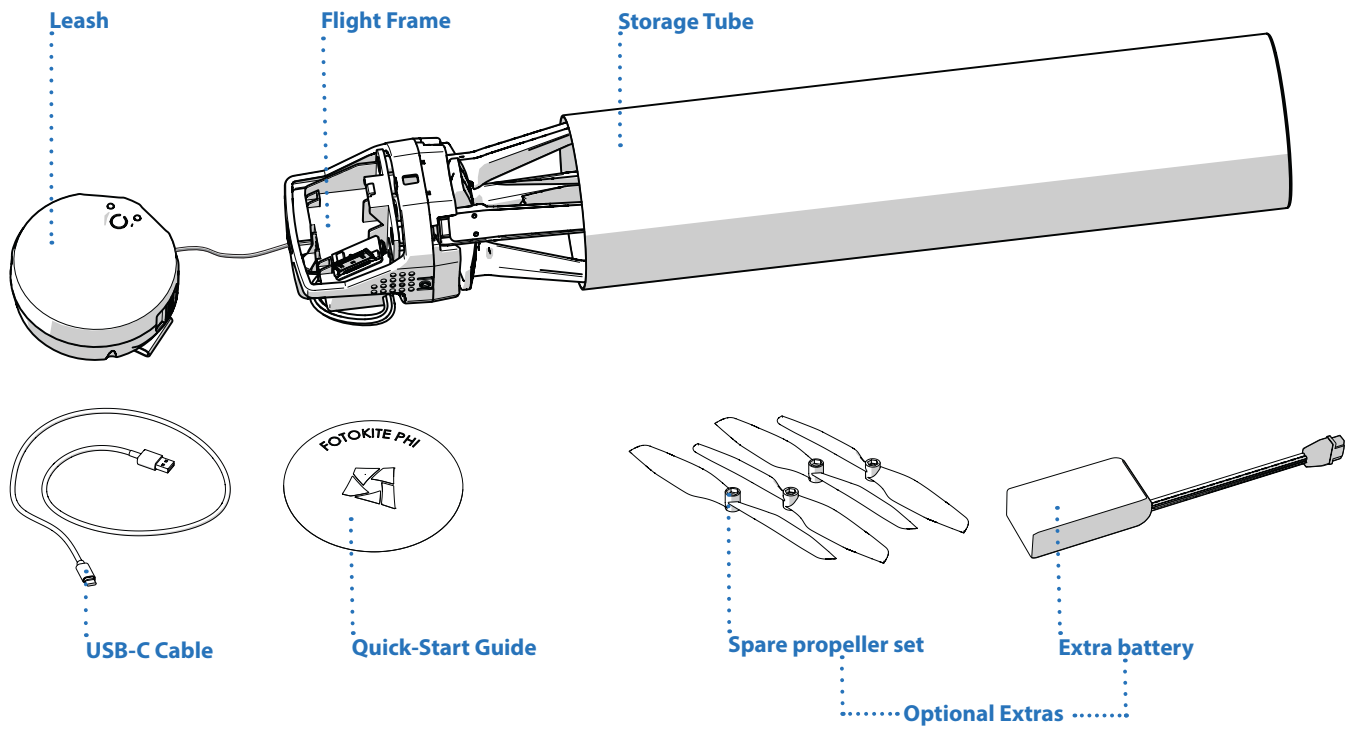


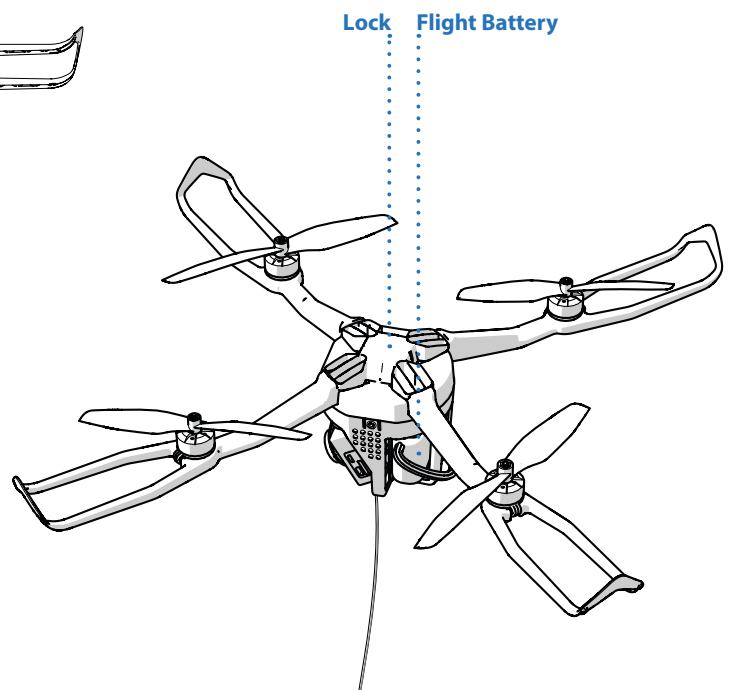
