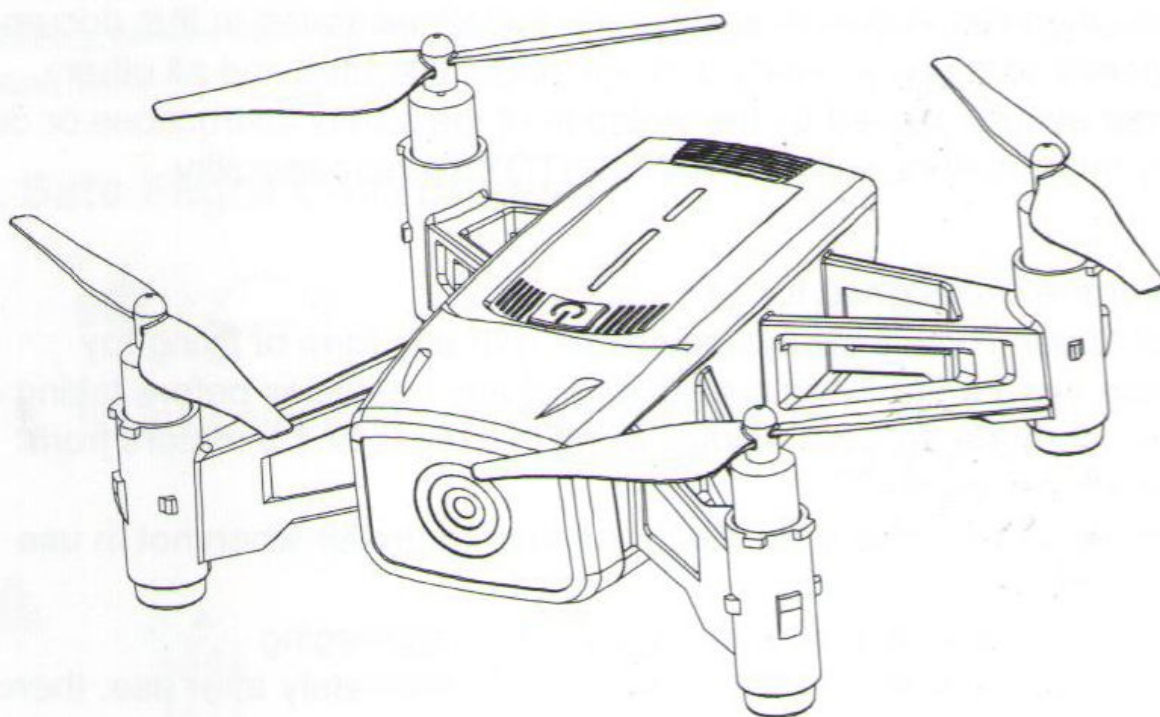# Wowitoys

LARK PRO

Battle • FPV • Optical flow

3 IN 1 drone

INSTRUCTIONS FOR USE

H4822

WWW.WOWITOYS.COM

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 damages 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 policies and guidelines.

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 factors, will not be WOWITOYS's responsibility.

• The drone is designed for 14+
• Adult supervision is always advisable with any form of flying toy
• Always ensure the flying area is free of any obstacles before taking off, and ensure the drone is always flying 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 the batteries unattended during charging
• Never touch the drone motors during or immediately after use, there is risk of burns
• Never touch the propellers when they are in rotating
• If the drone gets damaged, stop using it immediately
• Do not dispose of any parts of the drone or controller as normal rubbish, all parts should be taken to the 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, 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 controller are clean, undamaged and have enough power.

(3). Please be sure that all the propellers are undamaged and are installed in the right direction.

(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 dealt with.
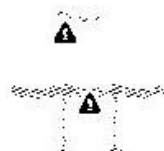
2. Safe Flight Environment

Fly in Open Areas   +   Maintain Line of Sight   +   Fly Below 164 feet (50 m)

(1). Make sure the surrounding area is free of people, pets or other obstacles before starting to fly the drone.

(2). The drone is designed for indoor and 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 from the drone at all times.

3. Use of Battery

(1). Ensure batteries are fitted in the correct direction as shown in the instruction manual.

(2). Avoid short circuits by fitting the batteries incorrectly, and do not crush or squeeze the batteries as this could carry the risk of 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). 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). Do not connect the battery directly to wall outlets or car cigarette-lighter sockets.

(9). Do not attempt to disassemble or modify the battery in any way.

(10). Do not use the battery if it gives of an odor, generates heat, becomes discolored or is 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 of it.

Li-Po Battery Disposal & Recycling

Waste Lithium-polymer batteries must not be placed with household garbage. Please contact local environmental or waste agency or the supplier of the product or the nearest Li-Po battery recycling center.

Specification

Drone
Item no.:H4822
Weight: 101g
Battery: Li-po,3.7v 1000mAh
Max Flight Time: 7-8 mins
Charging time: 150 mins
Hovering: Enabled
Operating Temperature Range: 0° to 40°C
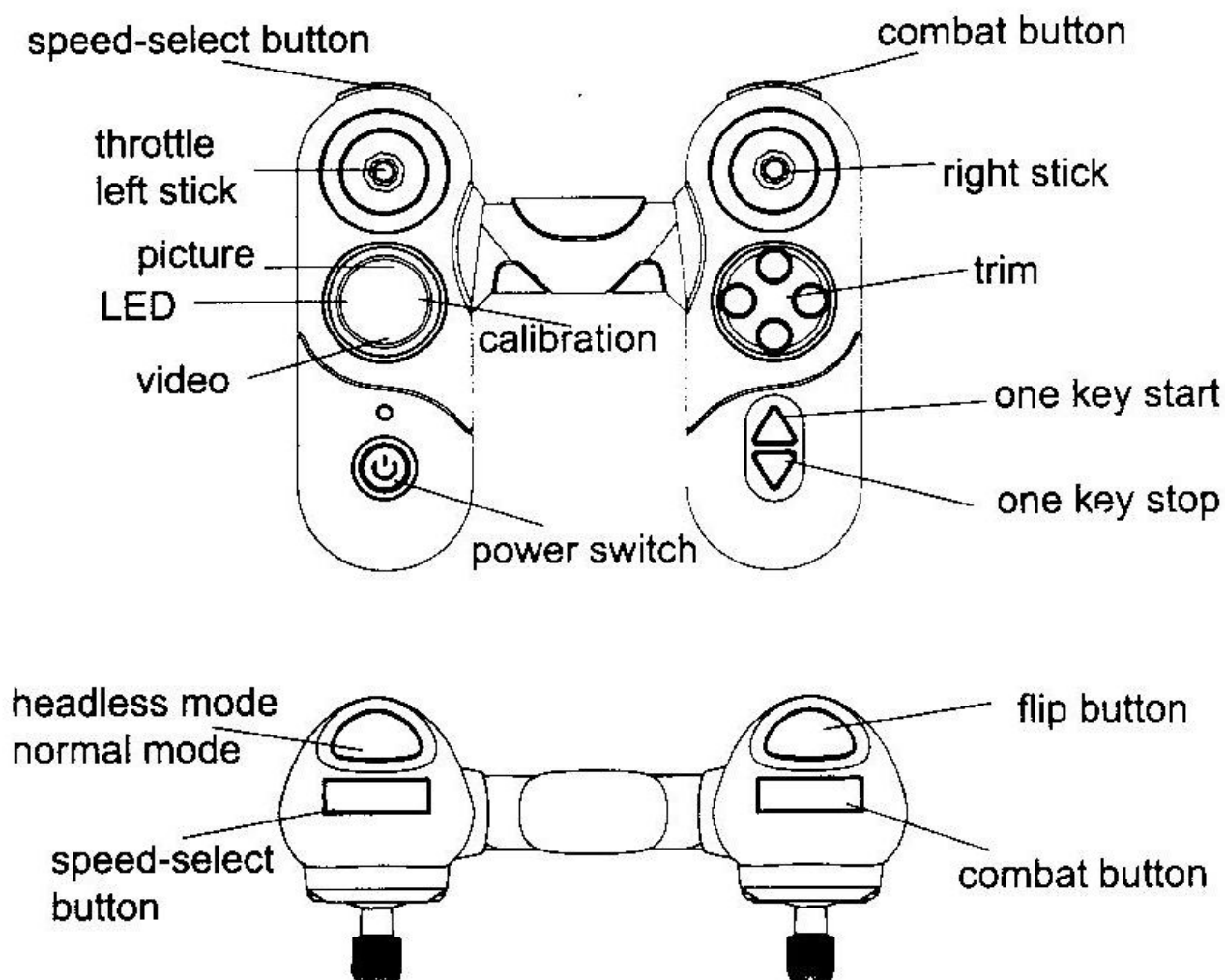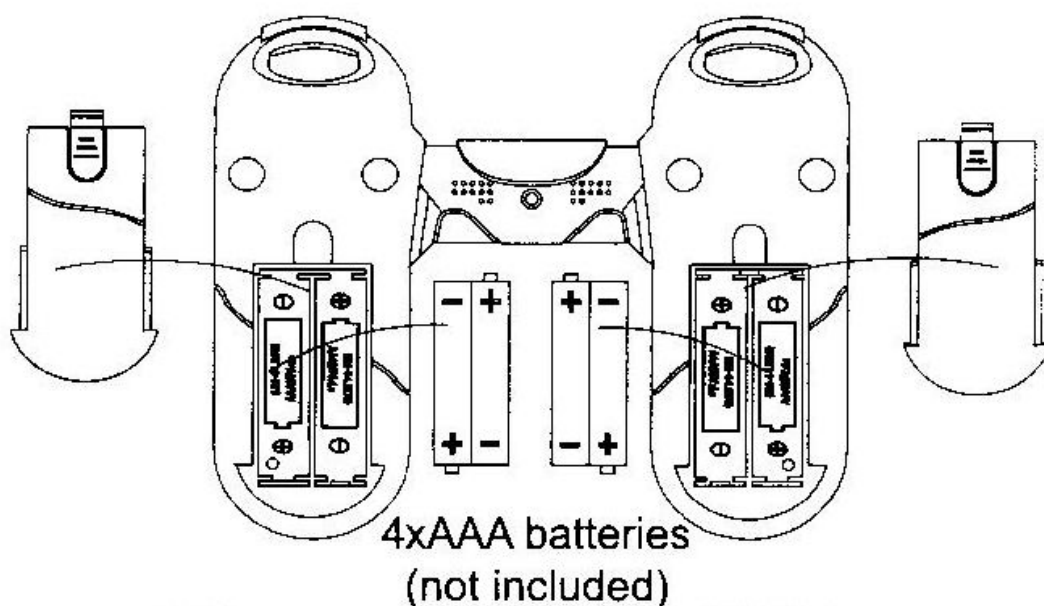Dimensions: 180x 170x 45mm

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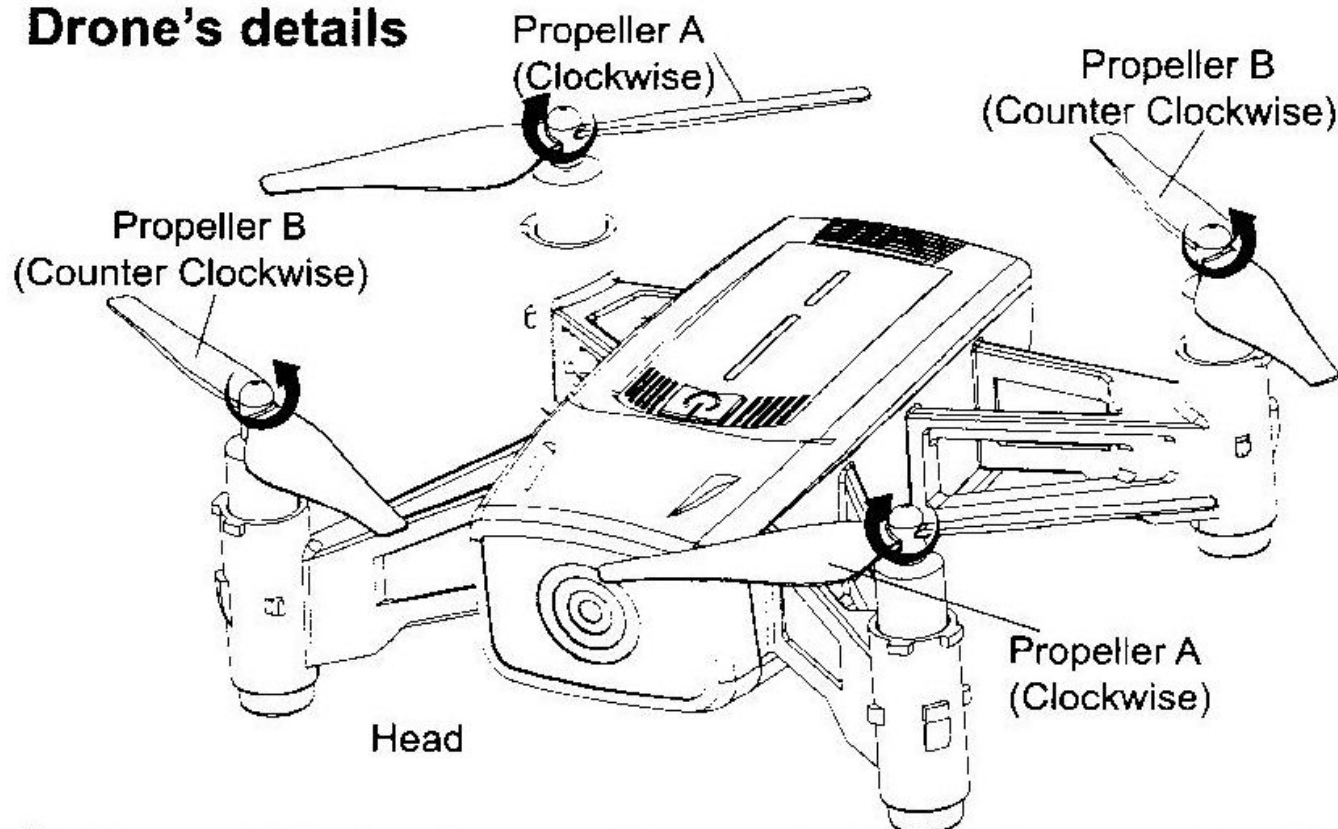Operating Temperature: 0° to 40°C

Controller Functions

speed-select button

throttle
left stick

picture

LED

video

calibration

power switch

combat button

right stick

trim

one key start

one key stop

headless mode
normal mode

speed-select
button

flip button

combat button

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),
   make sure to insert them following the correct polarity as shown.
2. Replace the battery cover.

Drone's details

Propeller A
(Clockwise)

Propeller B
(Counter Clockwise)

Propeller B
(Counter Clockwise)

Propeller A
(Clockwise)

Head

⚠ 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 the drone
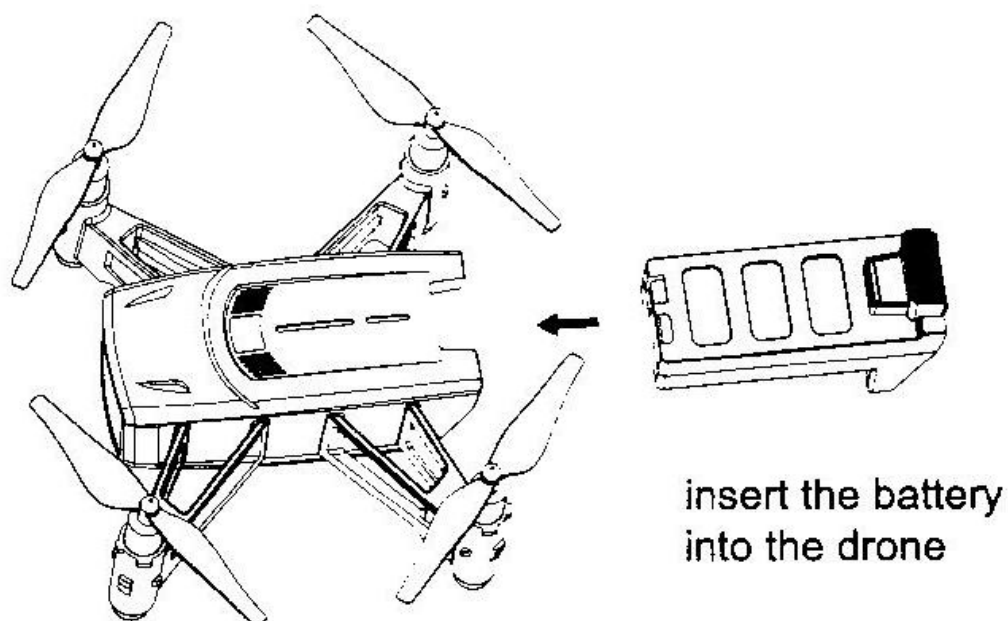
Charging the Drone Battery

1. Remove the battery from the drone and insert the charging wire into the battery charging slot.
2. Connect the USB charger (square socket) to a computer, the USB indicator will glow red.
3. The red light will go out when the battery is fully charged.

USB Adapter
(5V/0.5-2.0A)

Computer USB Port
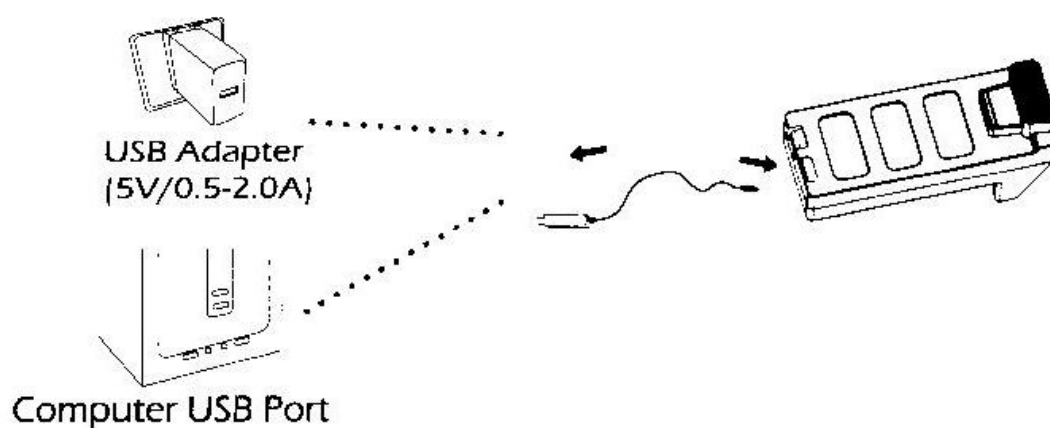
WARNING!
Do not leave the battery unattended while charging.
Only use the supplied battery or plug charger.

-5-

Assembly of Drone Function Module

The drone contains a total of three modules, the basic module / battle module / camera module.
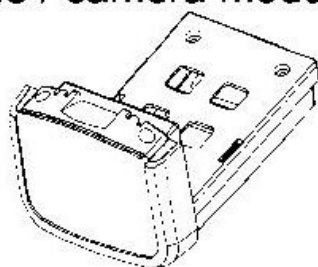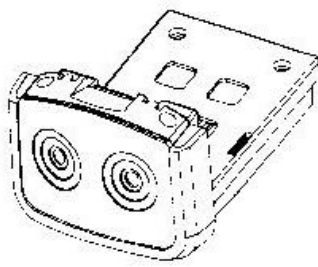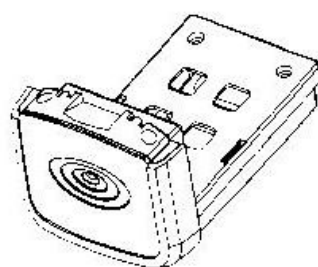
Basic module   **Battle module**   **Camera module**

When the drone is equipped with the basic module, the drone has only basic functions, and is suitable for users to practice flying.

When the drone is equipped with the battle module, the drone will have the battle function, which is suitable for 2 or more people to compete with each other.

When the drone is equipped with the camera module, the drone can perform functions such as photography / video / FPV flying etc.
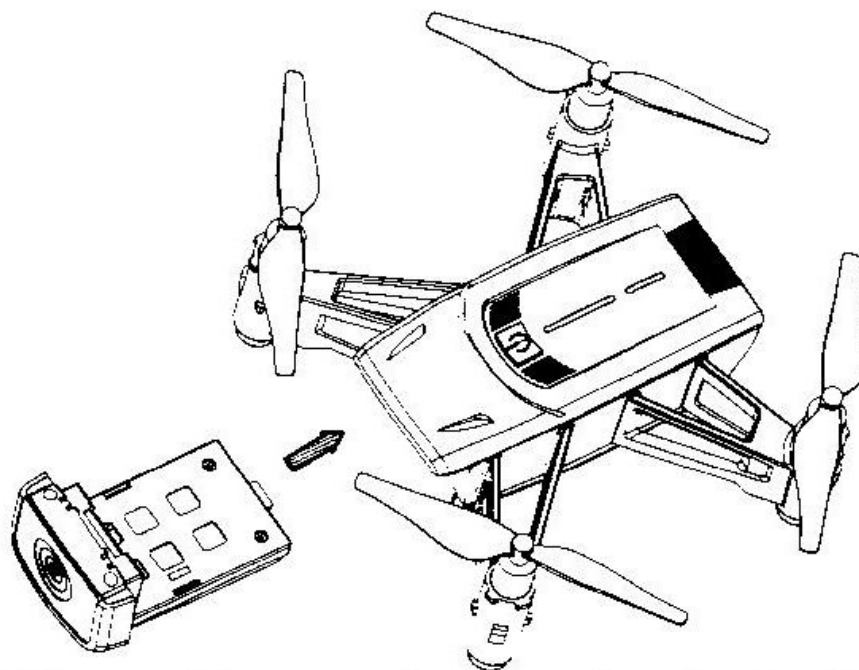
Firstly, point the module connector upwards, align it with the interface under the nose of the drone, and slide it into the middle of the bottom section of the drone until a crisp "snap" is heard to indicate the success of assembly.Press and hold the release button of the module at the bottom of the drone, and gently slide outward to remove the module.

Assembly of Protective Rings

Insert the protective ring diagonally into the side of the motor base and get it connected with the buckle.
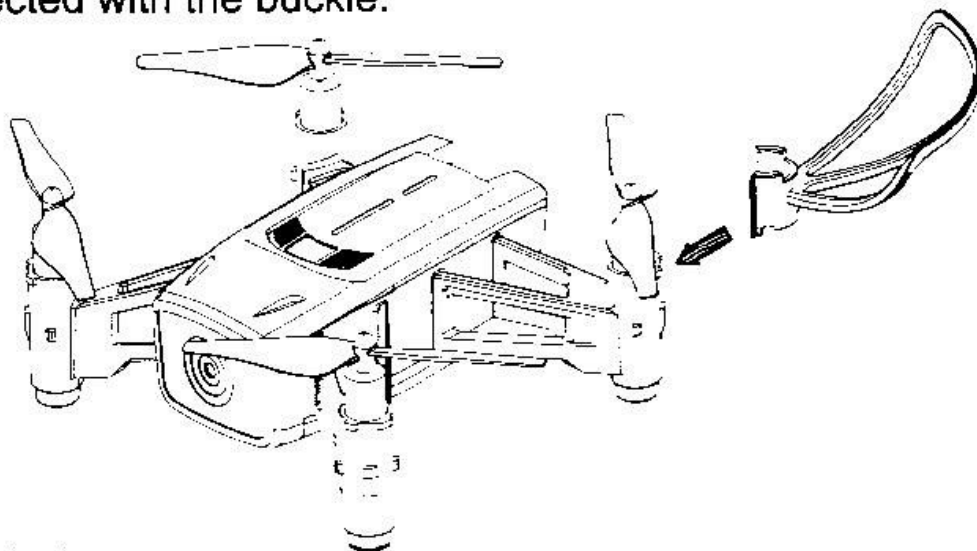
Note 1: The drone must be equipped with protective rings during flight, safety first. It can also protect the safety of the drone propellers and the motors.

Note 2: After the flight is completed, the external temperature of the motor will reach 60 degrees, do not directly touch the motor with hands to avoid burns.
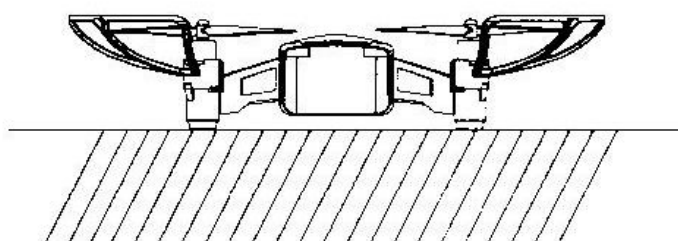
Replacement of Drone Cover

Since the upper cover and the rack are tightly matched without screws, find the gap between the upper shell and the rack from where the upper cover can be disassembled by hand or a knife, and then the upper shell can be removed for replacement.
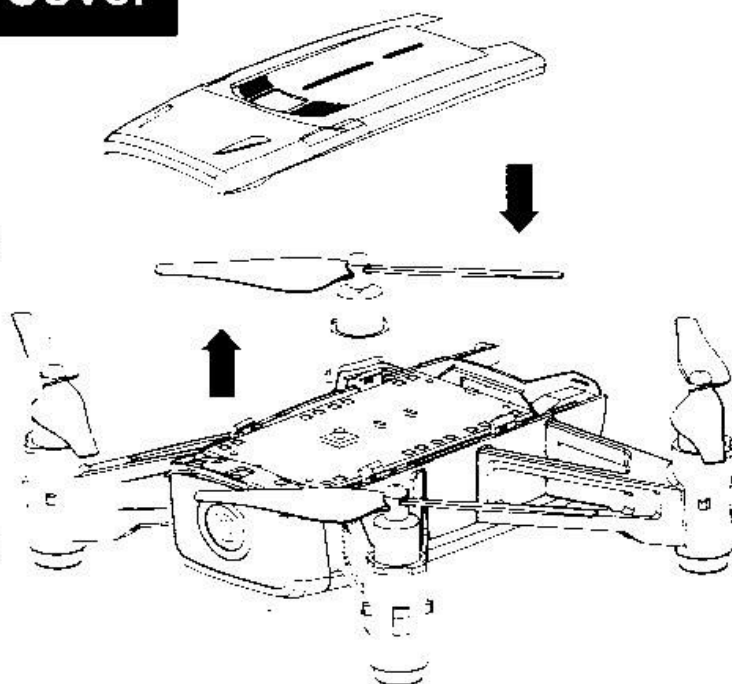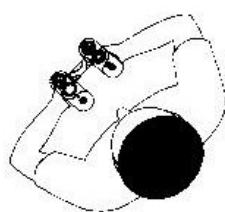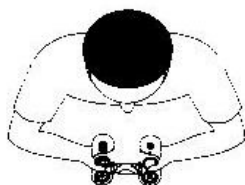
Pairing the Drone to the Controller

power switch
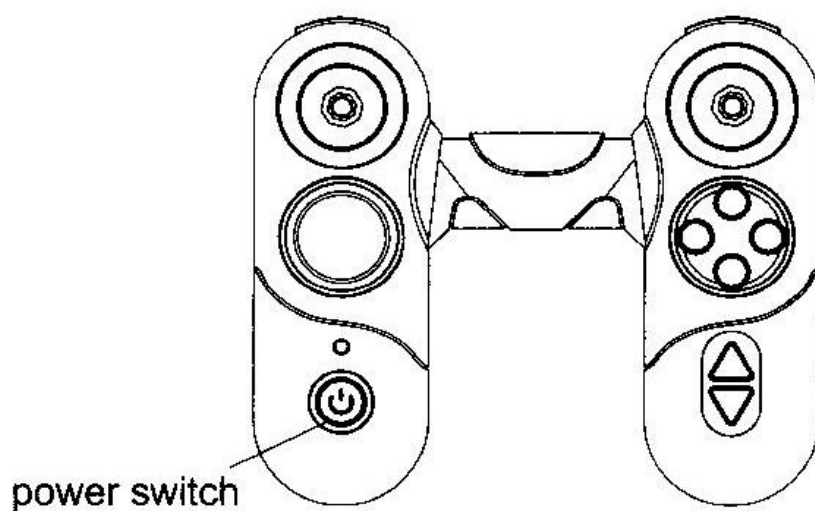
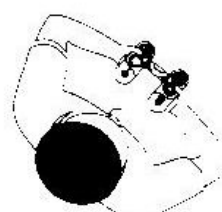1. Turn on the remote control.

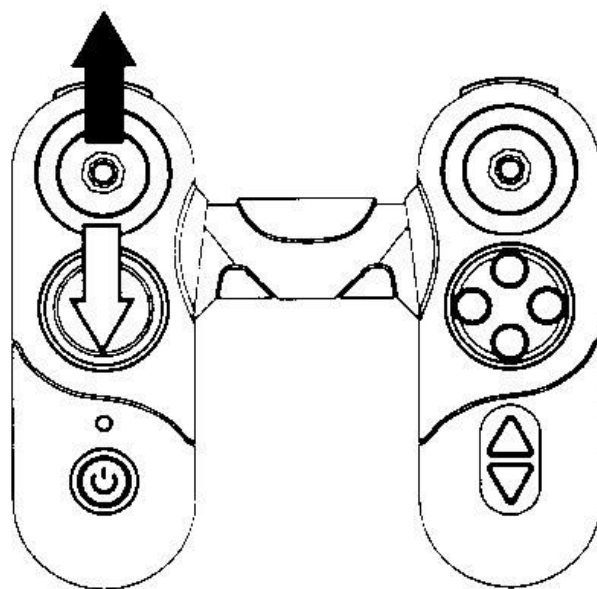The direction of control when the drone is paired.

    X   X

-8-

2. Connect the battery to the drone and turn on the drone. The lights on the drone will flash.

3. Place the drone down on a flat surface, and make sure that the head of the drone is facing the front and the tail facing the rear (player).

4. Push the left throttle up once and controller will beep once.

5. Pull the left throttle down once and controller will beep once. Pairing is completed once the drone lights and controller lights stop flashing.

Flying the Drone

Take Off/Landing Method 2

Take off Method 1

Landing Method 1

-9-
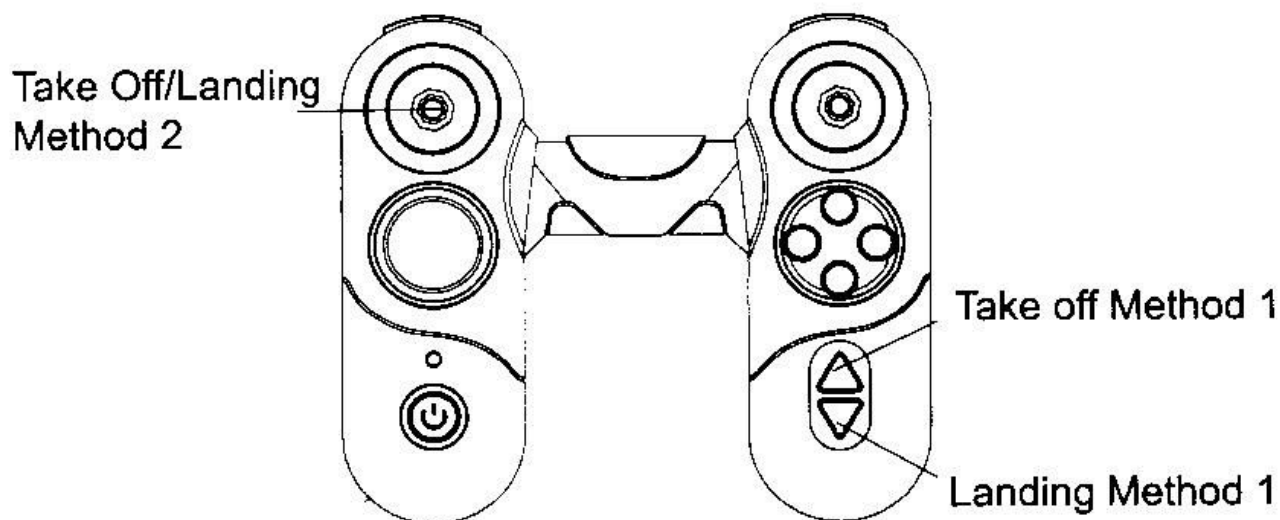
1. Taking Off / Landing

Taking Off

Method 1
Press the one key start button, the propellers will rotate without taking off. Push up the left lever to take off.

Method 2
Push the left lever up until the propellers rotate without taking off and then push up the left lever again to take off.
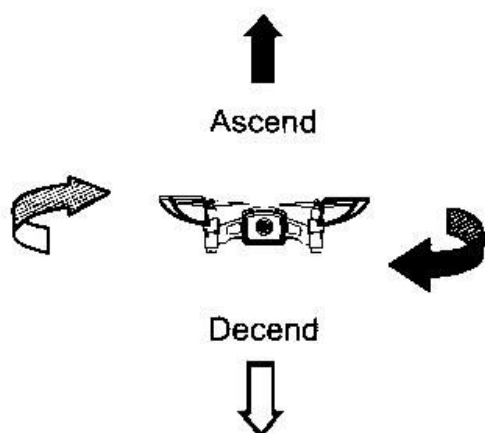
Landing

Method 1
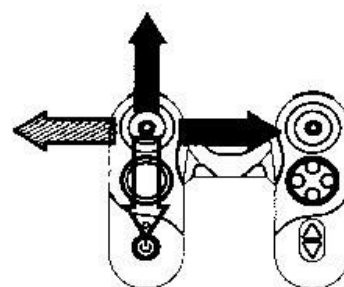Press the one key stop button, the drone will land by itself.
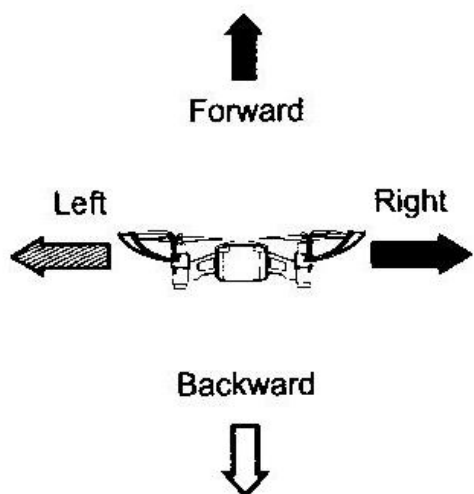
Method 2
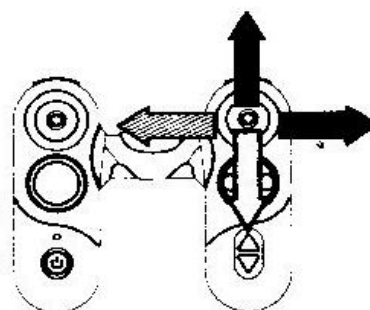Push the left lever down until the drone lands.

2. Altitude & Rotate

Ascend

Decend

Use the left lever to control the altitude and rotation during flight.

3. Forward / Backward / Left / Right
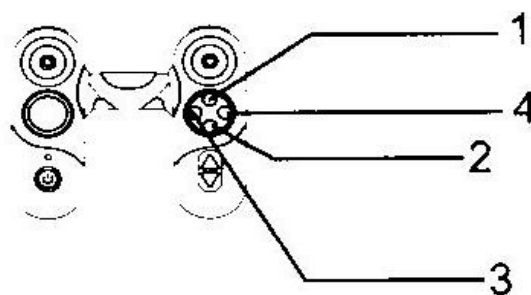
Forward

Left   Right

Backward

Use the right lever
to control forward,
backward, left and right
movement during flight.

