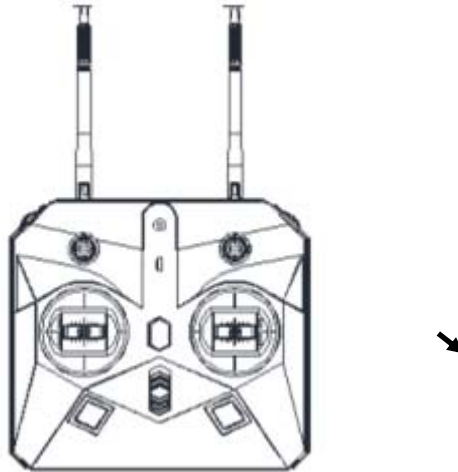


Figure 2.1

## 5.2 stop the motor

The motor rotated then stop mode:

After the aircraft landing, please operate the accelerator rocker as figure 2-2. The motor will stop after 2 seconds then you can loosen the rocker.

Step One : The rocker pulled to the left;

Step Two : After the motor stops, immediately release the rocker.

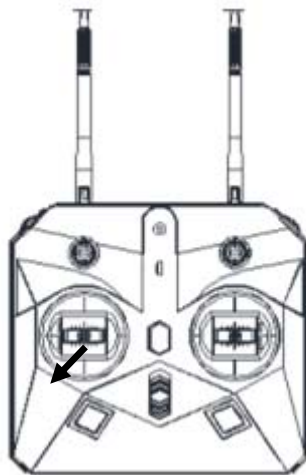


Figure 2-2



Do not stop the motor in the process of flight, otherwise lead to aircraft crashed.



- ◆ Operate the rocker as stable as possible, loosen the rocker after the rocker start/stop.
- ◆ Pull down the accelerator rocker to minimum position it will be locked. The aircraft will slow descend. Pull up the accelerator rocker it will be unlocked.

## Codicil

### Specifications

Aircraft	
Paddle length	9.5inch
Aircraft size	293*293*168MM
Flight Load	Max : 1500g
Motor standard	920KV
Working temperature	-20° C – 40° C
Bare metal weight ( without Paddle and battery )	650g
Machine weight	1380g
The power of the flight control	Max2.0W
ESC Standard	25A
Remote control	AJS002
The maximum rudder angular velocity	210° /s
The maximum tilt angle	30° /s
Battery standard	3S (11.1V)
Flight time	38Min
The maximum rise/fall speed	Rise : 7m/s ; fall : 1.5m/s
The maximum flight speed	8~15m/s
wheelbase	360mm

Gimbals	
The maximum working current	Static state: 280mA; moving : 500mA
Angle control accuracy	$\pm 0.03$
The controllable range of rotation	Pitch: -90° -0°
Gimbals	2D
The maximum rotating speed	Pitch : 45° /s

DV camera
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Working temperature	-10° C —40° C
Sensor size	1/2.3 precision sensors
Effective pixels	16000000/4K 1296P 30, 1080P 60, 720P 120, video , 4Gmemory card
The maximum resolution	4096x2160 UFD : 4096x2160P 24/25
HD video cassette	3840x2160P 24/25/30 FHD : 1920 x 1080P 24/25/30/48/50/60 HD : 1280 x 720 24/28/30/48/50/60

Remote control	
Operating frequency	2.402GHz-2.476GHz
The maximum communication distance	CE : 400m; FCC: 800m; ( you can customize 1000m )
equivalent isotropic radiated power (EIRP)	CE :25mw; FCC : 100mw
Working current / voltage	210mA/12V
Built-in lithium battery voltage capacity	12V, 1500mAh

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

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

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

FCC RF warning statement: The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.