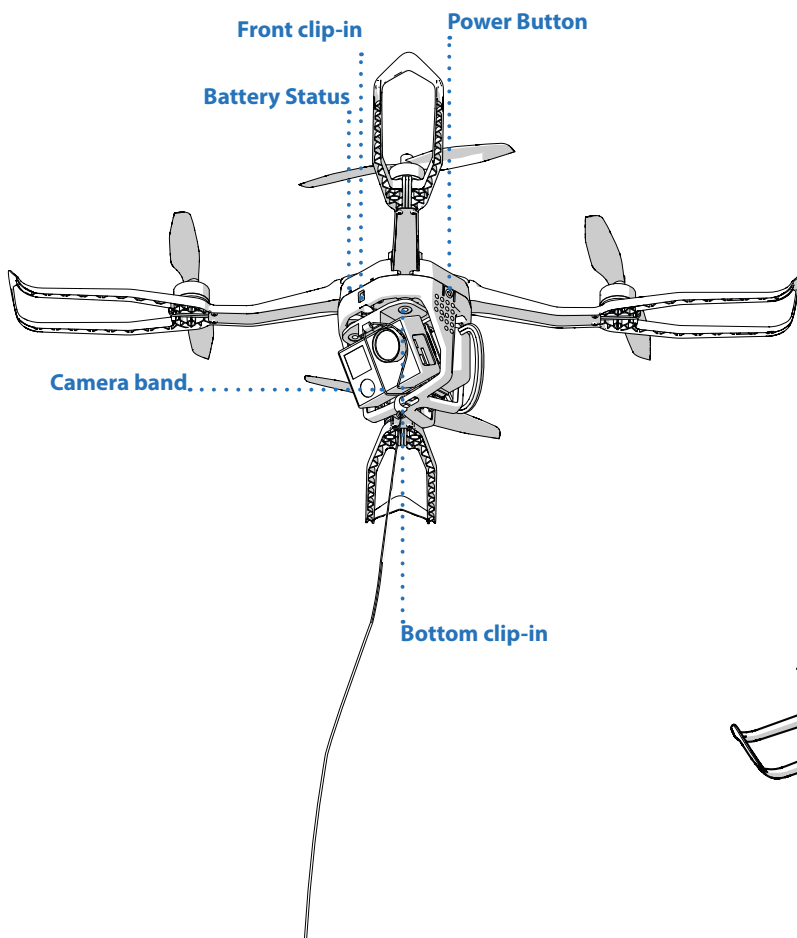
Fotokite Phi User Manual

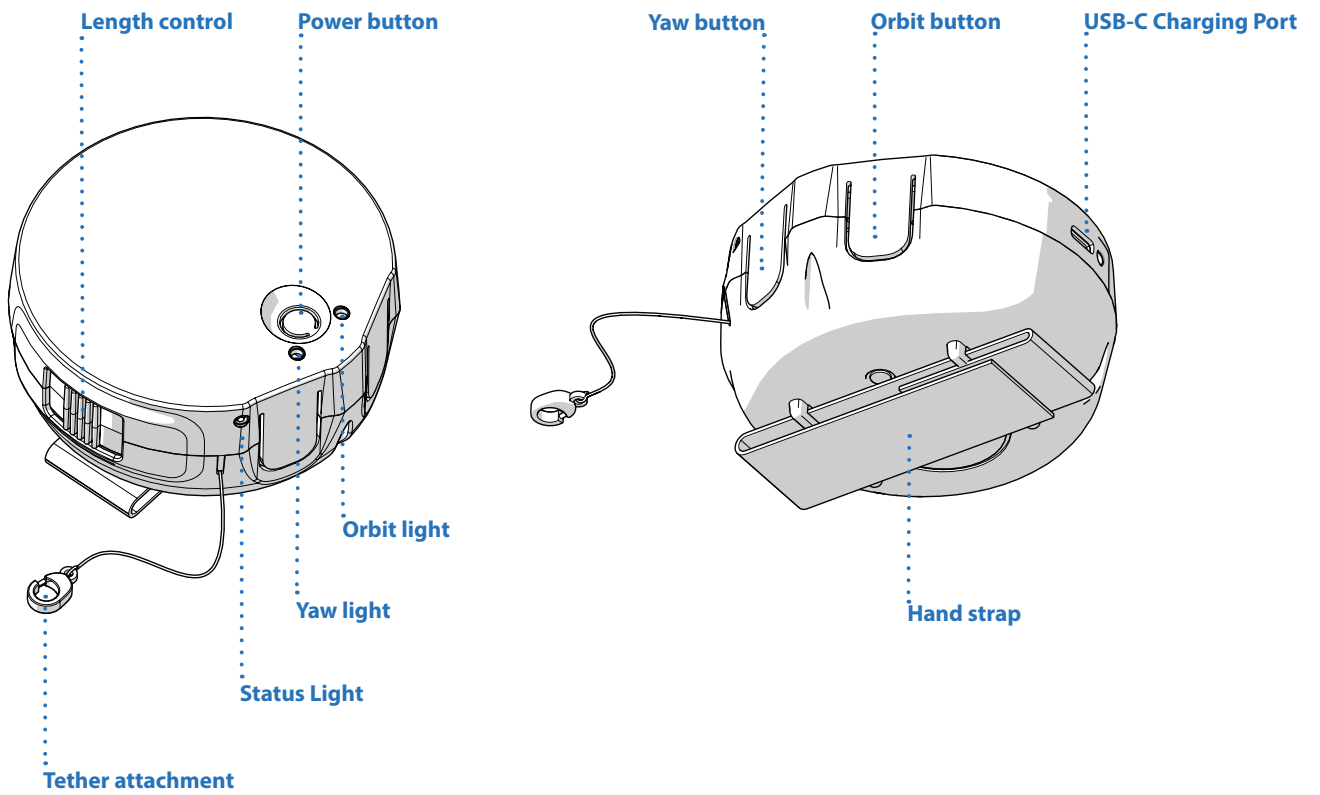
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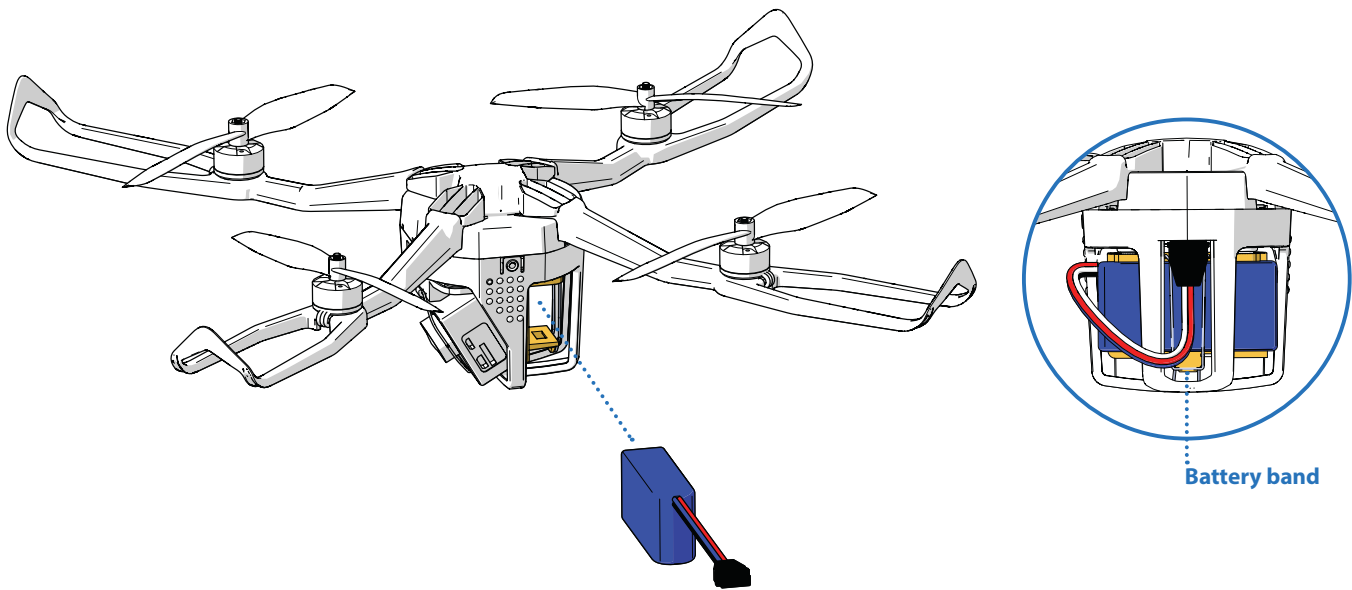


- What's in the box?
- System overview...Flight Frame
- System overview...Leash
- Installing the battery
- Charging the Fotokite
- Charging the Leash
- Unfolding / Locking
- How to fly...takeoff
- How to fly...controls
- Thrust calibration
- Thrust equalization
- Fitting new propellers

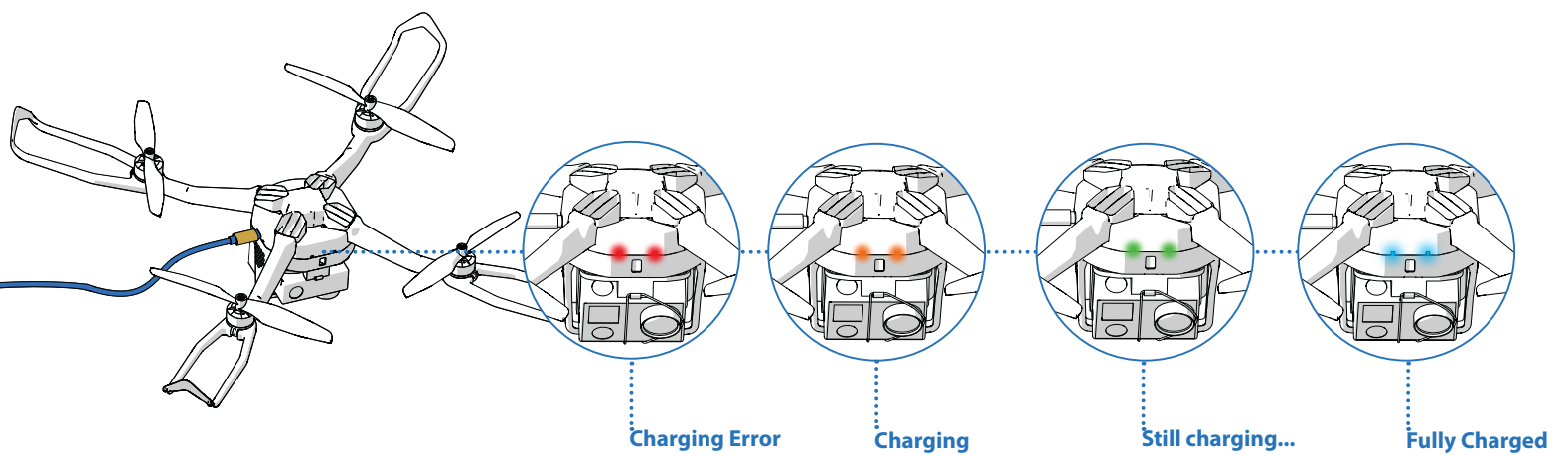








1. Detach the battery band that holds the battery in place.
2. Hold the battery band back to keep it from going inside the Fotokite's main body.
3. Slide the battery in from the side. Position it centrally to ensure the flight frame is well balanced.
4. Pull the battery band over the battery, and secure it to the yellow hook at the bottom of the flight frame payload.
5. Plug in the battery connector as shown above.



1. Ensure that the battery is connected to the Flight frame.

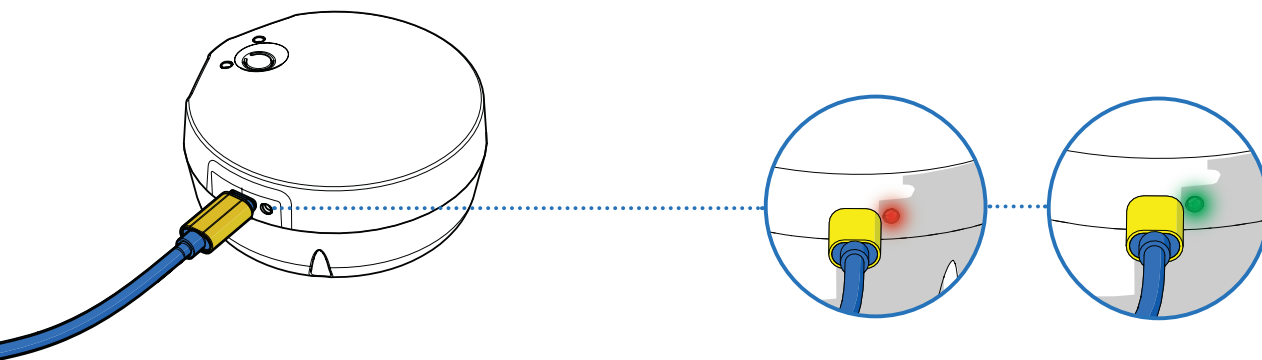
2. Plug the Fotokite charging cable into a USB power supply or into a computer.

3. