



# Box Drone

## User Manual



Model: PFBD103

Thank you for choosing ProFlight.

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

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## SAFETY

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.

## Battery Charging

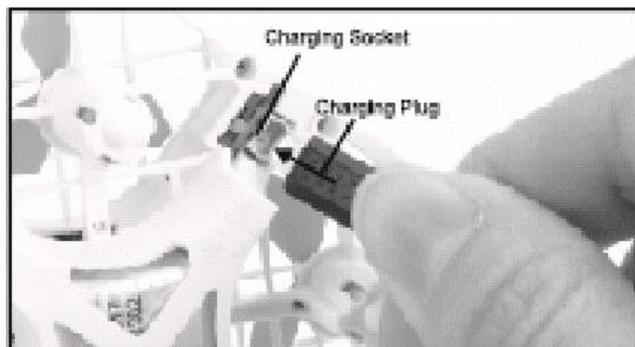
Use only the enclosed USB Li-Po charger to charge your battery.

Connect the charging plug to the drone, ensuring the plug is inserted the correct way round.

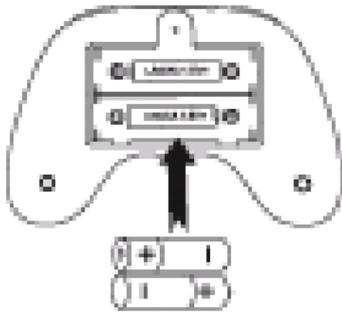
Plug the charger into a USB socket before attaching the battery.

When the charger is plugged into the USB slot and charging the LED will illuminate RED. When the battery is fully charged the LED will go out.

Never charge the drone for more than 45 minutes.

