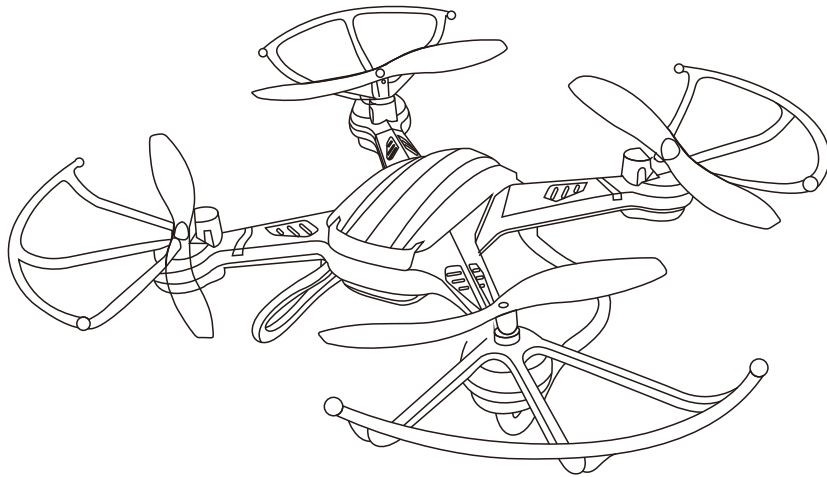




# User Manual



Contact E-Mail: [support@ipotensic.com](mailto:support@ipotensic.com)

## Contents

Important Statement	03
Safety Precautions	03
Safe Notice on the Li-Po Battery	04
Charging Method of Li-Po Battery	05
Flyer Warnings	05
Definition of the Flyer and the Controller	06
Flying Operation	09
Function of the Flyer	12
Flip Mode	13
Headless Mode	13
Installation/Replacement of Motors/Blades	13
Method of Using the Phone APP	14
Icon Function Introduction	15
One-hand Operation	17
3D Flip	18
Installation Blades	19
Problems Guidance	20

## Important Statement

Thank you for purchasing the item with Potensic. This is a toy drone, not a professional drone, but also need skills to control/play it.

- (1) This drone is suitable for those experienced RC drone user aged 14 years or more.
- (2) Please read the user manual carefully before flying. This product is a complicated equipment integrated with professional knowledge of mechanic, electronic, air mechanics, etc., so it should be installed and adjusted correctly to avoid accidents.
- (3) The user must always operate in a safe manner. Potensic undertake no liability for human injury or property damage caused by improper operation as we could not control the procedure of installation, usage and operation of this drone.
- (4) Potensic undertakes no liability for those accidents caused by improper operation, usage and control of the drone after sale of the product.
- (5) We provide technology support and after-sale service. If you have any questions about usage, operation, repairment etc., please contact [support@ipotensic.com](mailto:support@ipotensic.com).

## Safety Precautions

This drone is suitable for those experienced RC drone user aged 14 years or more. This product includes small parts, please keep it away from kids under 3.

### (1) Flying field

The flying field must be legally approved by local government. Areas around airport of radius of 5000m are not allowed for flying all kinds of remote controlled quadcopters. Flying fields must be spacious enough and we suggest at least 8m(length)\*8m(width)\*5m(height).

### (2) Correct Usage

For safety, please use the Potensic parts to replace the damaged. Improper assembly, broken main frame, defective electronic equipment or unsilled operation all may cause unpredictable accidents such as drone damage or human injury. Starters are recommended to learn from others who are experienced in operating a drone. Please pay special attention to safety operation and have a good knowledge of accident responsibility that the user may cause.

### (3) Keep away from obstacles and crowds

The speed and status of a flying RC drone is uncertain and it may cause potential danger. For security, we strongly suggest that the user must keep away from crowds, buildings, power lines etc. Forbid flying the drone in rainy, storm, thunder and lightning weather for the safety of user, people around and property etc.

(4) Do not look straight into the highlighting navigation LED lights, which may cause discomfort to the eyes.

### (5) Keep away from humid environment

The drone inside is consisted of precise electronic components. Humidity or water vapor may damage electronic components and cause accident.

### (6) Safe operation

Please operate the RC drone in accordance with your physical status and flying skill. Fatigue, listlessness and improper operation may increase the rate of accident.

### (7) Keep away from the rotating parts

Please control and operate the drone within your sight. Keep your face, body and other spectators away from rotating parts, otherwise, it may cause serious injury and damage.

### (8) Keep away from heat

The drone is made of metal, fiber, plastic and electronic components. Keep away from heat and sunshine to avoid distortion and damage.

### (9) Controller range

The best control distance is 30 meters line of sight and altitude. Do not fly the drone in area with tall buildings, power line etc. around that may influence the drone signal to avoid any unexpected accident due to out of signal and control.

(10) Only Potensic battery charger can fit this drone. Please disconnect the charger with the drone before cleaning. Check the charger wire, plug, fuselage and other components on a regular basis to make sure they are in good condition. Please do not operate the drone if there's any parts damaged.

## Safe Notice on the Li-Po Battery

- \*Do not put the battery on high temperature place, such as fire or heating device to avoid damage or explode.
- \*Do not use the battery to crash or hit hard surface.
- \*Do not put the battery into the water. Keep it in dry place.
- \*Do not detach the battery.
- \*Do not leave the battery without supervision when charging.
- \*Check the power supply connection before charging to make sure it works.

