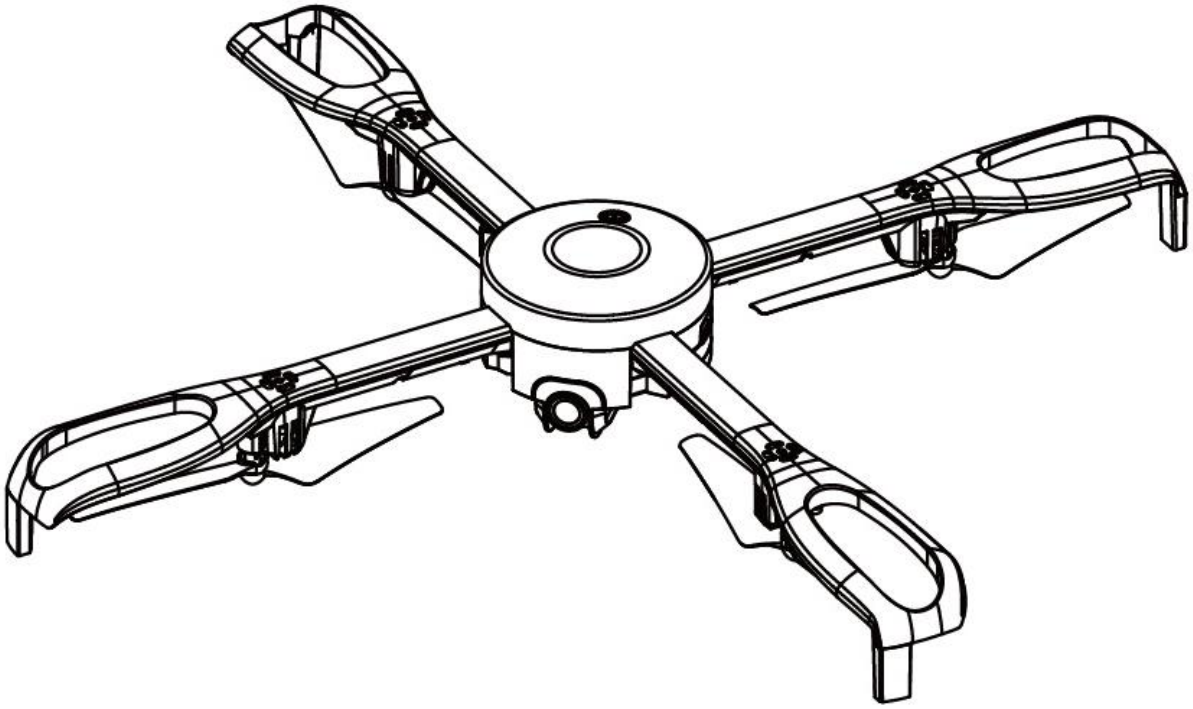
PRO FLIGHT

USER MANUAL



ORBIT

PFBD201

Thank you for choosing ProFlight.

Please read this user manual before using this drone and keep it safe for future reference.

CONTENTS

SAFETY WARNINGS

Read the entire instruction manual and familiarise yourself with the product and all its features before operating. Failure to operate the product correctly can result in damage to the product, surroundings or even serious injury. This product is not a toy and must be operated with caution and common sense. It requires some basic mechanical knowledge. This product is not intended for use by children without direct adult supervision. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in this manual prior to assembly, setup or use in order to operate correctly and avoid damage or serious injury.

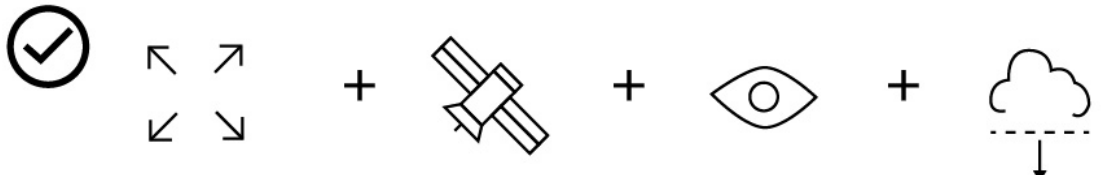
- Not intended for use by children under 14 years of age. This is not a toy.
- Always operate your drone in open spaces away from vehicles, buildings, traffic and people.
- Always keep out of reach of children.
- Avoid exposure to water as moisture can cause damage to the electronics.
- Never operate your drone with low transmitter batteries.

The battery charger included with the drone has been designed to safely charge the Li-Po battery.

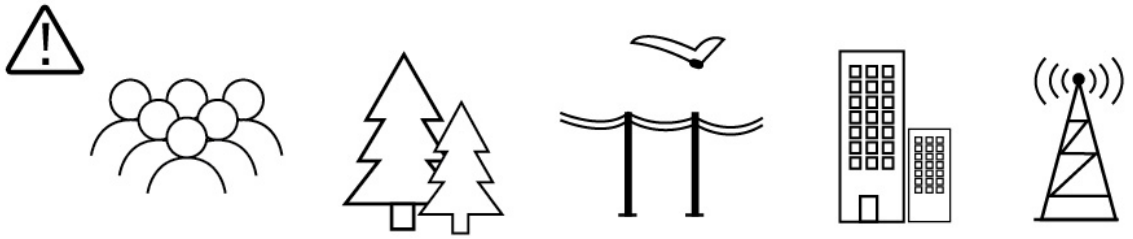
- Mishandling of Li-Po batteries can result in a fire, personal injury, and /or property damage.
- By handling, charging or using the included Li-Po battery you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Do not store battery or drone in a car or direct sunlight. If stored in a hot environment, the battery can be damaged or even catch fire.

- Never use any other type of battery charger other than the one supplied with the drone. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage.
- Never exceed the recommended charge rate.
- When a Li-Po battery is discharged below 3.7V, the battery may be damaged and may no longer accept a charge. The drone will automatically land and become inactive when the battery reaches this level, this is to protect the battery.

SAFETY PRECAUTIONS



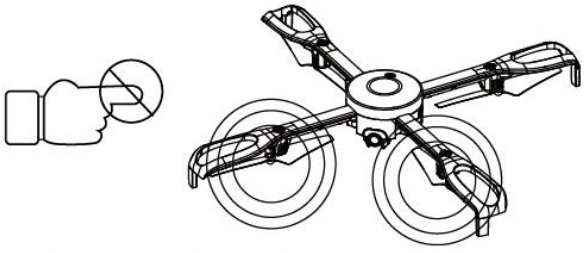
Only fly in an open space | Ensure good GPS signal | Keep within line of sight | Fly at a height below 80m



When flying ensure that the drone is kept away from other people, trees, electric wires, buildings, airports or signal transmitting tower etc.

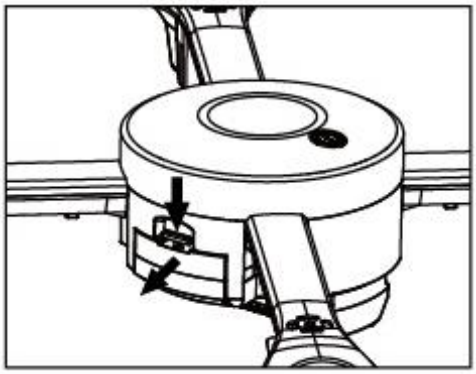
Ensure that the weather conditions are suitable for flying. Do not fly the drone during snow, rain, fog, thunder or in windy conditions.

DO NOT touch the rotating blades during operation. They can cause injury or damage to property



No-fly zones must be observed. It is the user's responsibility to ensure that the drone is operated legally and safely.

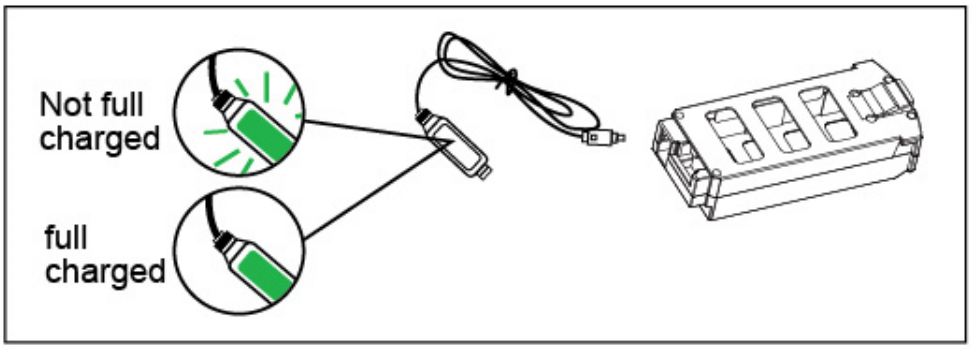
BATTERY CHARGING



Use only the supplied USB Li-Po charger to charge your battery.

Remove the battery from the battery compartment on the right of the aircraft. Press down the release button and slide the battery out.

Plug the charger into a USB socket before attaching the battery. When the battery is charging the green LED on the charger will flash. When the battery is fully charged the LED will be illuminated. Charging should take around 180 minutes. DO NOT leave the battery unattended whilst charging.



WARNINGS:

- DO NOT use other USB cables. They may lead to incorrect charging, and could cause damage or present a safety risk.
- When reinserting the battery, make sure it is secure and fully clicks into place.

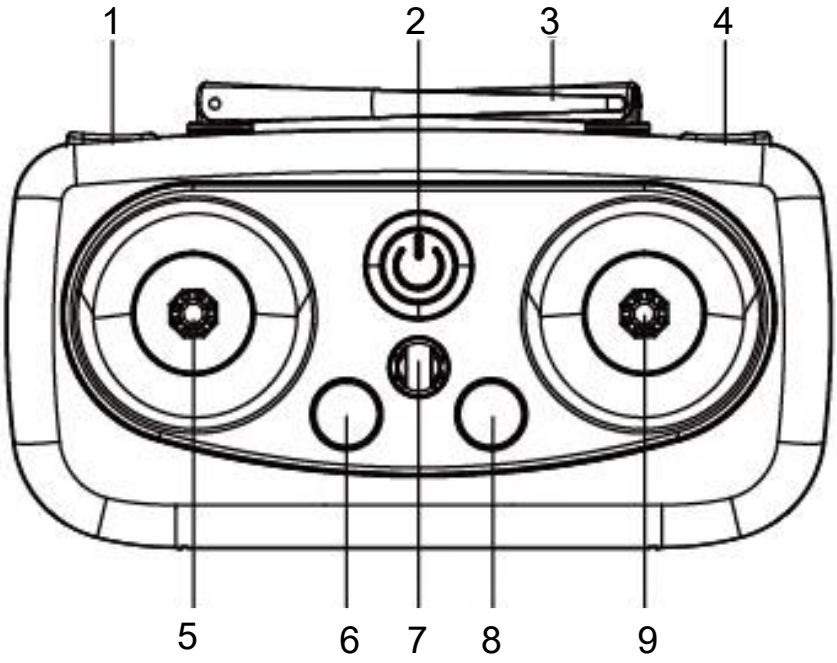
PREPARING FOR FIRST FLIGHT

1. Fully read and understand the safety warnings, and precautions.
2. Make sure both the transmitter and aircraft batteries are sufficiently charged.
3. Find a suitable place to fly the aircraft, away from people, buildings and vehicles.
4. Make sure the throttle stick is centred before turning on the transmitter.
5. Calibrate the GPS compass and gyroscope.

INSTALLING THE CONTROLLER BATTERIES

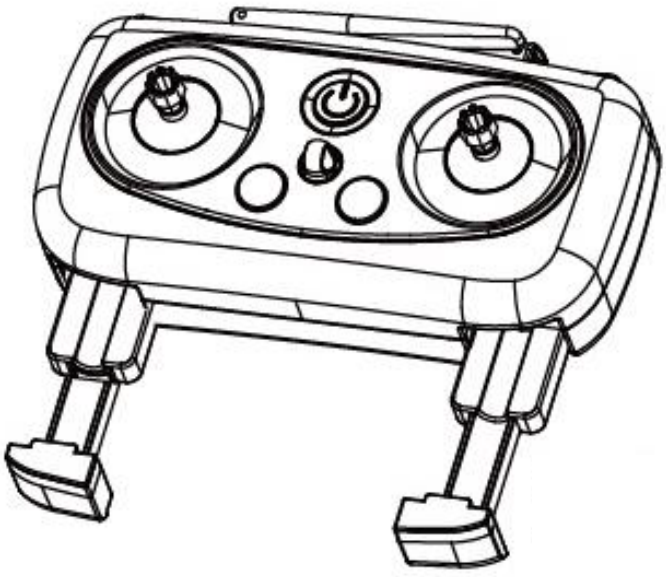
Unclip the battery cover from the rear of the controller and insert 4 x AA batteries, making sure the correct polarity is followed. Once the batteries are correctly installed, the battery cover must be re fitted.

CONTROLLER DIAGRAM



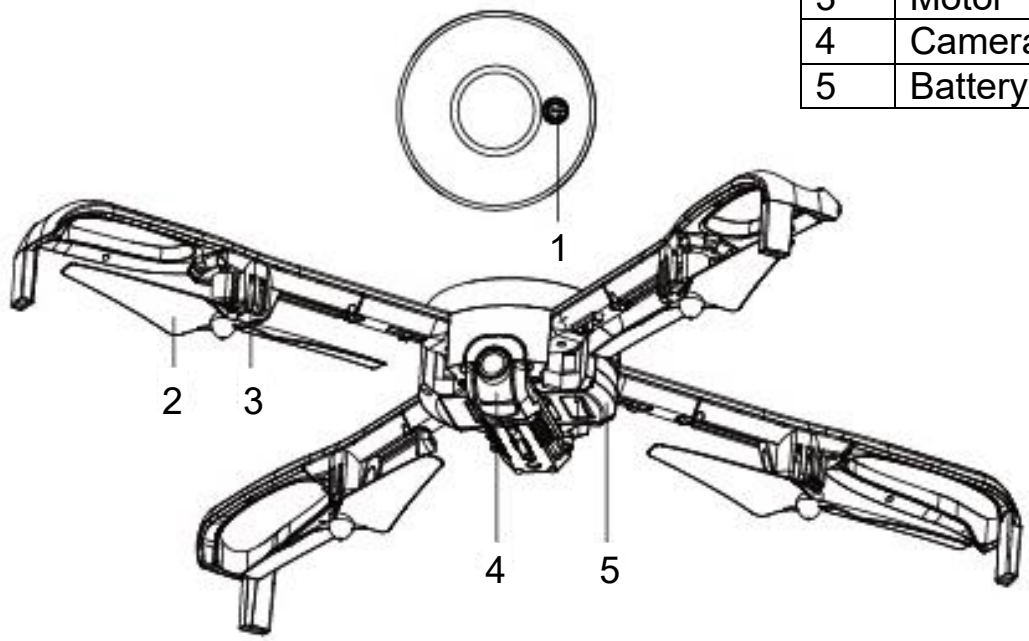
1	Speed Button
2	Power Button
3	Decoration Antenna
4	Headless mode (Short Press)
	Orbit mode (Long Press)
5	Left Joystick
	Start Video (Short Press)
6	Auto Take-Off
	Auto Land (Short Press)
	Emergency Stop (Long Press)
7	Ring
8	Auto Return (Short Press)
	GPS Calibration (Long Press)
9	Right Joystick
	Take photo (Short Press)

SMARTPHONE HOLDER

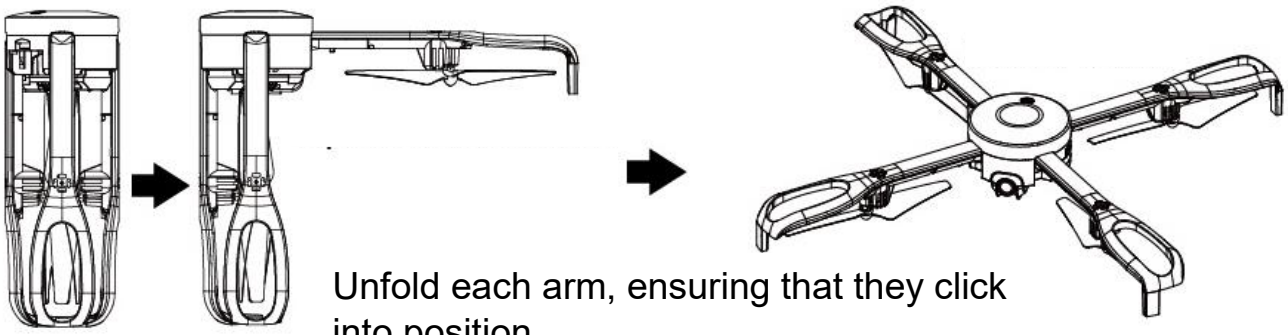


DRONE DIAGRAM

1	Switch
2	Blades
3	Motor
4	Camera
5	Battery



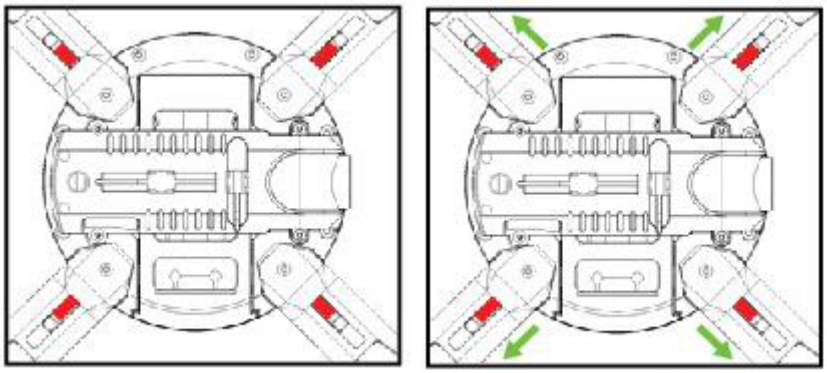
UNFOLDING THE ARMS



Unfold each arm, ensuring that they click into position

FOLDING THE ARMS

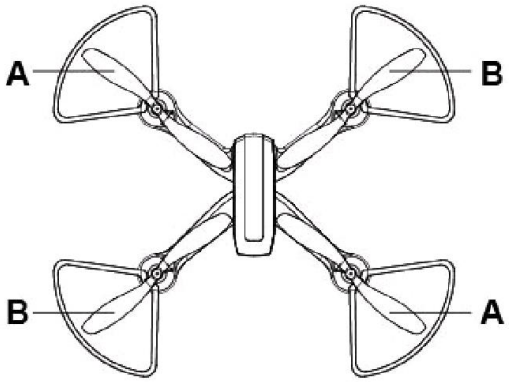
Fold each arm individually by sliding the switch on the underside of the arm to unlock the mechanism, and then carefully push the arm into the folded position.



REPLACEMENT OF THE PROPELLERS

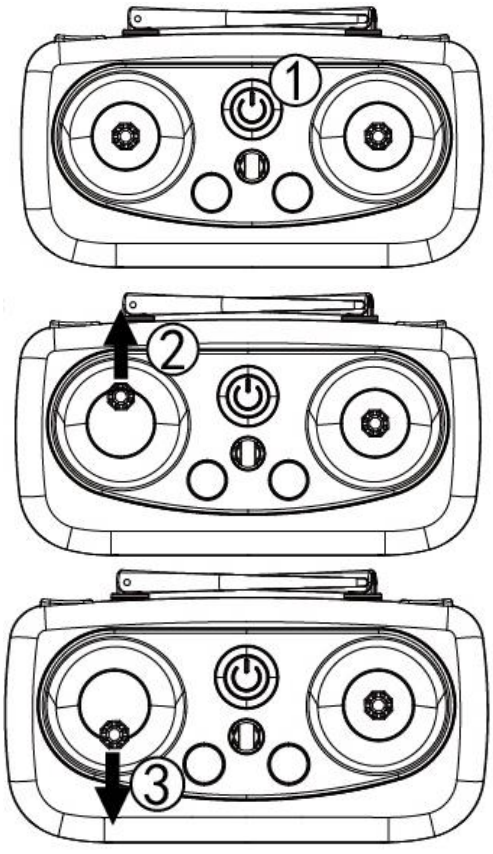
Should one of the fitted propellers become damaged, it can be replaced, by removing the screw from the side of the propeller before sliding the propeller off the motor shaft. Refitting is the reversal of removal.

It is important for the correct blade to be placed on the correct motor or the aircraft will not fly correctly. Each blade is marked with an A or B on the underside to indicate which motor it corresponds to.



BINDING OF CONTROLLER & RECEIVER

1. Place the aircraft on a flat surface in an open area and insert the battery in before turning on. The lights on the underside of the drone will flash.

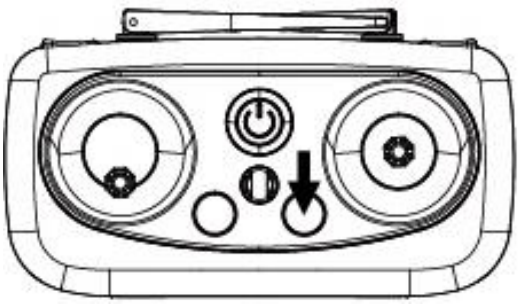


2. Turn on the controller.
3. Press the left joystick up, until the controller bleeps.
4. Press the left joystick down until the controller bleeps again.

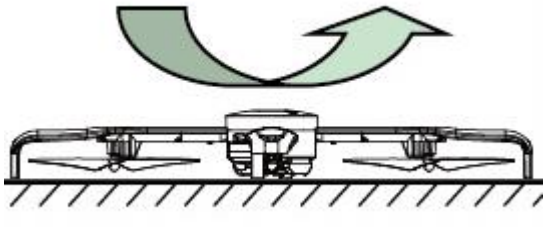
The front lights on the drone will illuminate, while the rear lights flash. The drone will then find its location using GPS, at which point the rear lights will illuminate constantly. Please note this can take upto 2 minutes.

The aircraft can be flown using either the radio control supplied or by using the App on a smart device.

GPS COMPASS CALIBRATION



1. Long press the GPS compass calibration button. The lights on the drone will flash.



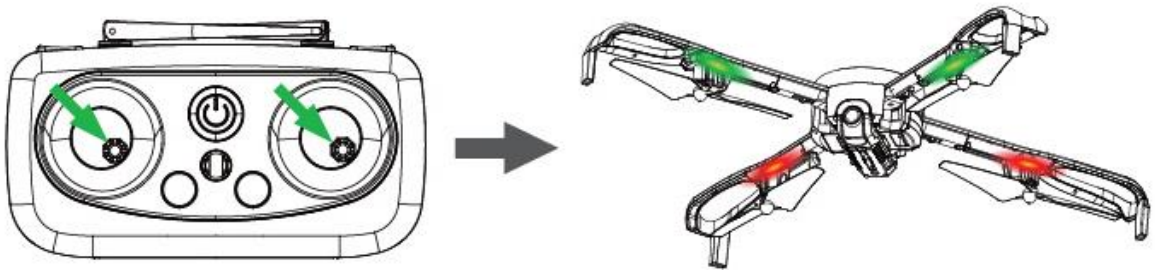
2. With the drone level, rotate it anticlockwise for 3 full revolutions. The lights at the rear of the drone will illuminate.

3. Then hold the drone with the front facing down, and rotate it anticlockwise for 3 full revolutions. The lights at the front of the drone will illuminate. The lights will then return to the same status as prior to calibration, indicating that calibration has finished.

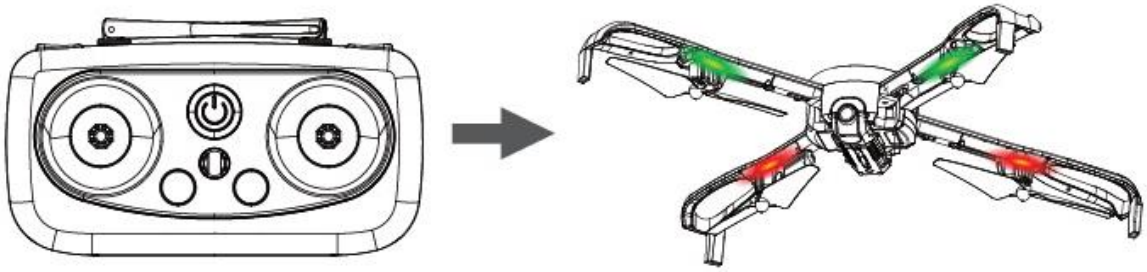
For accuracy the GPS should be calibrated before each flight, and we would advise that the drone is at least 50cm away from the ground during calibration.

GYROSCOPE CALIBRATION

With the drone on a level surface, Pull both the joysticks to the lower right position at the same time, and hold in that position for 3-5 seconds. The four lights on the drone will flash to indicate it is calibrating.



Release the joystick, which will complete the calibration.

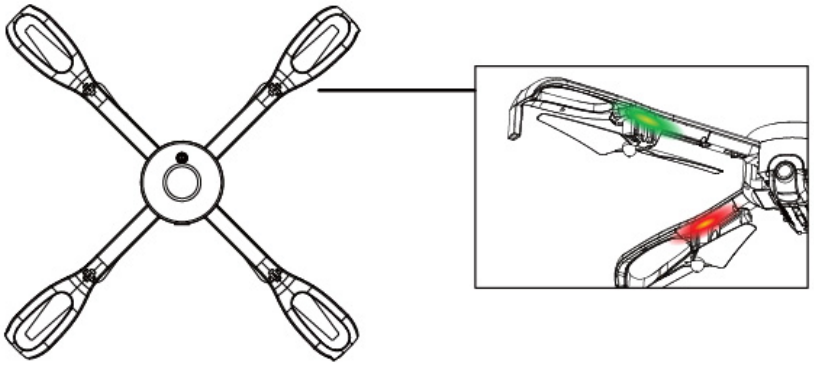


This should be carried out before each flight.

GPS LOCATION SEARCH

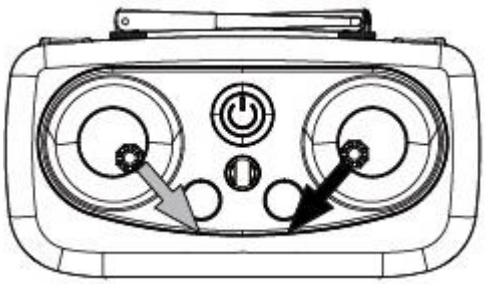
Once the drone has been calibrated, as shown in the previous steps, the drone should be placed on a flat surface in an open area in order to for it to fix its location via GPS. Once the location has been fixed, the rear lights will stop flashing and will be illuminated.

It can take around 2 minutes for the drone to fix on its location, although if the drone has been used within the previous hour, this time is reduced.



PREPARING FOR TAKE OFF

Once the controller has been calibrated the motors must be engaged. Before doing this, please ensure that the unit is in position, unfolded, and ready for flight.



To do this push the left joystick to the bottom right position at the same time as pushing the right joystick to the bottom left position.

The motors will then start to rotate.

TAKE OFF

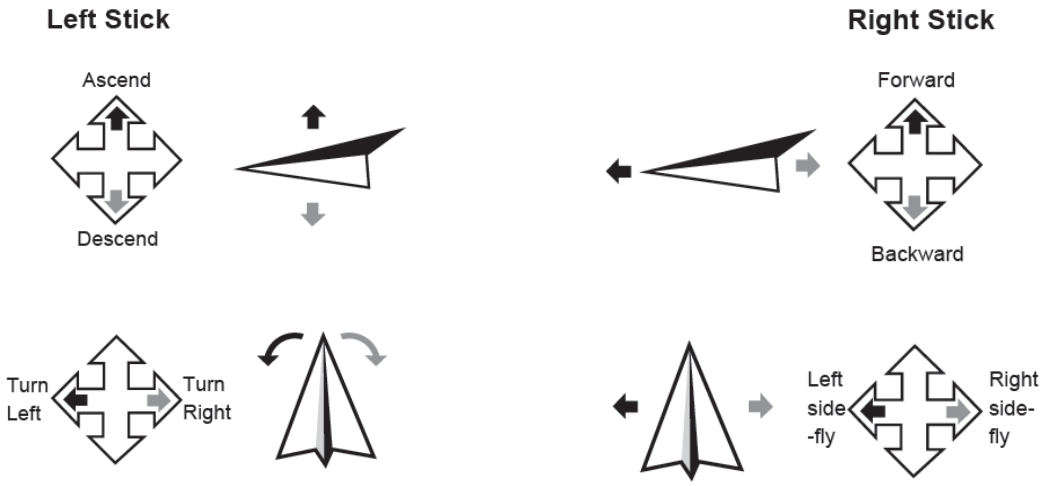
There are two options for take off. It can be triggered by using the take off button which will result in the drone hovering at a set height above the ground. Alternatively the left joystick can be pushed forward.

FLIGHT INSTRUCTIONS

Before your first flight make sure you are familiar with the controls of the aircraft.

Left Joystick – Throttle & Rudder

Right Joystick – Elevator & Aileron



Note: Should the aircraft be left for a while with no control inputs it will go to sleep, simply press and hold the take off/land button to reactivate the aircraft.

AIRCRAFT FUNCTIONS AND FEATURES

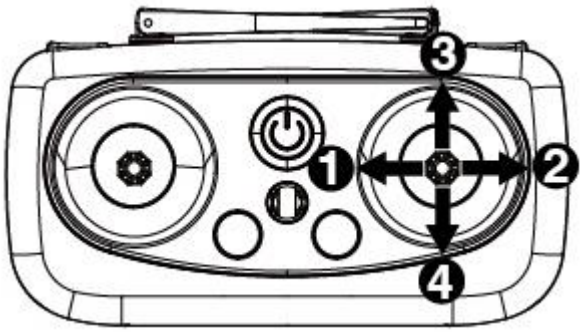
HEADLESS MODE

The aircraft can be made to fly in Headless mode by pressing the headless flight button. This will make the aircraft fly without a front or rear. It will fly in the orientation of the pilot. If you move the right joystick right, the aircraft will fly right. Move the joystick left and it will fly left. Move the joystick forwards and the aircraft will fly away from you and pull it back to make it fly towards you. It does not matter which direction the drone is facing in headless mode.

ORBIT MODE

The aircraft can be made to fly in orbit mode by long pressing the headless flight button. The camera of the drone will automatically aim at the position of the smartphone. The orbit is controlled using the right joystick.

1. Move the joystick to the left to orbit anti clockwise/ increase the speed of the anticlockwise orbit.
2. Move the joystick to the right to slow the anticlockwise orbit, or to orbit in a clockwise direction
3. Move the joystick up to increase the radius of the orbit.
4. Move the joystick down to decrease the radius of the orbit.



SPEED CONTROL

The drone has 3 speed settings. It will initially be set at 25%. By pressing the speed button the speed of the drone can be adjusted. The controller will bleep to indicate the speed it is set at after the button has been pressed.

1. 25% - 1 Bleep, 50% - 2 Bleeps 100% - 3 Bleeps

AUTO RETURN

The drone has an auto return feature which will return the drone to within 2 metres of the take off position. Please note it will return in a straight line, and it is the responsibility of the user to make sure that there are no obstacles in the return route.

AUTO RETURN BUTTON

Press the auto return button, and the drone will return to the position of take off. Auto return can be cancelled at any point by moving the right joystick in any direction.

AUTO RETURN – LOST CONTACT WITH CONTROLLER

If the drone loses contact with the controller, the drone will automatically return to the position of take off. The controller will continuously bleep to indicate the loss of contact.

LOW BATTERY AUTO RETURN

If the battery is low, the drone will automatically return to the position of take off and the front of the drone will flash rapidly. If the battery is out of power, all the lights will flash, quickly find a suitable place to land before the drone carries out an emergency land in its current position.

CAMERA

As well as recording onto your phone through the app, the camera can also directly record onto a MicroSD card inserted into the drone (Not Supplied).

The MicroSD card can be inserted into side of the camera housing on the underside of the drone.

Pictures can be taken by pressing the right joystick button.

Press the left joystick button to start recording a video, press again to stop recording.

APP

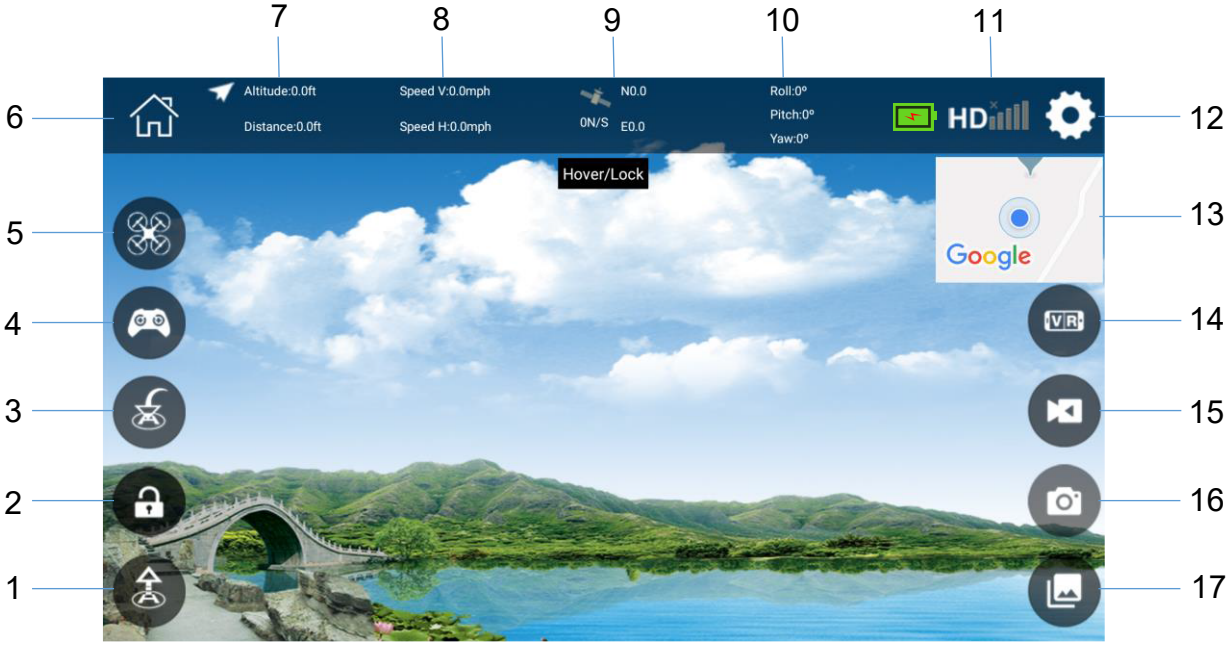
The camera App can be downloaded by scanning the below QR code or search for LW FPV in your App Store:

Android

iOS

To connect the aircraft to your mobile device: Turn on the aircraft, while ensuring your controller is turned off. Go to the settings on your mobile device. Open the WiFi settings and search for a device starting with “LW-1080P-GPS”. Select it and wait for it to connect. Open the LW FPV App and press the “START” button at the bottom of the screen. This will lead you to the control screen and show the view of the camera.

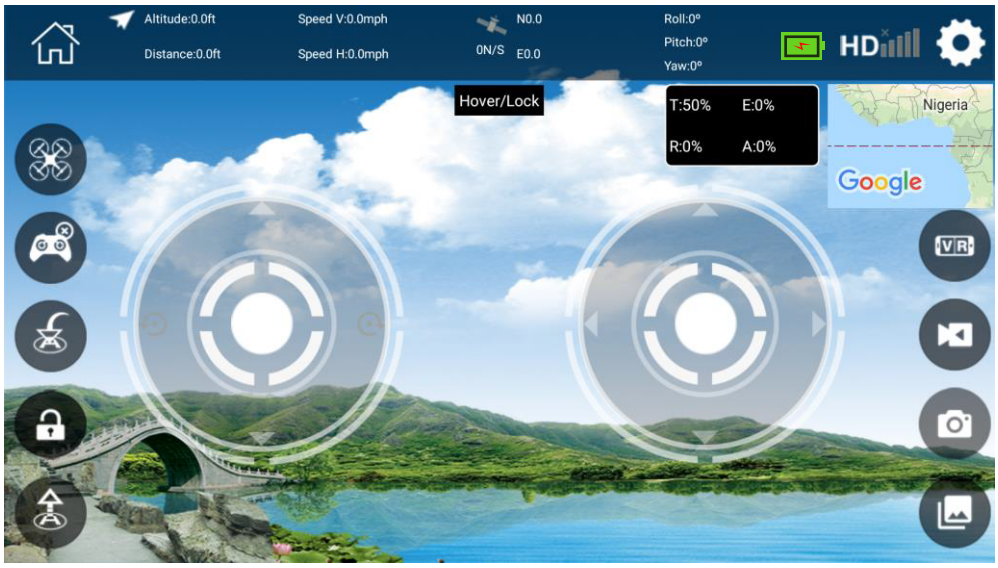
MAIN SCREEN



1	Auto Take Off	10	Attitude angle
2	Lock / Unlock Drone	11	Drone battery level & transmission signal
3	Auto Home	12	Settings menu
4	View Joystick Controls	13	Switch Map / Image view
5	Flight mode	14	VR Split Screen
6	Back to Main Menu	15	Record Video
7	Altitude / Distance	16	Take Photo
8	Vertical and horizontal speed	17	Folder
9	GPS Co-ordinates and signal info		

JOYSTICK CONTROLS

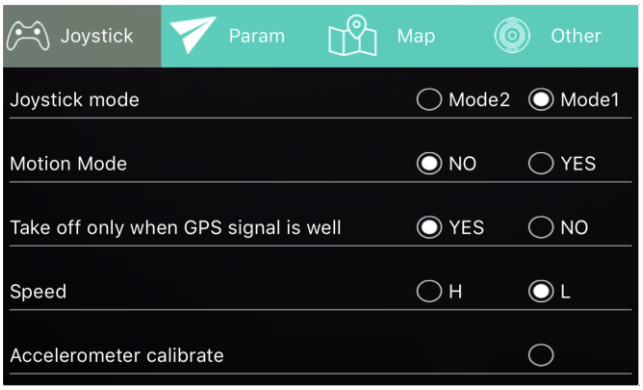
Once the drone is connected, display the joystick controls, and the drone can be flown using the onscreen joysticks (after the drone has been unlocked, and the take-off button has been pressed). The controller must be turned off to control the drone from the app.



SETTINGS MENU

The settings menu is separated into 4 sections: Joystick, Param, Map and Other.

JOYSTICK



Joystick mode: Allows the left and right joysticks to be swapped.

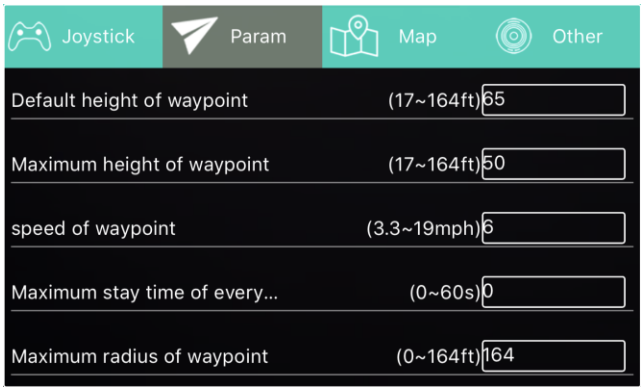
Motion Mode: Allows the drone to be controlled by tilting your phone.

Take off only when GPS Signal is good. Drone will only take off when the signal is above 8 when activated.

Speed: Change the speed between High and Low

Calibrate Accelerometer: Advisable to calibrate before each flight

Calibrate Magnetometer: Advisable to calibrate before each flight

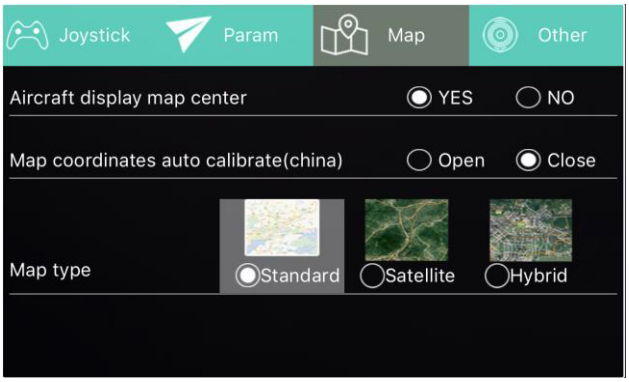


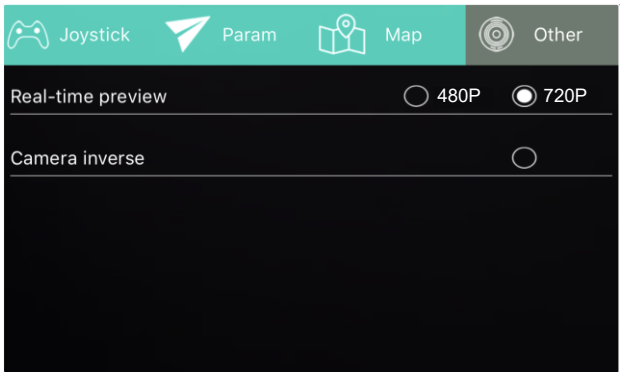
PARAM

Allows the default height, max height and speed of waypoint to be set. You can also set the Maximum stay a each waypoint, maximum radius of waypoint and the default height of homeward travel.

MAP

Select whether the drone is displayed in the centre of the map, and the type of map to be displayed (Between standard Satellite, and Hybrid)



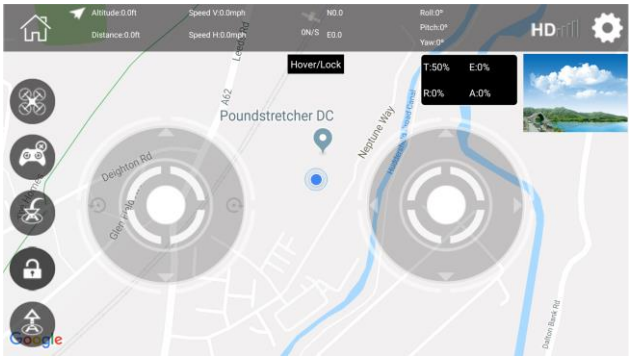


OTHER

Select the image quality of the preview, and option to inverse the camera.

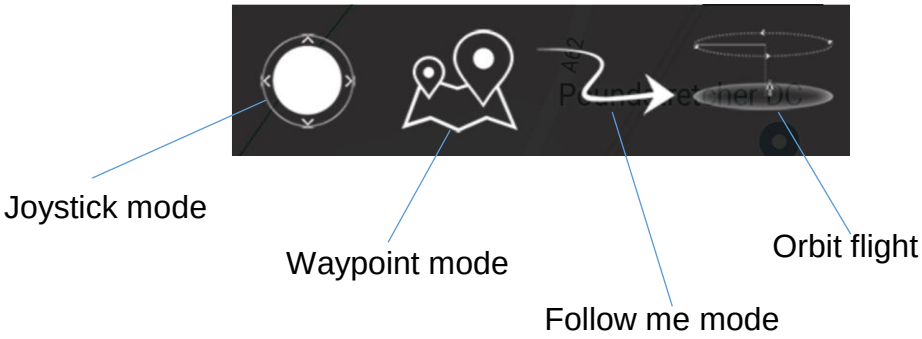
MAP VIEW

Press the map (13) to change from camera view to map view. The map will then show the current position of the drone.



FLIGHT MODE

Use the flight mode button to choose the type of flight between joystick control, waypoint flight, follow me mode and Orbit flight. Ensure the controller is turned off when attempting to control the drone from the app.

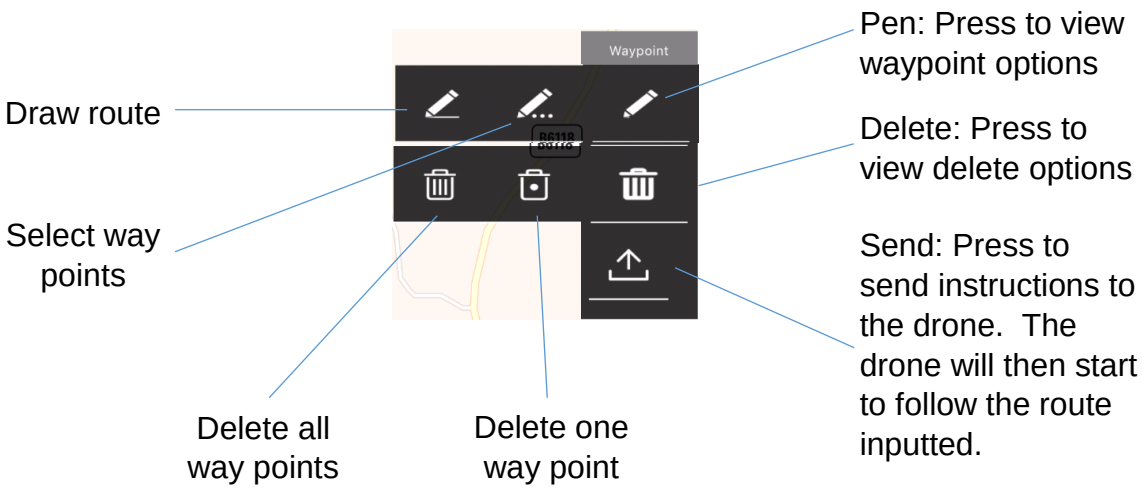


JOYSTICK MODE

Control the drone with the onscreen Joystick.

WAYPOINT MODE

Before starting the waypoint mode, check the Param settings within the menu to ensure they are suitable for the location. Then set the drone hovering at a height above 50 metres, ensuring there are no obstacles between the drone and the waypoints. To exit waypoint mode, use the joystick.



FOLLOW ME MODE

When follow me mode is selected, the drone will auto fly, following the position of the smartphone. Follow me mode can be exited by returning to joystick mode.

ORBIT FLIGHT

The camera will be automatically orientated to the APP signal position. The right joystick is then used to control the position on the drone

Left	Increase speed in anticlockwise direction, or increase speed in clockwise direction
Right	Increase speed in clockwise direction, or increase speed in anticlockwise direction
Forward	Move the drone further away to extend the orbit
Back	Move the drone close to decrease the size of the orbit

Press the joystick mode button to turn off orbit flight.

WARNINGS:

- Always calibrate the drone before controlling using the APP.
- Ensure you understand the operating instructions provided before attempting to fly.
- Only compatible with Android 5.0 and above.
- Only compatible with iPhone 5.0 and above.
- The phone must be capable of connecting to a 5Ghz wifi network.
- If you experience problems with the image, the drone is either too far away or there is too much interference in the area. Try moving to a place with less interference.
- Ensure all safety warnings in the front of the manual are adhered to.
- Keep these instructions for future reference

TROUBLESHOOTING

	Problem	Cause	Solution
1	The lights on the aircraft are flashing but it does not respond to the control	1. The aircraft and transmitter are not connected. 2. Insufficient battery power.	1. Repeat the connection procedure. 2. Recharge the battery.
2	The aircraft blades turn but it will not take off	1. Insufficient battery power. 2. The blades are distorted. 3. Take off button not pressed.	1. Recharge the battery. 2. Replace the blades. 3. Press the take off button.
3	The aircraft shakes in flight	The blades are damaged/distorted	Replace the blades.
4	The aircraft won't fly using the App.	1. Aircraft not connected to App. 2. Connection not done in correct order. 3. Main controller is turned on.	1. Reconnect using the instructions on page 14 2. Reconnect using the instructions on page 14 3. Aircraft can not fly on App when main controller is turned on. Turn off controller, reset aircraft, app and WiFi to reconnect to App
5	Camera not working in App	1. Aircraft not connected to App.	1. Reconnect using the instructions on page 14

Disposal: Do not dispose this product as unsorted municipal waste. Collection of such waste must be handled separately as special treatment is necessary

Recycling facilities are now available for all customers at which you can deposit your old electrical products. Customers will be able to take any old electrical equipment to participating civic amenity sites run by their local councils. Please remember that this equipment will be further handled during the recycling process, so please be considerate when depositing your equipment. Please contact the local council for details of your local household waste recycling centres.

UK Support

http://www.proflightuk.co.uk/support/

If you have been through the troubleshooting, and the unit is failing to operate, our service line can be contacted on: 0871 971 3141

Office hours: 9AM - 5PM Monday to Friday

www.prolightuk.co.uk

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Lowfields Way, Elland
West Yorkshire, HX5 9DA