4.Trimming

If the drone sways in an
unprompted direction, use the
trim buttons to correct the flight:

1- Forward trim
2- Backward trim
3- Left trim
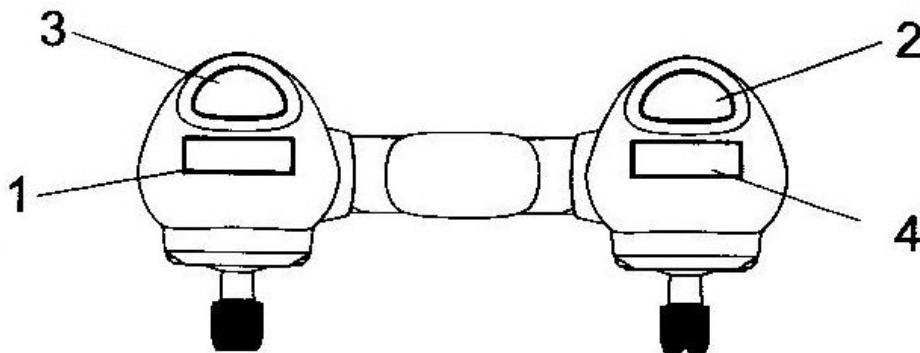4- Right trim

1

4

2

3

- 11 -

Features

1. Speed Modes

Select between 3 speed modes:
40% speed - controller makes 1 beep
60% speed - controller makes 2 beeps
100% speed - controller makes 3 beeps

2. 360 Flips

Perform 360 flips by pressing the "flip" button and immediately after press the right lever in the desired direction.

Note: The flip button only has function for drone equipped with the basic module or the battle module, the camera module does not have this function.

3. Headless Mode / Normal Mode

Headless mode: To activate headless mode, press "headless" button and the drone will fly in the desired selected direction, regardless of the direction the drone is facing.

Normal mode: Press and hold this button for 2-3 seconds to enter the altitude hold mode of flight, that is to exit the optical flow mode of flight. Then press and hold for 2-3 seconds to re-enter the optical flow mode.

4. Combat Function

This drone is a battle drone, press the combat button during flight to shoot other battle drones. one beep sound will be heard from the controller and also the front blue lights will blink once from the drone, that means an infrared bullet is launched once.

Shot chance and performance:

When the battle drone get 1st shot, it will sway for 2-3 seconds; get 2nd shot, it will contrarotate for 2-3 seconds; get 3rd shot, it will vertically flip left once and flip right once; get 4th shot, it will spiral down to the ground, game over. After 2-3 seconds, this battle drone could fly up again to have a new battle.

Note: The combat function button only has function after the battle module is installed. This button will be non-functional for the basic module and the camera module.
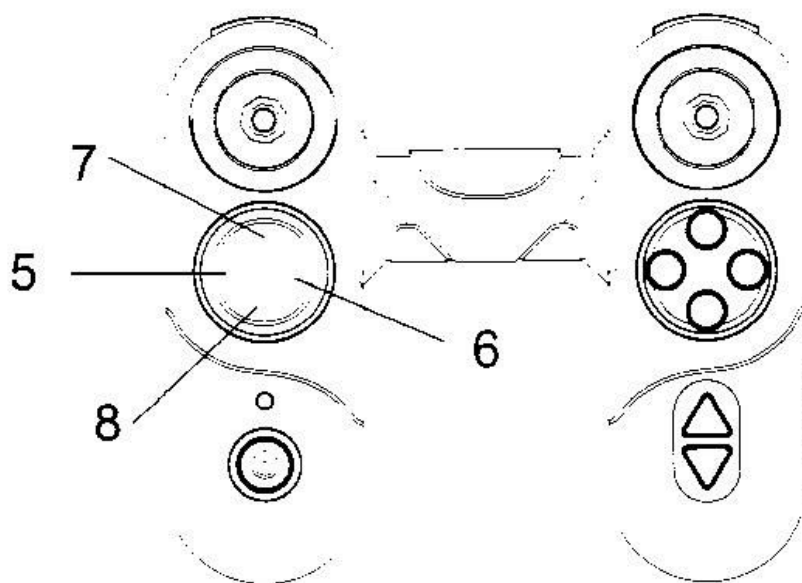
5. LED

Press the LED button to turn off/on the lights.

6. Calibrating the Gyro

Press this button to calibrate the gyro. The indicator lights on the drone will blink and turn solid which means calibration is completed.

7. Photography

Press once the photography button, the Lights on the drone will blink once.

Note: The photography button will has function only after the camera module is installed. this button is non-functional for the basic module and the battle module.

8. Recording a Video

Press once the video button, the lights on the drone will blink twice. Press it again to stop recording, the lights will blink twice again.

Finding the Photo and Video Files

• The photos and videos are stored in the smart phone.
• Make sure the smart phone is connected to the camera signal successfully before taking the photos and videos.

Note: The video function button will has function only after the camera module is installed. this button is non-functional for the basic module and the battle module.

9. Emergency Stop

⚠ Only stop motors mid-flight in an emergency situations, Doing so to reduce the risk of damage or injury.
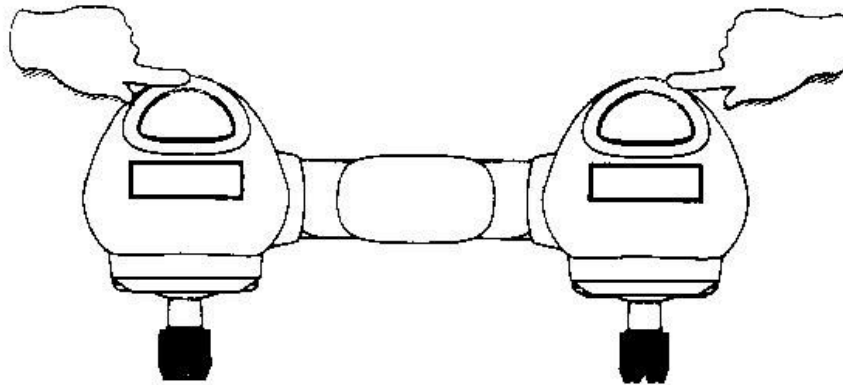
Press the above two buttons on the controller at the same time, the motors will stop spinning immediately.

Resetting the Drone

When the flight of the drone is unstable or deviated from the left and right after taking-off, correct the gyroscope and the flight will be more stable after the correction.
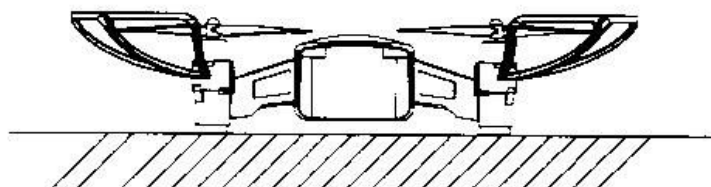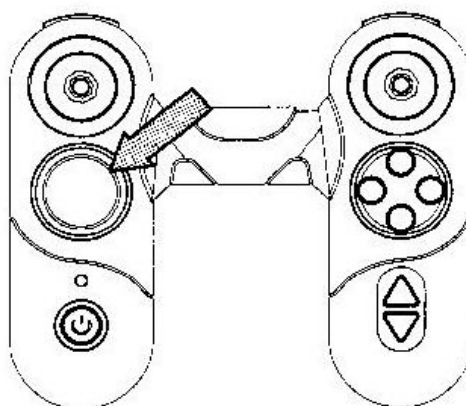
Method 1

1. Turn on the drone and controller, place the drone on flat ground (it is very important), then push the left lever of the controller up and down once to pair with the drone.
2. Then push both left and right lever of the controller to the lower left corner (7 o'clock direction). This will reset the drone to its original factory settings and will be ready to fly again.
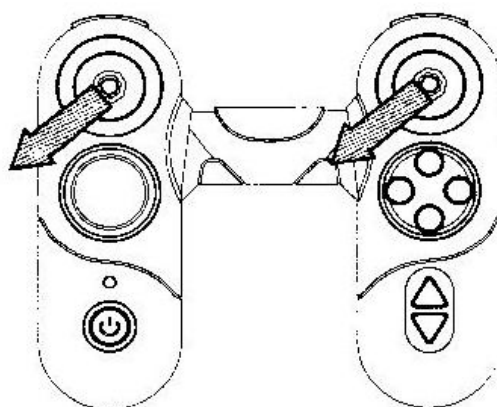
Method 2

Press this button to calibrate the gyro. The indicator lights on the drone will blink and turn solid which means calibration is completed.

Trouble Shooting

Problem	Possible Cause	Solution
The indicator lights of the drone are flashing and do not respond to the controller.	1. The controller is not synced with the drone. 2. Insufficient battery power.	1. Perform pairing according to the instructions. 2. Charge the battery.
The propellers spin, but the drone cannot take-off.	1. Insufficient battery power. 2. The propellers are installed in wrong direction. 3. The propellers are distorted.	1. Charge the battery. 2. Install the propellers in right direction. 3. Replace the propellers.
The drone sways sharply.	The propellers are distorted.	Replace the propellers.
The drone flies out of balance.	1. The propellers are distorted. 2. The motor is not working properly.	1. Replace the propellers. 2. Replace the motor.
The drone is out of control after crashing.	Six-axis acceleration sensor has lost 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 is not working properly.	1.Fit well the terminal end of motor if it is loose. 2.Replace the motor if it is broken.

ATTENTIONS

1. Do turn off the power of the drone after flying!
2. Pay more attention to the altitude of the drone when flying, in order to avoid crashes caused by collision on obstacles.
3. When the power of the controller or the drone is insufficient, the remote control distance will be affected.
4. If the drone power is insufficient, it will be difficult to fly the drone or even get the drone taking off.
5. If the drone is damaged or deformed, please repair it in time. If the propeller is broken or damaged, do not fly, otherwise it may cause injury.
6. Remove the battery from the controller when it is not in use for a long time. Avoid damage to this product caused by battery leakage.
7. Never allow the drone to crash or crash badly from high altitude, which can damage the drone or shorten its service life.
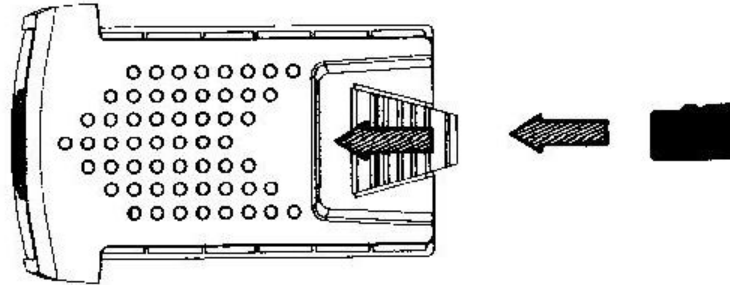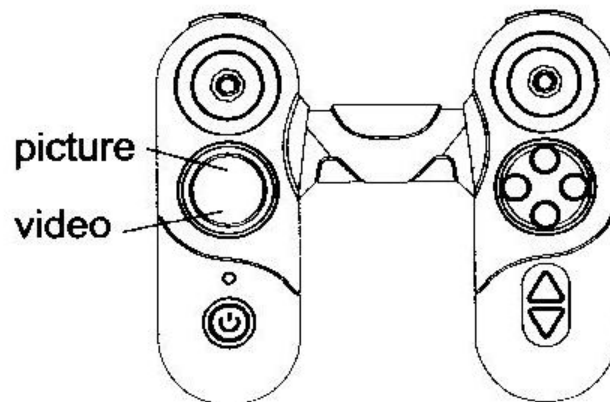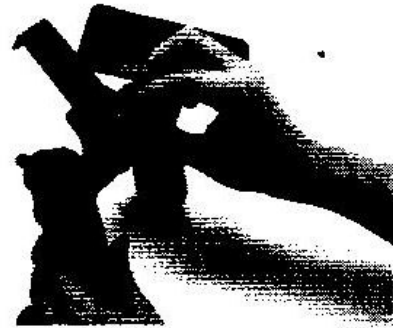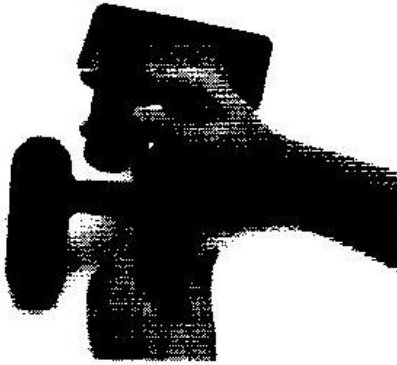
Insert the SD card (not included) to the slot in right direction. If the SD card was inserted upside down, it will get stuck and the camera will not work.

Downloading the Photo and Video Files

• Remove the SD card from the drone and plug it into the card reader (not included).

• Plug the card reader into the computer to access the files.

picture

video

Fitting the Phone Holder

1. Position the phone holder to the middle of the remote controller.
2. Use the screws which are behind the phone holder to adjust the tightness between the holder and the controller.
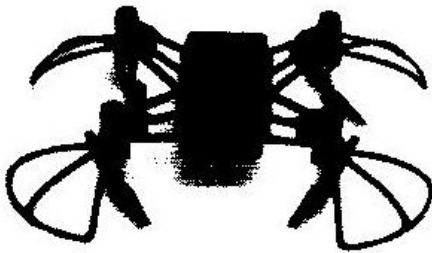

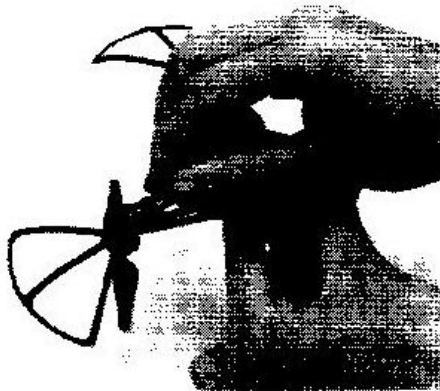3. Pull out the holder and place the phone in the holder.

Replacing the Motor

Thanks to the modular design of the drone, the motor can also be replaced independently.
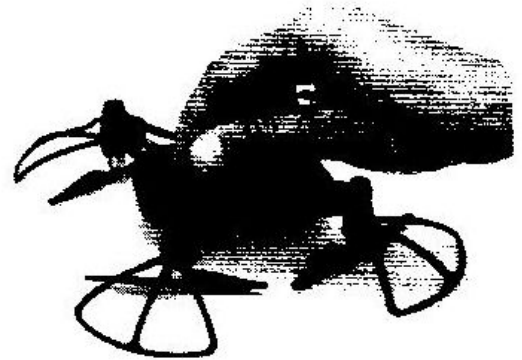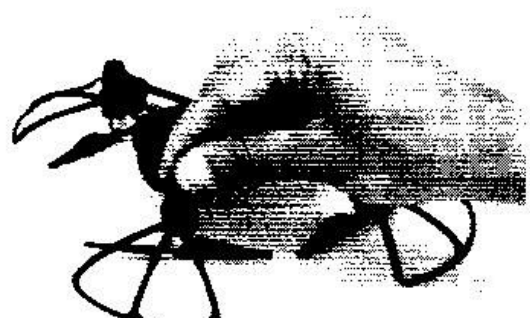
1. Find the motor base to replace the motor and manually remove the motor cover.

2. Take out the motor wire and loosen the joint of the motor wire terminal.

3. Use a plier to upwardly take out the damaged motor.

4. Get the new motor, pass the motor wire through the motor base first and then press down the motor tightly.

5. Connect the motor wire terminal to the PCB terminal (note that the terminal must be installed correctly, the motor may be burnt out if it is installed reversely)

6. Replace the motor cover and the motor replacement is completed.

Downloading, Installation and Use of the Camera Software

For iPhone users, scan the QR Code on the packaging or below,
or go into Apple store and search for "WOWITOYS", to download
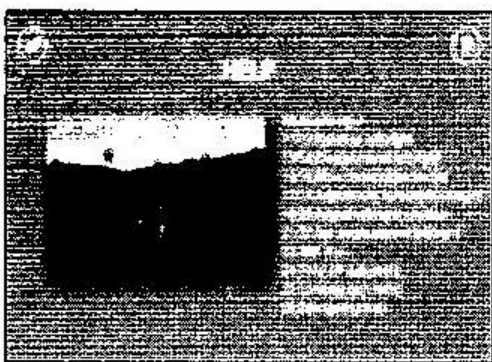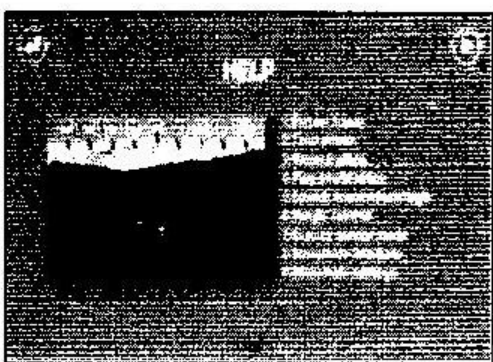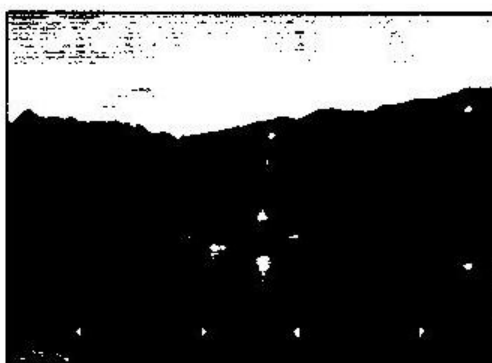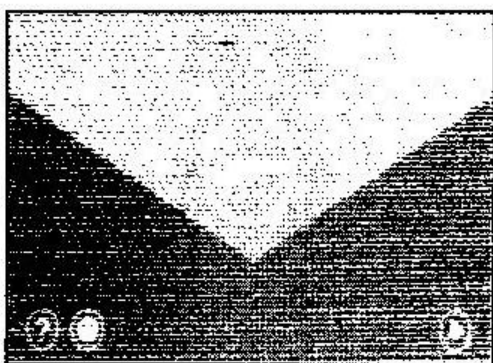the software;
For Android smartphone users, scan the QR Code on the packaging
or below, or go into Android Eloquent Market / Google play
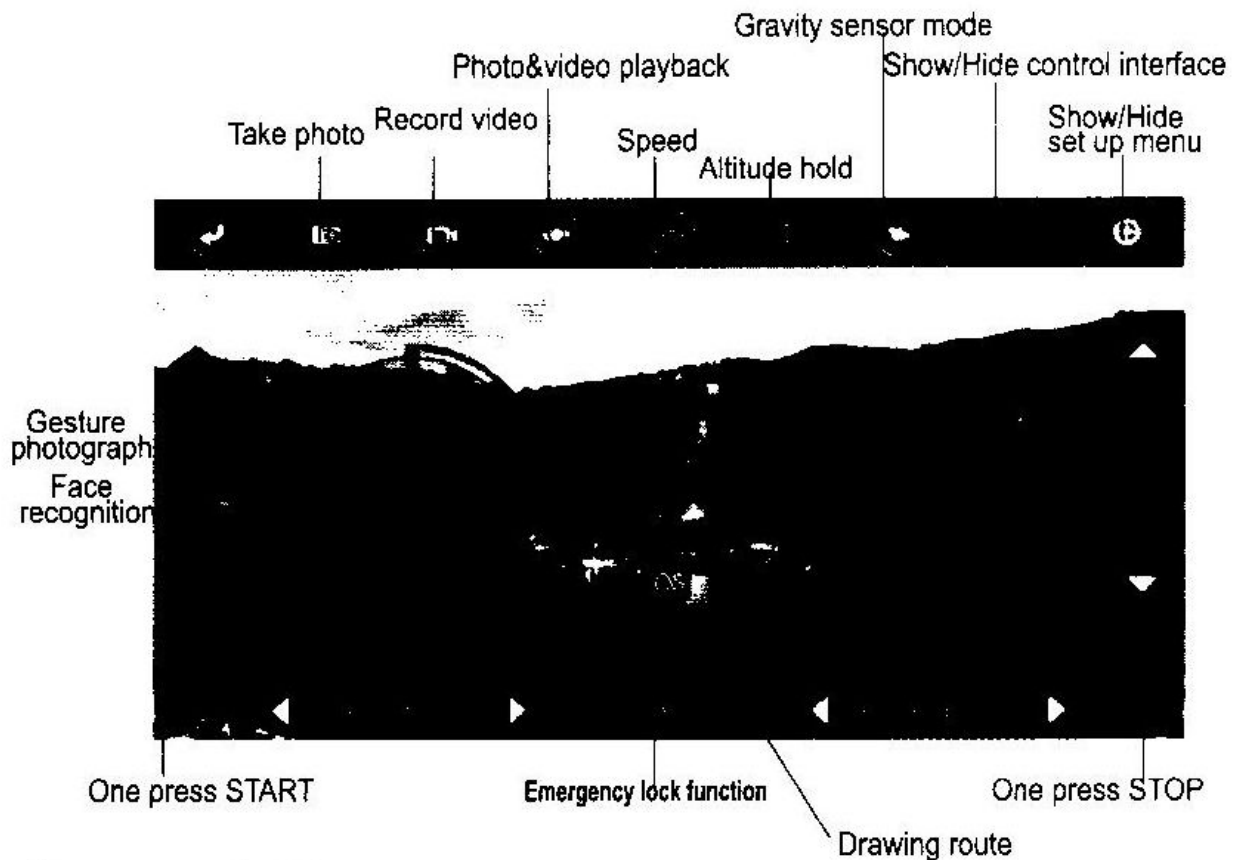and search for "WOWITOYS", to download the software.
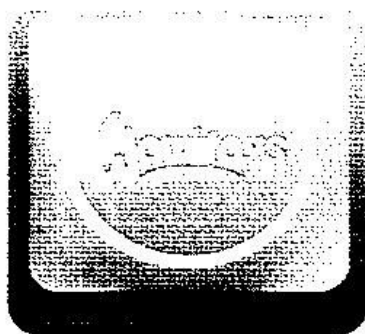
WOWITOYS

Connecting to the APP

1. Turn on the drone.
2. Enter the SETTINGS menu of your mobile device.
3. Activate WIFI connection, search for the drone's wifi network and connect to it.
4. Click on the ICON to open the interface of the APP, the video image from the drone's camera is displayed on the screen.
5. Click the SETTINGS icon on the interface, Activate the Altitude hold function.
6. To begin flying, click START button once, the propellers will start to spin slowly by itself, it is a signal to show the drone is ready to fly. If no further action after this signal in next 15-20 seconds, the propellers will stop spin by itself, if so, click the START button again, it is ready to fly again. Slide the virtual left throttle lever up, the drone will go up and will stay at a fixed height when release the left throttle lever.

App Control Interface

Gravity sensor mode

Photo&video playback

Show/Hide control interface

Take photo Record video

Speed

Show/Hide
set up menu

Altitude hold

Gesture
photograph
Face
recognition

One press START

Emergency lock function

One press STOP

Drawing route

Emergency Lock

When the drone is flying very near to people or obstacles, click this button to cut off the signal immediately to stop drone's flying, to avoid crashes onto the people or obstacles. You could turn on the drone to enjoy the flying again as usual.

Speed Control

The drone is set at 30% speed for start when it is turned on, ONE beep sound will be heard. Click once the SPEED BUTTON, TWO beeps sound will be heard and the speed will be increased to 60%. Click this button again, THREE beeps sound will be heard and the speed will be increased to 100%. Click it one more time will bring the drone back to 30% speed and ONE beep sound will be heard.

Gesture Photography
Click on the Gesture photography icon, after the drone's camera recognized the victory V gesture for 3 seconds, the APP will automatically take a photo; Open your hand with palm facing the camera, the APP will automatically start or stop video recording.
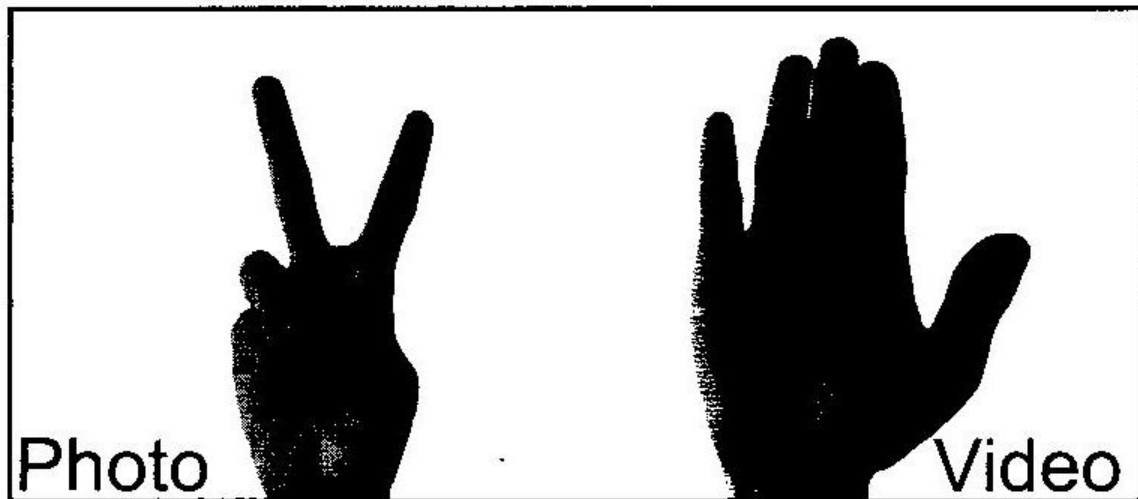

Face Recognition
Click on the Face recognition icon, draw a rectangular frame in the yellow dotted box to select a target. Click the GO button to start following, the drone will track the target as the target moves.(The drone should be at a constant speed during the following process)

Route Flying
Click on this route flying icon, draw a flight route on the APP interface the drone will be flying following the corresponding route.

Safe flight environment

(1). Make sure the surrounding area is free of people, pets or other obstacles before starting to fly the drone.

(2). The drone is designed for indoor and outdoor use. However, it is not recommended to fly the drone inside if there is limited space, or outside if there is any wind.

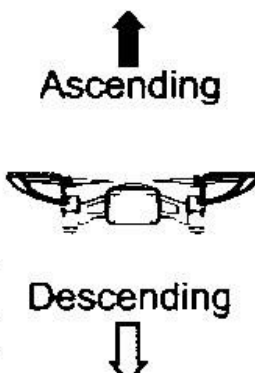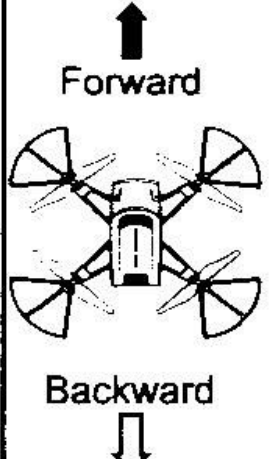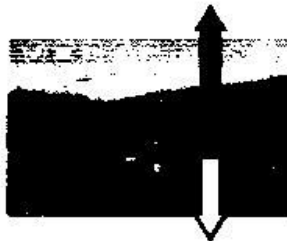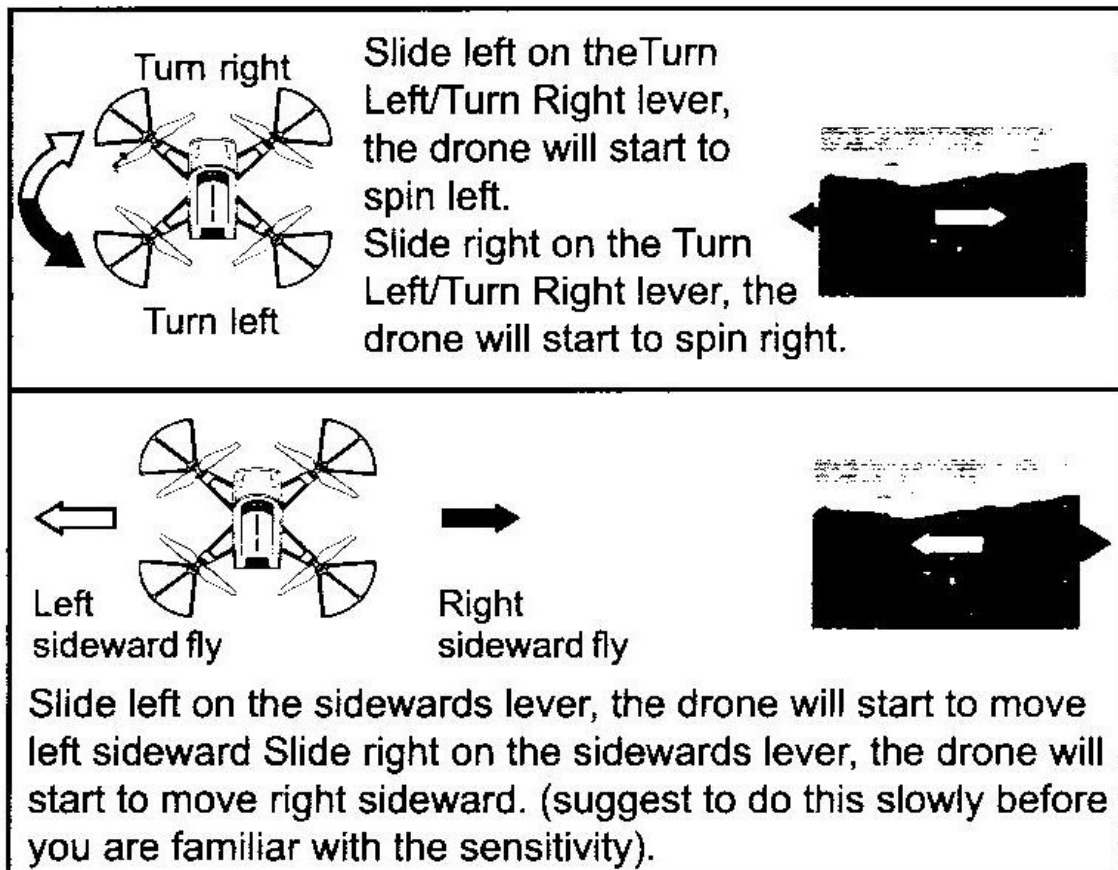(3). Keep a safe playing distance from the drone at all times.
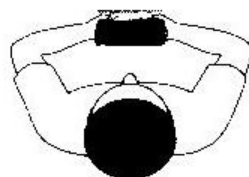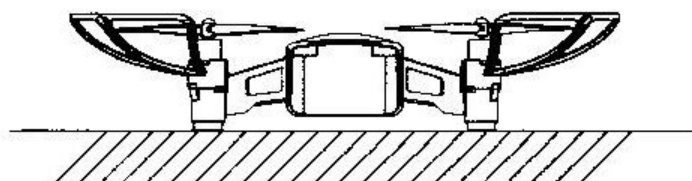
The battery is only designed to be connected to the charger or the Drone, IN ONE ORIENTATION. Please make sure to follow the shape of the connectors, and DO NOT connect the wrong way round.

Flight Control

Note: Please use the controller to practise simulated flights before you actually take the drone in the flights for the first time.

1. Connect the battery to the drone and turn on the drone. The lights on the drone will flash.
2. Place the drone down on a flat surface, and make sure that the head of the drone is facing the front and the tail facing the rear (player).

|	
↑ Ascending / Descending ⇩	Slide up on the Up/Down lever, the drone will start to go up Slide down on the Up/Down lever, the drone will start to go down.(suggest to do this slowly before you are familiar with the sensitivity).
↑ Forward / Backward ⇩	Slide forward on the Forward/Backward lever, the drone will start to fly forwards Slide backward on the Forward/Backward lever, the drone will start to fly backwards.(suggest to do this slowly before you are familiar with the sensitivity).

| Turn right | Slide left on theTurn Left/Turn Right lever, the drone will start to spin left. |
| Turn left | Slide right on the Turn Left/Turn Right lever, the drone will start to spin right. |

| Left sideward fly | Right sideward fly |

Slide left on the sidewards lever, the drone will start to move left sideward Slide right on the sidewards lever, the drone will start to move right sideward. (suggest to do this slowly before you are familiar with the sensitivity).

TIP

It will be much easier for beginners, to ignore TURN left /TURN RIGHT function, just by using the other function levers the DRONE will still be able to fly everywhere.

Flight Adjustment

When lifting the drone into the air, and don't use any of the control levers, it should just hover in one spot. If it doesn't, Follow the below instructions to bring the drone back to a perfect hover.
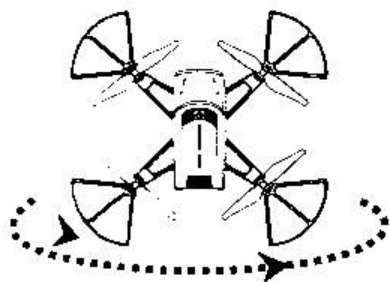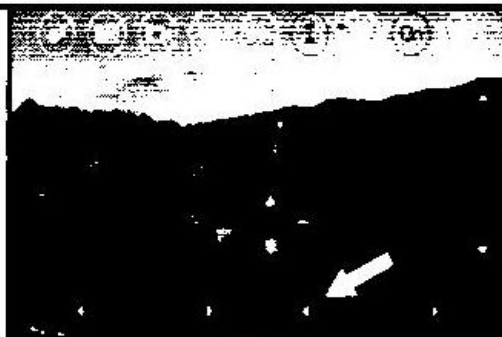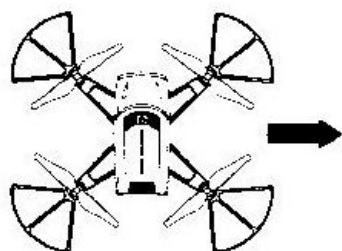
If the drone spins to the Left, keep clicking on the Turn Left/Turn Right Trim Button to the Right till the drone stops spinning.
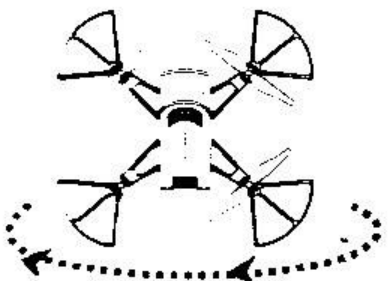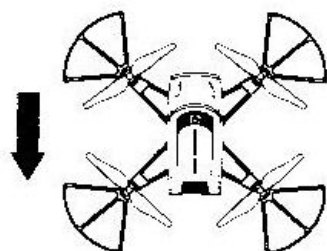
If the drone spins to the Right, keep clicking on the Turn Left/Turn Right Trim Button to the Left till the drone stops spinning
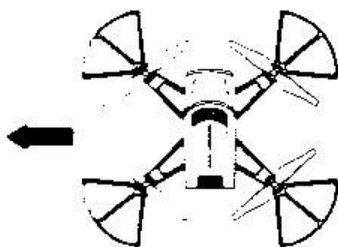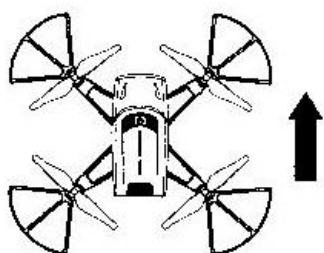
If the drone moves to the Left, keep clicking on the sidewards trim button to the Right till the drone stops moving left.

If the drone moves to the Right, keep clicking on the . sidewards trim button to the Left till the drone stops moving right.

If the drone flies Backwards, keep clicking on the Forward/Backward trim button Up till the drone stops flying backwards.

If the drone flies Forwards, keep clicking on the Forward/Backward trim button Down till the drone stops flying forwards.