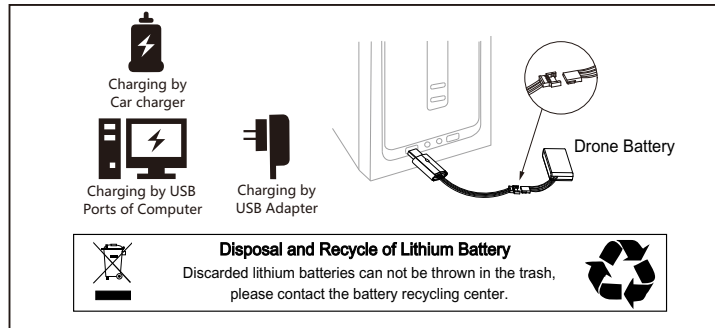
\*Use Potensic original charger only.

\*Check the charger wire, plug, fuselage and other components on a regular basis to make sure they are in good condition. If any of those parts damaged, please do not use them until they are repaired.

\*If not using the drone for over a week, please make sure that the power of the battery remains above 50% to keep its performance and utility.

## Charging Method of Li-Po Battery

1. Plug the USB charging cable to your computer USB interface, the light will indicate red.
2. Then connect it with the battery, the red light will off which indicates that the battery is being charged.
3. If the red light comes on again, then the battery is fully charged. Charging time is about 50 minutes.



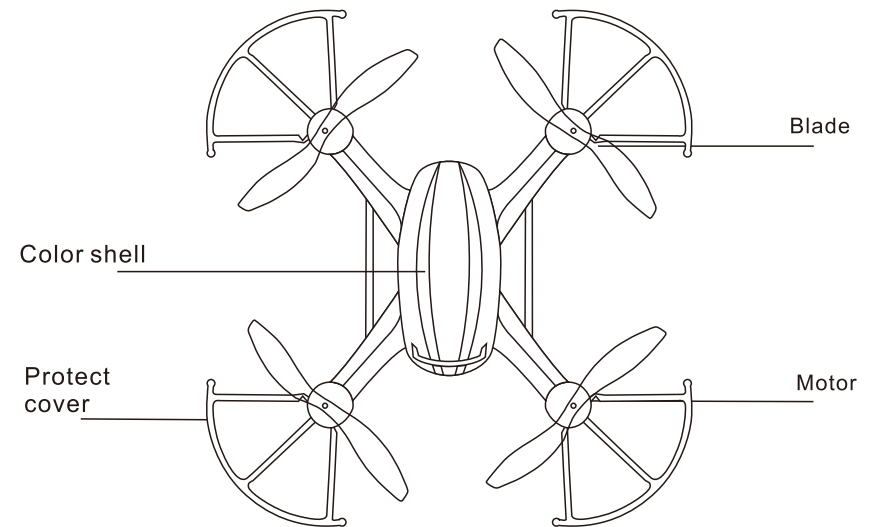
It is recommended to select the output 5V2A current adapter, which will be faster for charging. The maximum current can not exceed 5V, otherwise the battery could be damaged.

## Flyer warnings

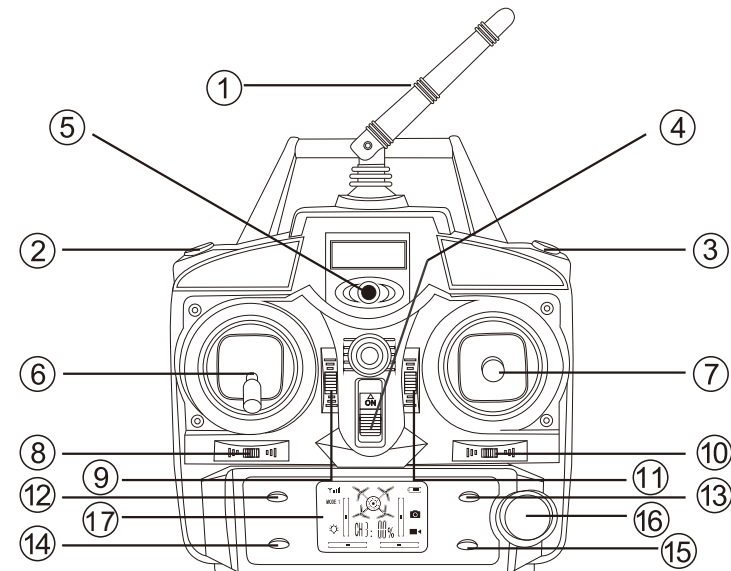
- (1) Confirm that the battery is fully charged.
- (2) Confirm that the left throttle is in the middle position before power on.
- (3) Before flight, please turn on the controller, first and then power on the drone. While after flight, power off the drone first and then turn off the controller. Incorrect steps may result in the drone out of control.
- (4) Make sure the drone parts are connected strictly and securely. The continuous vibration during flight may loosen the connection between the drone parts which may result in hard control.
- (5) Incorrect operation may result in crashing and make the drone parts damaged /faulty. We suggest that the user should purchase the drone parts to replace immediately for sustainable flying. Should you need any information or help with replacing the parts, please feel free to contact us at [support@ipotensic.com](mailto:support@ipotensic.com). We will be standing by all the time for you!

