

# **USER MANUAL**



# FOLDING DRONE WITH HD CAMERA AND APP CONTROL PFBD303

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 INFORMATION

- 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.
- The drone is 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 when the controller or drone batteries are low.
- Mishandling of 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 the 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.
- Only use the battery supplied with the drone, or replacement batteries from the manufacturer which are guaranteed to be compatible. The use of other non-approved batteries may cause a fire or malfunction within the drone.
- 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 approaches 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 propeller 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.



### WHAT IS SUPPLIED





Hard Case



Strap for Hard Case



Controller



User Manual



Propeller Replacement Kit



Note: The hard case has space for 2 x batteries, spare batteries are available from the retailer.

# **REMOVING THE BATTERY FROM THE DRONE**

With the rear of the drone on a flat surface, slide the two tabs on the side of the drown downwards at the same time.

While both the tabs are pressed down, twist the top of the battery (By the power button) out of the drone. Please note this may take some force.





Once the top of the battery is free from the drone, it can then be slid out of the drone following the direction of the arrow to the left.

# **CHARGING THE BATTERY**

Use only the supplied USB Li-Po charger to charge your battery. To charge the battery it must first be removed from the drone, following the instructions above.

Plug the charger into a USB socket, the LED on the charge will light up Red. Attach the charger to the battery, the LED on the charger will start to slowly flash. When the battery is fully charged the LED on the charger will turn off. Charging should take around 4-5 hours. DO NOT leave the battery unattended whilst charging.



# **REFITTING THE BATTERY**

Slide the rear of the battery into the battery compartment on the base of the drone at an angle of around 30 – 45 degrees.

Ensure the notch on the rear of the battery slides under the ledge at the rear of the battery (See the diagram on the previous page for location of the notch).





While continuing to ensure the battery is pushed up to the rear of the drone, with the notch under the ledge, push down on the front of the battery, so that it twists into the compartment.

Ensure that the battery 'clicks' into place and is locked in position before flight.

# **INSTALLING THE BATTERIES IN THE CONTROLLER**

Remove the retaining screw from the top of the battery cover on the rear of the controller. Unclip the battery cover and insert 4 x AAA batteries (Not Supplied), making sure that the correct polarity is followed. Once the batteries are correctly installed, the battery cover must be re-fitted.



# **DRONE DIAGRAM**







- 1. CONTROLLER SIGNAL LEVEL
- 2. NUMBER OF GPS SATELLITES
- 3. DRONE BATTERY LEVEL
- 4. CONTROLLER BATTERY LEVEL
- 5. VIDEO INDICATOR
- 6. PICTURE INDICATOR
- 7. GPS ON
- 8. GPS OFF
- 9. HIGH SPEED
- 10. LOW SPEED
- 11. FLIGHT ALTITUDE
- 12. FLIGHT DISTANCE
- 13. HEADLESS MODE
- 14. ONE BUTTON RETURN

### HOW TO CONTROL YOUR DRONE



# **USING THE CONTROLLER**

#### POWER

Once the drone is turned on, press the power button on the drone to turn it on. The controller will automatically connect to the drone, and once successfully connected the drone will change from flashing quickly to flashing slowly.

#### JOYSTICKS

Use to control the drone, following the information on the previous page.

#### SPEED DIAL

Use the SPEED DIAL to change the flight mode from Low Speed (Beginner) to High Speed (Advanced). The display on the controller will indicate the currently selected speed mode (R.H = High Speed, L.H = Low Speed)

#### PHOTO/VIDEO BUTTON

To use the Photo and video functions from the controller, a suitable MicroSD card must be correctly inserted into the rear of the camera.

Photo: Press once to take a photo.

Video: Press and hold for 2 seconds to start recording a video. The video symbol will show on the display. To stop recording, press and hold the video button for 2 seconds again. Note if power is disconnected during recording the video file will be corrupted.

#### **COMPASS CORRECTION BUTTON**

Press and hold the compass correction button for approx. 2 seconds until the controller bleeps. The LED's on the drone will flash quickly. Pick up the drone and hold it around 1 meter from the ground and with the base facing the ground. Turn the drone clockwise repeatedly (approx. 3-6 full rotations) until the controller emits a sound. Then hold the drone vertically with the camera facing the ground and turn clockwise again until the controller emits a long sound indicating compass correction has been successful.

#### **GYROSCOPIC CORRECTION BUTTON**

Place the drone on a flat surface. Press the gyroscopic calibration button and the drone will flash quickly. This indicates that calibration has been successful. You can now search for GPS signals by pressing the GPS button.