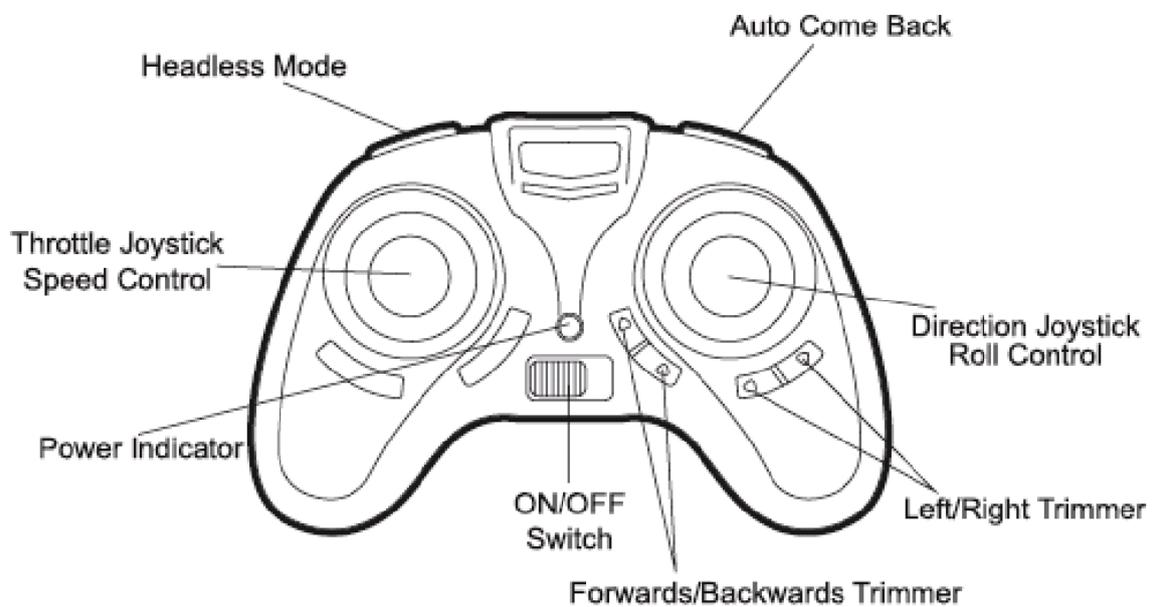


## Installing the Controller Batteries

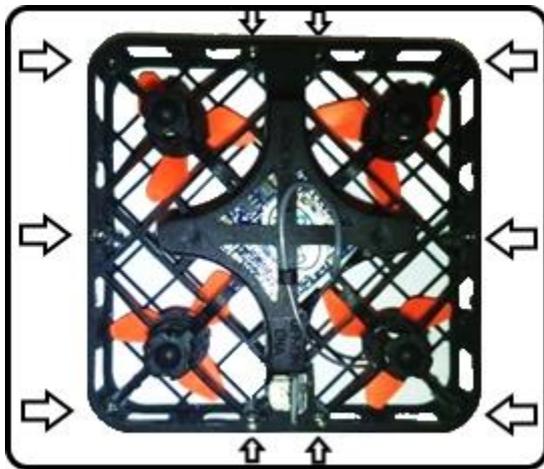


Unscrew the battery cover and insert 2 x A Batteries, making sure the correct polarity is followed, before reattaching the battery cover.

## Transmitter Diagram



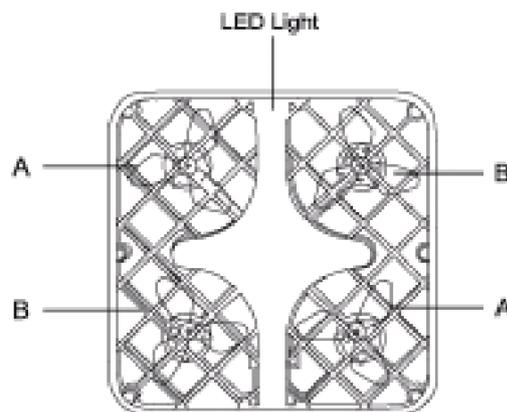
## Changing the Propellers



There are 10 screws on the underside of the drone, holding the cage together. Undo the screws and gently separate the top of the cage from the base.

Once the top of the cage has been removed, the propellers can be pulled off the motor spindle.

Please note there are two different propellers on the drone (Designed to spin in opposite directions). When swapping a propeller, ensure it is replaced with one of the same type.



## Preparing for First Flight

1. Make sure both the transmitter and aircraft batteries are sufficiently charged.
2. Find a suitable place to fly the aircraft, away from people, buildings and vehicles.
3. Make sure the throttle stick is centred before turning on the transmitter.

## Binding of Radio Transmitter & Receiver

1. Place the drone upside down on a flat surface and turn it on using the small switch on the underside next to the charging port, which will start the lights flashing. Then turn the drone over, so it is stood on its feet.

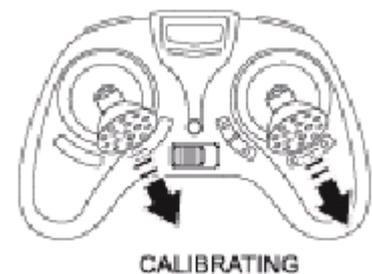
2. Turn on the controller.

3. The controller will beep twice, and the red LED will flash. Pair it to the drone by pushing the throttle stick to the top, it will beep, and then pull the throttle stick to the bottom.



4. The long beep indicates it is paired.

5. The Gyro should then be calibrated, by holding both joysticks diagonally down to the right, until the lights on the drone stop flashing.



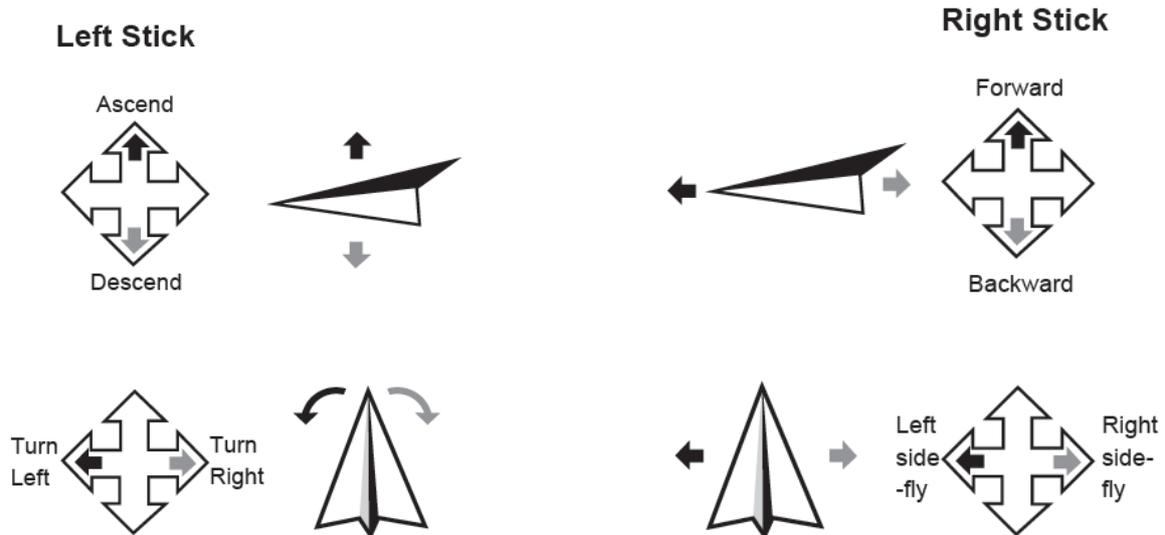
6. Once this has been done you are ready to fly the drone, press the left joystick up to take off.

# 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

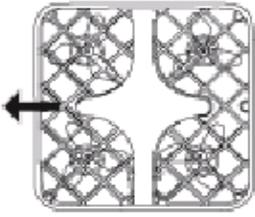
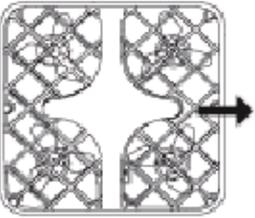
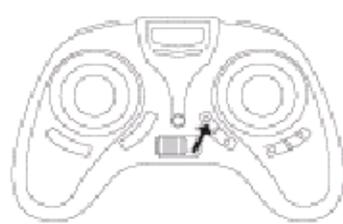


The aircraft can only take off and land by pressing the take off / land button (click once to take off and once to land). Once the aircraft is airborne it will hold a steady hover, you are now in control of the aircraft and can use the left and right sticks to control it.

**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.

# Flight Adjustment

When you lift the Drone into the air, If the aircraft drifts in a particular direction you can trim the controls using the trim buttons. Select the trim key opposite the direction of drift. Trimming is always needed before your first flight.

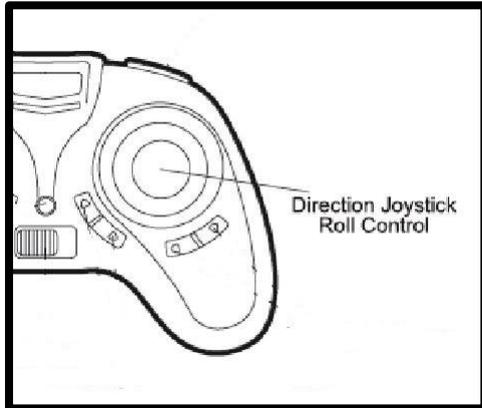
	<p>If your Quadbox banks to the left, keep pressing the Trim Right Button till your Quadbox stops banking.</p>	
	<p>If your Quadbox banks to the right, keep pressing the Trim Left Button till your Quadbox stops banking.</p>	
	<p>If your Quadbox flies backward, keep pressing the Trim Forwards Button till your Quadbox stops flying backward.</p>	
	<p>If your Quadbox flies forward, keep pressing the Trim Backwards Button till your Quadbox stops flying forward.</p>	

## Reset Trim

On both trims there is a longer beep when the trim is set in the central location. Press and hold the left trim button, and listen for the longer beep, if instead the beeping stops, you have got to the end of the range, so hold the right trim button until the long beep is heard. Repeat the same steps with the forward and backward trim buttons

# Aircraft Functions and Features

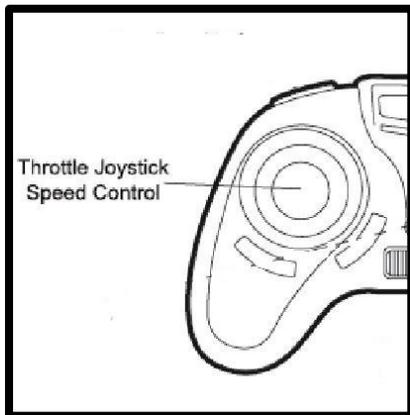
## 360 Flip



Press the direction joystick, to enter the flip mode. The controller will start to bleep, then move the joystick in the direction you would like the drone to flip.

Please note when the battery is starting to get low, the flip function is disabled

## Speed Setting



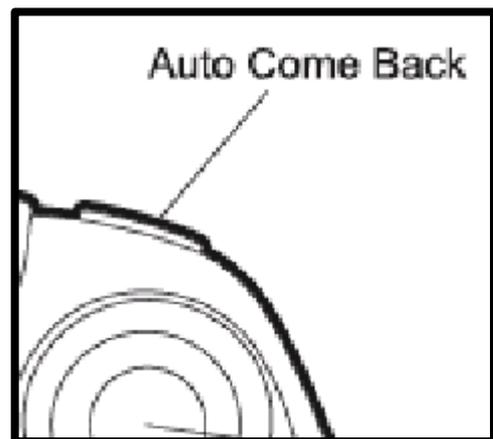
The drone is supplied in low speed mode. This mode can be changed by pressing the left joystick. The controller will bleep to confirm the speed which is selected

- 1 Bleep - 25% Speed
- 2 Bleeps - 50% Speed
- 3 Bleeps - 100% Speed

## Auto Come Back

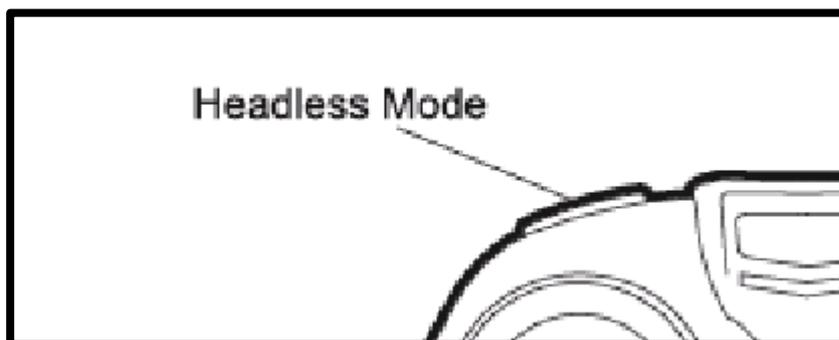
The aircraft can be made to return in a fixed direction by pressing and the return button. When the aircraft is turned on it will remember the direction it is oriented and upon activation of the One Key Return feature it will fly back in that direction.

**NOTE:** Be careful to orientate the aircraft with the rear tail facing towards you if you want the aircraft to fly back towards you using the smart return mode. You can retake full control of the aircraft at any time by moving the right control sticks. The aircraft will not return to where it started, it will simply move in the direction it was orientated when turned on.



## Headless Flight

The aircraft can be made to fly in Headless Flight 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. To calibrate the aircraft for headless flight, place it on a flat surface with the front facing away from the operator. Then press the Headless function button as labelled on the diagram above.

## 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.	1. Recharge the battery. 2. Replace the blades.
3	The aircraft shakes in flight	The blades are damaged/distorted	Replace the blades.



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

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