## Definition of the Flyer and the Controller

### Name of Parts



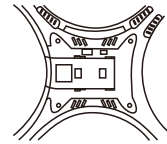
### Transmitter



1. Antenna	Transmit Signal to the drone
2. Side Lights On/Off	Turn on or turn off the side lights of the drone
3. Flip	Make the drone 360 degree roll over
4. Power On/Off	Push up to turn on the transmitter, down to turn off.
5. Power On/Off Indicator Light	Indicates the states of the transmitter and low voltage alarm
6. Throttle Up/Down	Push the throttle Stick Up or Down, left or right and the drone flies to up or down, rotate to left or right synchronously.
7. Left/Right/Forward/Back Flying Stick	Push the Left/Right/Forward/Back Flying Stick up or down, left or right, the drone flies forward or backwards, left or right synchronously.
8. Move Head Left/Right Steering Trim	Adjust the trim to right if the drone head rotates to left when taking off, and vice versa.
9. Throttle Trim	Adjust the flying speed of the drone.
10. Side Trim In Hover	Adjust the trim to right if the fuselage drifts to left when taking off, and vice versa.
11. Forwards/Backwards Trim	Adjust the Trim to backwards if the drone fuselage drifts to forward when taking off, and vice versa.
12. Picture	<b>This button doesn't apply to this drone.</b>
13. Video	<b>This button doesn't apply to this drone.</b>
14. Start/Landing	Press the button to take off the drone after binding. Press the button during flight to slowly landing the drone.
15. Headless Mode (RETURN)	Press the button and the transmitter will continuously issue "beep beep beep" sound, press the button again and the drone will exit headless mode.
16. Speed Adjustment	Press the button and the transmitter issues a "beep" sound, the percentage of speed output on the LED screen will flash, turn it around left or right to adjust the percentage. Press the button again and output speed you choose will take effect.
17. LED Screen	Display the power of the transmitter and other adjustment parameters.

### Replace/Install the Drone Battery

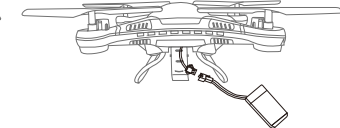
1. Open the bottom battery cover of the drone (Picture 1).
2. Take out the battery carefully, avoid using too much force, it may damage the power cable of the drone (Picture 2).
3. Pinch the buckle on the battery wire connection, then disconnect the battery with the cable of the drone (Picture 3).



Picture 1



Picture 2

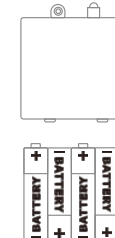
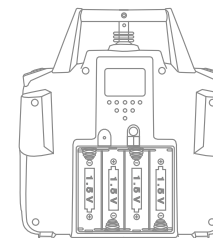


Picture 3

4. Replace with a new battery, put it into the drone, cover the back.

### Transmitter Battery Installation

Open the battery cover on the back of transmitter and put 4 alkaline batteries (excluding) into the box in accordance with electrode instructions. Pictures as below.



Battery cover

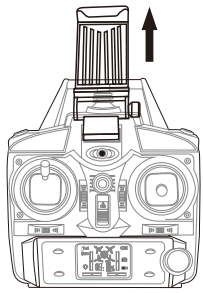
AA alkaline batteries

### Notice:

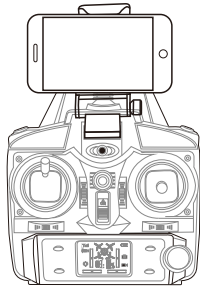
1. Make sure the electrodes are correct.
2. Do not mix using new and old batteries.
3. Do not mix using different kinds of batteries.
4. Non-rechargeable batteries can not be charged

### Phone Installation

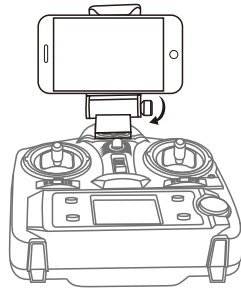
1. Open the phone holder fully, then put the phone in and fasten it. (Picture 4)
2. Insert the phone holder (with phone installed) into the card slot on the remote. (Picture 5)
3. Loosen the bottom screw of the phone holder, adjust the angle of the phone, and then tighten the screw. (Picture 6)



Picture 4



Picture 5



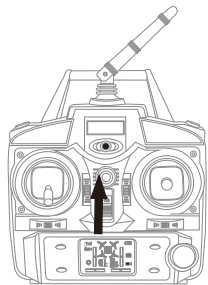
Picture 6

## Flying Operation

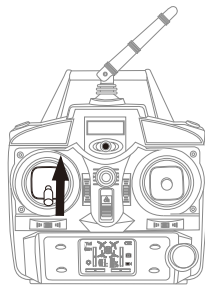
### Pair your drone with the transmitter

1. Turn on the transmitter (Picture 7), then turn on the Drone, the side lights of the drone flash slowly, move the left throttle up and down (Picture 8/9), the side lights of the drone stop flashing and stay bright, at this moment, the drone is successfully connected to the transmitter.
2. Put the drone on the flat ground, press the switchover button on the controller (Picture 10), the blades begin to rotate and you can operate your drone with the transmitter.

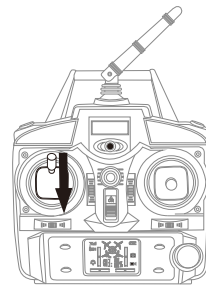
**Important Notice:** Please make sure the gyro of the receiving board is placed on the horizontal position after powering on the drone, so that the drone can be controlled.



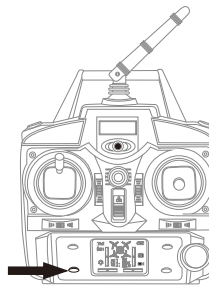
Picture 7



Picture 8



Picture 9



Picture 10

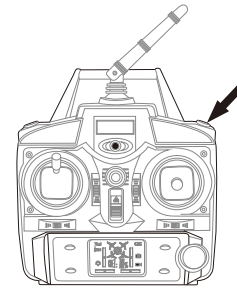
### Additional Instruction before Flying

1. The camera lens is front (head). Players should keep away from the head of the drone.
2. After frequency pairing, press the Start/Landing button and check the rotating blades. The left front/right rear blades (blades A) rotate towards clockwise direction while the right front/left rear blades (blades B) rotate towards counterclockwise direction.
3. Slowly push the left throttle stick up, the drone flies upwards, then push the left stick slowly down to end, the drone flies downwards and landing.
4. Adjust relative transmitter Trim button to adjust the rudder if the drone tilts to one side when flying.

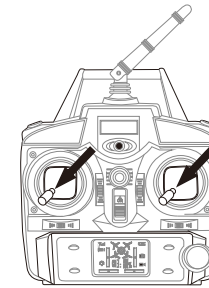
### Calibration Instruction

Please follow the below steps to calibrate the drone if the drone wouldn't hover after taking off, and can not be adjusted by trim button and cause difficult operation.

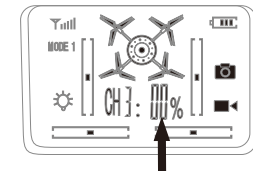
1. Turn off the drone switch and then turn off the transmitter switch.
2. Turn on the transmitter switch, then power on the drone switch and put it on the horizontal ground, after successful frequency pairing, press the flip button (Picture 11), you will hear "beep,beep,beep" sound from the transmitter. Push the left stick and right stick to left rear position about 45 degrees at the same time (Picture 12), the percentage displayed on the transmitter LCD screen turns to 0.0% (Picture 13).



Picture 11



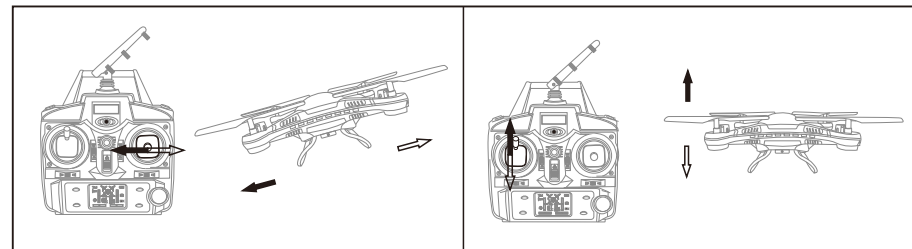
Picture 12



Picture 13

3. After 8 seconds later, the side lights stop flashing and stay solid, which indicates that the calibration is done and the drone is ready to fly.

### Flying Control



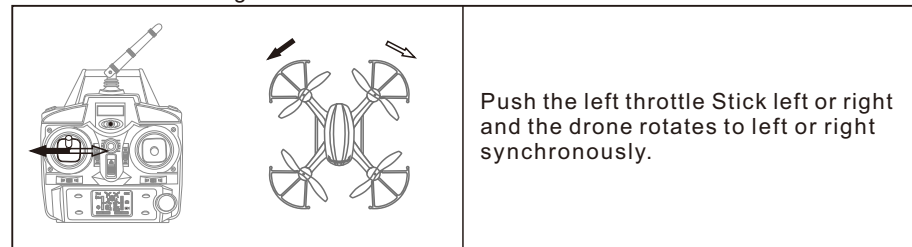
#### 1. Left and Right flying

Push Left/Right/Forward/Back Flying Stick (Right stick) left or right and the drone flies to left or right synchronously.

#### 2. Upwards and Downwards Flying

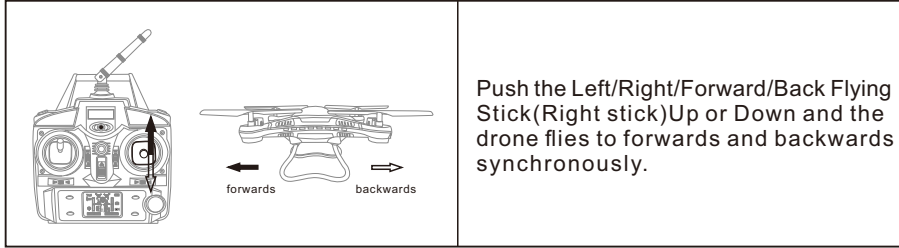
Push the left throttle Up or Down and the drone flies to up or down synchronously.

#### 3. Rotate to Left or Right

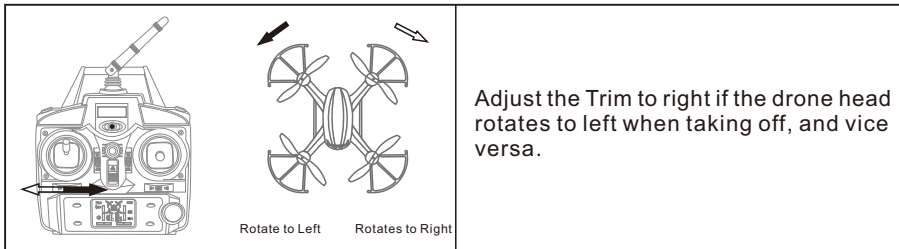


Push the left throttle Stick left or right and the drone rotates to left or right synchronously.

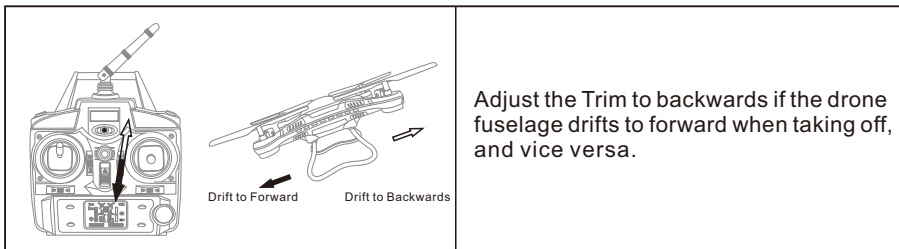
#### 4. Forwards/Backwards Flying



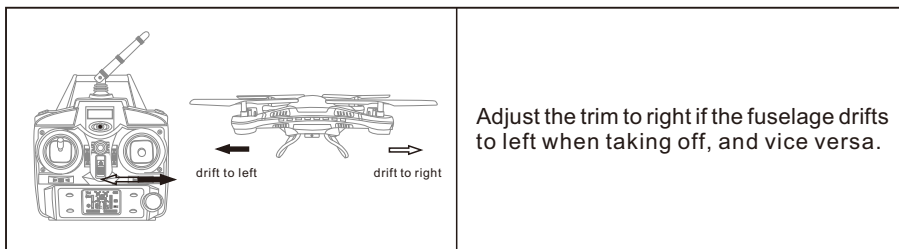
#### 5. Adjust Move Head Left/Right Steering Trim



#### 6. Adjust Forward/Backwards Trim

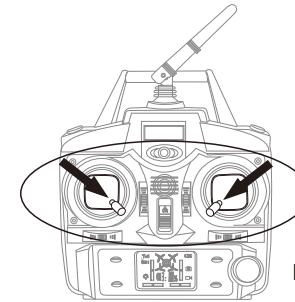


#### 7. Adjust Side Trim In Hover



## Function of the Flyer

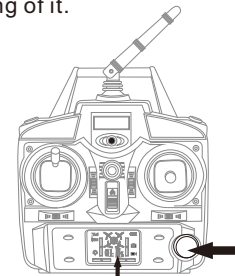
1. Take Off: Turn on the transmitter and then power on the drone, push the left throttle to the utmost control distance and then to the low end, release the throttle, the side lights stop flash and stay solid, which indicates successful frequency pairing. Press the start/landing button and the drone begin to fly.
2. Landing: Push the left throttle down to the end while flying, the drone will slowly flies downwards to the ground until the motors stop rotating.
3. One key to landing: Press the Start/Landing button while flying, the drone will fly down to the ground until the motors stop rotating. (Forbid to move the left throttle when using the the one key to landing function or it will not take effect.
4. Immediate landing: Push the left throttle and right stick to internal angle of 45 degree at the same time when immediate landing is need in urgent condition (Picture 14), the motors will stop rotating and the drone will fall to the ground directly. (Please keep away from clouds while using the function, the drone may generate some impact in the process of immediate landing.)



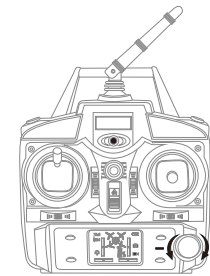
Picture 14

#### Variable Gain

Before flight, turn on the transmitter and press the Speed Adjustment button, the transmitter will issue "beep" sound, the percentage displayed on the LCD will flash (Picture 15), turn around it to left or right to adjust the speed (Picture 16), choose a proper speed and press the button again, the percentage on the LED screen will stay solid and the speed is set. Percentage below 50% will reduce the sensitivity of the drone, starters are advised to set the speed percentage between 30% and 50% to practice it. Percentage above 50% will increase the drone's sensitivity and its operation difficulty, recommend not try speed percentage above 50% until you are completely get the hang of it.



Picture 15

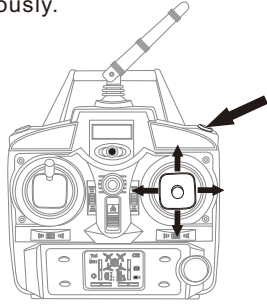


Picture 16

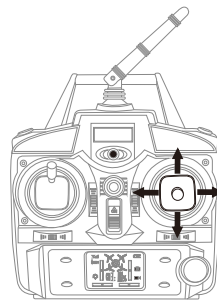


## Flip Mode

Press flip mode button of the transmitter(Picture 17) when flying and the transmitter will issue sound of "beep beep..."which indicates the drone enters flip mode. Push the Left/Right/Forward/Back Flying Stick(Right stick) to left/right/forward/back (Picture 18),the drone will do 360 degree flipping to corresponding direction synchronously.



Picture 17



Picture 18

## Headless Mode

By using headless mode, players are not needed to tell the front or rear of the drone when operate it. Suitable for situations that the drone in sunshine or the drone over a long distance and can not recognize the drone head and tail.The drone is set as "head mode" by default.

Press the Headless button to enter the headless mode. While in Headless mode, no matter which way the quad copter is facing, the right lever will move the quad copter in the same direction the lever is being pushed - left for left, right for right, forward for forward, or backwards for backwards - "Headless" mode. The controller will continue to beep while in Headless mode.Press the Headless button again if you want to exit the headless mode.

## Method of Using the Phone APP

1. Download and Install the APP:VS-UFO(Picture 19).

This App is suitable for mobile phone with IOS8.0+ or Android 4.4+ system, please download and install the APP by scanning the QR code below.



Picture 19



Android System

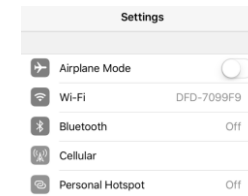


IOS System

2. Operate the Drone with APP

(1). Turn on the drone and place it on a level surface.

(2). Enter phone "setting", turn on WIFI(WLAN) and choose"DFD-\*\*\*\*\*",then return to the phone home screen after successful connection.(Picture 20)




Picture 20

(3). Open the APP by clicking "VS-UFO" icon, and enter real-time image transmission interface.(Picture 21)



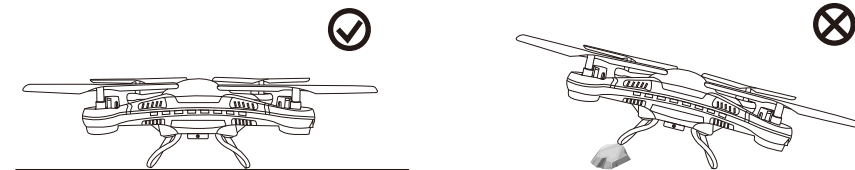
Play

Picture 21

(4). Click  to enter joystick interface, the LED light of the drone will stop flashing and stay solid, meaning the drone is paired successfully with APP, and the drone is ready to fly.

### Important Notes:

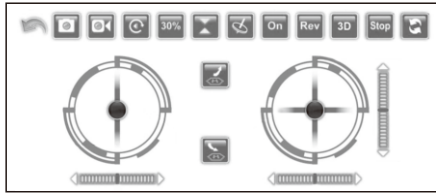
Please ensure that the ground is level when you calibrate the gyro in the receiving board, then the drone can be operated normally.(Picture 22)



Picture 22

# Icon Function Introduction

## 3.1 Phone Control Interface Icon



### Reback Icon:

Directly return to the entering interface of the APP by clicking this Icon.

### Take Photo Icon:

Click once to take photo, and saved directly on your phone.

### Record Video Icon:

Click once to record video, click again to end and save recording.

\*Please note the recorded video is without sound.\*

### APP File Icon:

Click to view photo and video.

### Speed Adjustment Icon:

"30%, 60%, 100%" 3 rates can be selected, the greater the value, the higher sensitivity of the drone, and the corresponding operation difficulty will be increased.

### Take off /Land Icon:

Only when using the joystick interface can you use this icon. By clicking the icon, you will see two small icons - "one key take off" and "one key landing". You can control the drone via phone after clicking "one key take off". On the contrary, by clicking "one key landing", the drone will land slowly.

### Gravity Induction Icon:

This function can only be used in joystick interface. By clicking this Icon, the joystick on the right will change into gravity induction ball. At this time, when the phone shakes to left/right, the ball will move to left/right, and the drone will fly to left/right.

### Joystick Icon:

Click this Icon to enter joystick interface and control the drone by using the phone.

### Lens Reverse Icon:

Click this Icon to reverse the picture received on the phone.

### 3D Icon:

Click this Icon to enter 3D dual-screen mode.

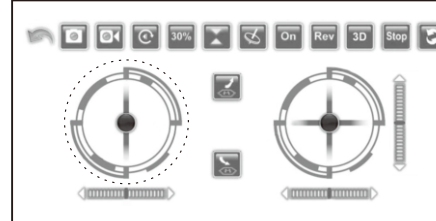
### Emergency Stop Icon:

By clicking this Icon, the drone will disconnect and fall down suddenly. This function should only be used in emergency situations. Click once to lock the joystick interface, and all other functions are unusable, click again to resume operation.

### 360 Flip Icon:

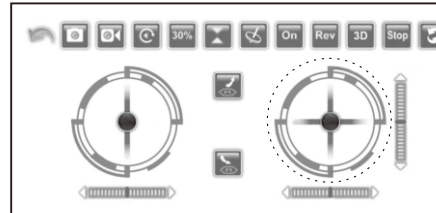
Click this Icon to enter 3D flip mode. Push the direction Icon to any direction, then the drone will make 3D flips to the corresponding direction. When using this function, the flying speed rate needs to be adjusted to 100%. One click for one 3D flip. Please don't try this function before getting the hang of the APP, otherwise the drone can be damaged easily.

## Throttle Control Icon:



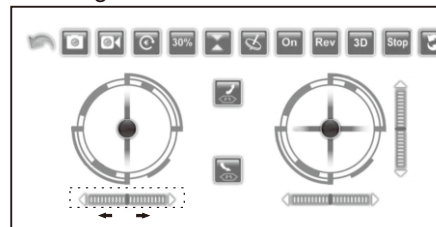
Move the center touch point to adjust throttle response.

## Direction Control Icon:



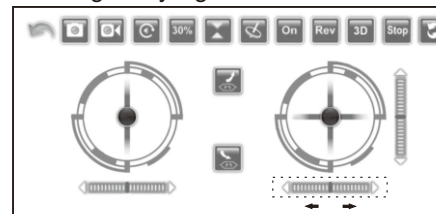
Move the center touch point to control the flying direction. Turn on the gravity induction icon, the flying direction can be controlled by adjusting the balance of your phone.

## Left/Right Rotation Trim:



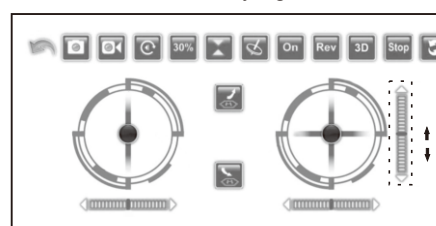
Click this icon to adjust the trim to right if the drone rotates to left when taking off, and vice versa.