#### **GPS BUTTON**

Press to turn the GPS Feature on and off. Note when GPS is turned off, or the GPS signal is insufficient a number of features are deactivated.

#### **ONE BUTTON RETURN BUTTON**

Press the return button and the controller will emit a sound. The aircraft will return home regardless of the current direction. Press again to cancel the function.

#### **HEADLESS MODE BUTTON**

Press the HEADLESS MODE button to change into headless flight. This will make the aircraft fly without a front or rear. It will fly in the orientation of the pilot. It does not matter which direction the drone is facing in headless mode. i.e. Pushing the right joystick forwards would cause the drone to move away from the pilot, and pulling it backwards would move the drone towards the pilot.

#### ONE BUTTON TAKE OFF/ONE BUTTON LAND

Press once and the aircraft will take off from the ground. Press and hold and the aircraft will begin to descend.

#### **CAMERA ANGLE DIAL**

Use the dial to adjust the angle of the camera, which can be adjusted up and down.

#### **ONE BUTTON RETURN**

Press the return button and the controller will emit a sound. The aircraft will return home regardless of the current direction. Press again to cancel the function.

### **INSERTING A MEMORY CARD**

A Suitable MicroSD card (Upto 64gb) can be inserted into the rear of the camera. It should be pressed fully into the housing of the camera. You will hear a click and the memory card will move slightly back before locking in position.

To ensure smooth recording of video, we would advise on the use of a Class 10 card.



Removal of the card is the opposite of insertion. Press the card in to unlock it, it will then be ejected from the rear of the slot.

### PREPARING FOR FLIGHT

- Before flying the drone, ensure the pilot has fully read the instructions, and understands how to control the drone during flight.
- Visually inspect the drone for signs of damage. Do not operate the drone if damaged.
- Ensure the batteries in the controller and the drone have a suitable level of charge before flight.
- Find a suitable place to fly the aircraft, away from people, buildings and vehicles.

#### UNFOLD THE DRONE

Unfold the legs on the drone. The longer front legs should be unfolded into the flight position first, followed by the shorter rear legs. Ensure that all legs are in their fully unfolded position.



#### PAIR THE CONTROLLER

Press the power button on the drone once so the battery lights illuminate and then press and hold power button for 3 seconds, the LED on the drone will flash. Then press the power button on the controller and the flashing light on the drone will become slower, indicating that pairing is complete.

#### CALIBRATE THE DRONE

After pairing, place the drone on a flat surface. Press the gyro calibration button and the drone will flash quickly. This indicates that calibration has been successful. It is also advisable to conduct the compass calibration as shown on page 11. You can now search for GPS signals by pressing the GPS button. If you don't require GPS signals you can go directly to the next step.





#### UNLOCK THE DRONE FOR FLIGHT

To unlock the drone for flight, push the throttle lever (Left) and the direction lever (Right) in the direction of the arrows shown to initiate flight and start the drone's propellers. You can now start flying by using the throttle or the one button take off.

### AFTER FLIGHT

Once your flight has completed, and the propellers have stopped spinning

- 1) Pick up the drone and hold the power button on the battery to turn the drone off.
- 2) Fold the arms of the drone until they sit close to the body of the drone. The rear legs must be folded first, followed by the front legs. DO NOT FORCE THE ARMS AWAY FROM THE BODY AS THIS MAY RESULT IN DAMAGE.
- 3) Turn the controller off using the POWER button.
- 4) Place the drone and accessories back into the storage case.
- 5) The drone should be fully charged before a period of storage to protect the battery.

### **REPLACEMENT OF THE PROPELLERS**

Should one of the propellers become damaged, it can be replaced, by removing the two screws, from the top of the propeller then 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 A1 or B1 on the top to indicate which motor it corresponds to.



### **INSTALLING THE APP**

Install the RC GPS app on your device by scanning the relevant QR code below. Alternatively the APP can be downloaded directly from your chosen app store.





### **CONNECTING USING THE APP**

Before connecting, it is advisable to turn off mobile data on your phone. The pictures provided are for guidance only, the steps may differ slightly depending on the operating system of the phone used.

- 1. Turn on the aircraft.
- 2. Turn on the Controller (If planning to control via the controller rather than the App, otherwise miss this step).
- 3. Open the RC GPS App on your phone.



4. The drone will automatically create a WiFi hotspot. Swipe down from the top of your screen to access the available WiFi Networks. Select the WiFi network created by the drone, which will be in the format: XYS-XXXX-XXXXXX



- 5. This will connect to the WiFi hotspot, no password is required.
- 6. Exit the WiFi settings menu and return to the app.
- 7. The app will now show the Firmware version of the drone, signalling that connection is successful.



8. Press the CONTROLS button on the right hand side of the screen. The drone will now enter the flight screen ready for flight and will display the output from the drones camera.



### CONTROLLING THE DRONE VIA THE APP

First press the unlock button to unlock the drone for flight. The propellers will start to spin. If this does not happen, swipe from the top of your screen, turn off your phone's WiFi and reconnect using steps 4 – 8 on the previous page.



Joystick On/Off	Tap to display to on screen joysticks to allow control of the drone.	
Lens Flip	If the image is upside down, press this to correct.	
3D Stereo VR	Press to enter VR mode. (Only applicable to phones connected to a V.R headset.	
Media Library	Press to enter the media library to see your saved pictures and videos and for one-click sharing.	
Flight Record	Press to view the flight record.	
Multi-point flight (Requires GPS)	The aircraft will fly according to the location selected on the map.	
Point-surrounded flight (Requires GPS)	The aircraft nose will fly around clockwise or counter clockwise with the current position of the aircraft as the centre. You can control the rise, fall, forward, and reverse to adjust.	
Video Focus	When taking a video, the camera will focus on the video object (can be people or an object) and the drone will continually move back and rise at same time till 50 meters high then stop this function.	
GPS signal	Indicates the current flight mode and the number of satellites visible; the flashing indicates that the current flow mode is fixed, and there is no return, follow, surround and pointing flight functions. Steady light indicates that the current mode is GPS.	
Battery Level	<ul> <li>Shows the current battery level of the drone.</li> <li>2-4 bars: Indicates normal power, and the return, follow, surround and pointing flight functions can be used normally.</li> <li>1 bar: Indicates that the vehicle is currently low on battery, and the aircraft will perform the automatic return function; there is no following, surround and pointing flight function while the battery is low.</li> </ul>	

Menu		
Return	Menu Return	Press to return to exit the control screen.
	GPS Follow	In GPS mode, click this button and the aircraft will follow the remote control to fly.
GPS follow	Return	In GPS mode, click to return the drone to your signal location.
Take Off	Take Off	Press on the aircraft to start taking off.
Decline	Decline	Press on the aircraft to start descent.
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MV Press to enter the MV int From here you can select and add filters to your vio and pictures.	
Audio Recording	Use to select if audio will be recorded when a video is saved.
Take a photo	Press the button to take a photo of what is currently displayed. The photo will be stored on the phone.
Video	Press the button to start recording a video. Press again to stop recording.
Sensor Calibration Switch	Press to display the Geomagnetic (Compass) Correction and Gyro Correction icons. Their use is the same as from the controller.





Flight Unlock	Press this button to unlock the drone for flight, this will start the propellers.
Gesture	Use gestures to take pictures and video.
Zoom	Use to zoom in and out of the current image or video displayed on
	screen.
Camera Up	Press to tilt the camera up.
Camera Down	Press to tilt the camera down.
Find Drone	If you find yourself unable to locate your drone or it has landed out of view, press this button and if the drone is still powered on, its current location will be shown on a map.

#### WARNING:

- Always calibrate the drone before controlling using the APP.
- Ensure you understand the operating instructions provided before attempting to fly.
- Android device operating system must be 5.0 or higher.
- 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.

### TROUBLESHOOTING

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

### DISPOSAL

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:

#### 0330 390 3062

#### Office hours: 9AM - 5PM Monday to Friday <u>www.proflightuk.co.uk</u> Unit J6, Lowfields Business Park Lowfields Way, Elland West Yorkshire, HX5 9DA

#### **TECHNICAL SPECIFICATION**

Product Size (cm)	24.5*23.5*7.5	
Carton Size	30*27*10.5	
Box Contents	1 x Drone	
	1 x 2.4G Remote controller (Batteries not included)	
	8X Blades	
	1X Screwdriver	
	1X 11.1V 1A-1.5A USB Charger	
Flying time (On Full Charge)	23-25 minutes (approx.)	
Controller Batteries	4 AAA (Not Included)	
RC Distance	1000 meters	
Wi-Fi Distance	600 meters	
Drone Battery	11.1V 1600mA 25C Li-poly; 1406 Brushless motor	
Memory Card slot	MicroSD (On rear of camera)	
	Accepts upto 64Gb MicroSD memory cards.	