## Left/Right Flying Trim:



Click this icon to adjust the trim to right if the drone drifts to the left when taking off, and vice versa.

## Forward/Backward Flying Trim:

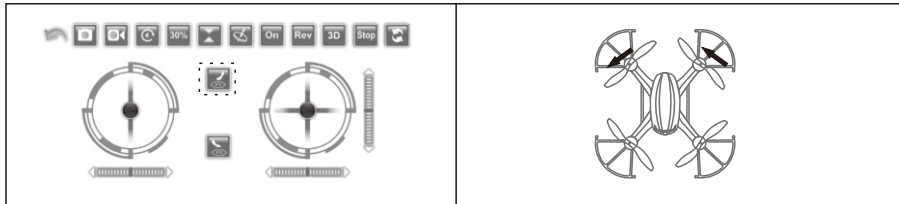


Click this icon to adjust the trim to backward if the drone drifts to forward when taking off, and vice versa.

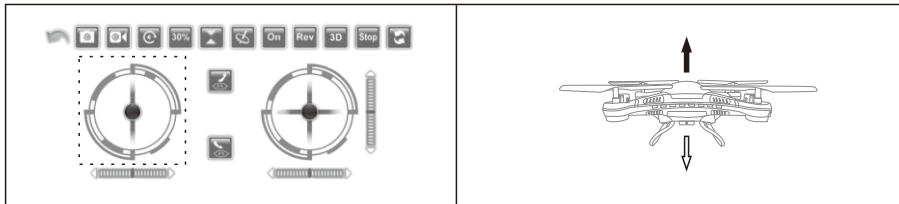


## One-hand Operation

1. With the phone and App paired successfully, turn on joystick interface, click start icon to make the propeller spin, then the drone is ready to fly.



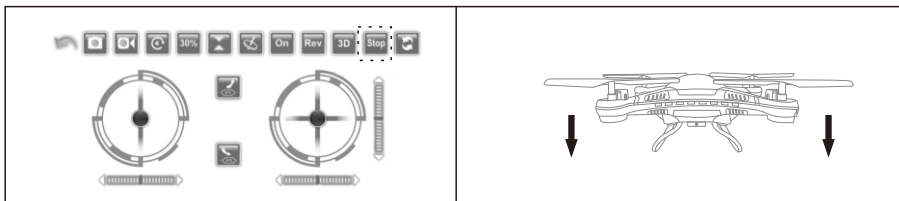
2. Adjust the throttle control icon to control the drone at a suitable height.



3. Click gravity induction icon to change the direction control icon into gravity induction ball.

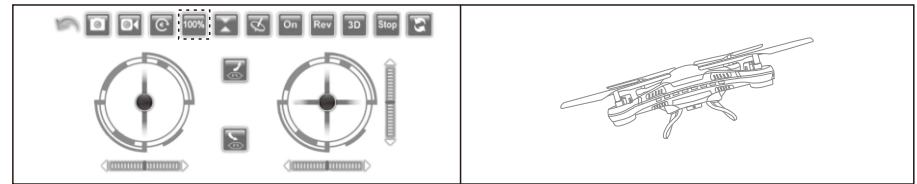


4. Hold the phone with one-hand, control the flying direction by adjusting the horizontal position of the phone. Under emergency situations, click the emergency stop icon to stop flying.

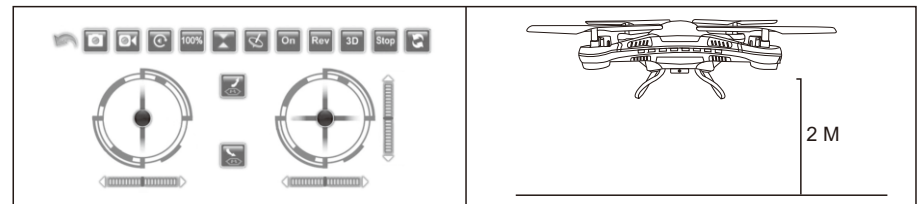


## 3D Flip

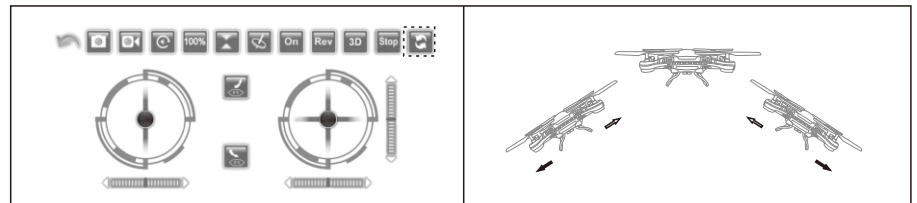
1. Click speed adjustment icon to adjust the speed rate to 100%.



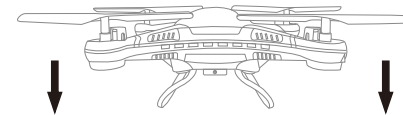
2. Keep the drone at an altitude of no less than 2 meters to ensure that there are no obstacles around.



3. Click 3D flip icon and then push the direction icon to any direction, the drone will make a 3D flip to the corresponding direction.



4. Due to inertia, the drone may lose some altitude. Please adjust the throttle to ensure the drone is at a proper height.

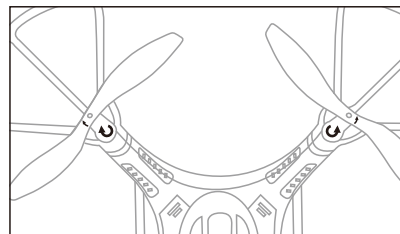
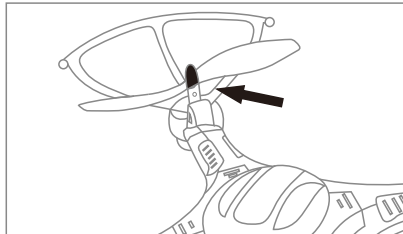
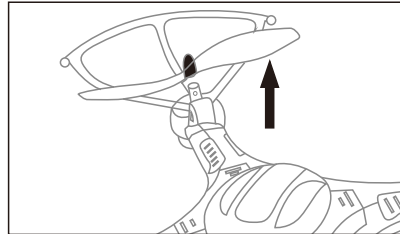
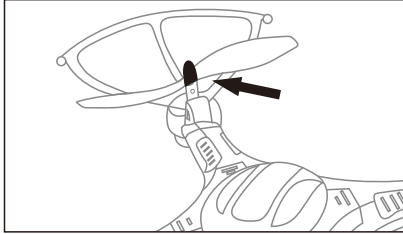


**Attention: Please don't try this function until you get the hang of the APP, otherwise the drone can be damaged easily.**

## Installation Blades

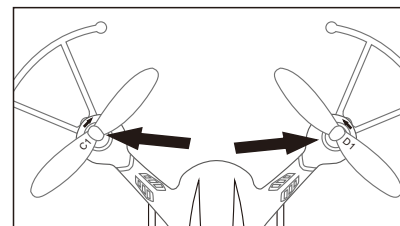
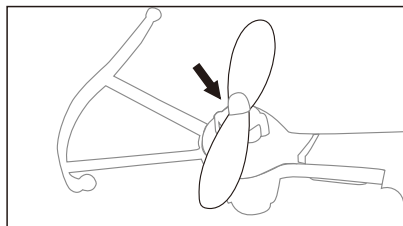
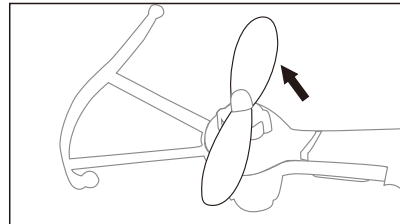
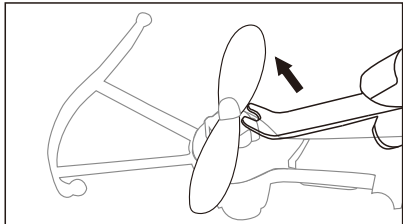
### F181 Blades Installation

1. Remove the screws by counterclockwise rotate the screwdriver.
2. Upwards pull out the blades.
3. Install the blades with the same rotate direction, then tighten the screws by clockwise rotate the screwdriver.
4. Make sure the blade be accordant with its rotate direction



### F186 Blades Installation

1. Put the blade changer to the base of the blades.
2. Push up the blades.
3. Put the new blades into its correct position.
4. Make sure the blade be accordant with its rotate direction



## Problems Guidance

Problem/phenomenon	Cause	Solution
One or more blades stop spinning	One or more motors were damaged	Swap with new motors
blades spin slowly or can't spin.	The larger white gear and the mental motor gear are not meshed together, it usually result from a strong crash.	Change the gears and base.
Grindy sound from the gear shaft	The gears were worn out. The gear shaft disformed after crashes that result in tight mesh of the blades gear with the motor gear, further ware out the gears.	
Fly to one side	The original program of the aircraft has changed slightly during operation, or the gyro is not reset after a violent impact.	Use the tuning button on the transmitter or calibration function, please refer to the User Manual for how.
	The motor has been crashed damaged.	If it can't be fixed by fine tuning or calibration resetting, then the motors should have been damaged, please replace the abnormal parts.
Can't lift off ground	The blades are severely deformed.	Change with the same type blades.
	The drone battery is low in power.	Charge the battery follow the instruction or try again with another fresh battery.
	incorrect installation of the props.	Reinstall the blades in accordance with the instruction.
	The drone won't be ready to fly until you press the Start/Landing button (Switchover button) after successful pairing.	Before take flight, press the left rear button on the remote control to make the blades rotate. More details please refer to the User Manual.
There is no pictures showing on the phone.	Loose connection of the camera wire with the drone.	Ensure that the camera wire has been strictly connected with the drone wire at the bottom, if there's no issue with the camera, there will be solid blue indicator light lit up in the camera box when the drone is powered on.
	The camera is damaged (No blue light in the camera box even if it has been full attached to the drone bottom and the drone is powered on)	Change with a new camera.
	There's interference signal around that affect the transmission of the drone signal.	Avoid flying the drone in fields around with power lines, radar and others that could release radio signal. Play in a clear wide field with no to little interference.
	Failed connection between the phone and drone WIFI.	Open phone "setting", turn off the WIFI and restart, the wifi signal of drone will show up on the the searching column, reconnect with it.
Can't bind.	There's signal interferences nearby. The interval between switch on the transmitter and the drone is too long (more than 8 seconds). The drone battery or transmitter battery is low in power.	Please try again in area with no signal interference; Restart the drone and the transmitter, turn on the transmitter first and then turn on the drone, the two steps should be done quickly (no longer than 4 seconds); ensure there's enough power in the drone battery and the monitor.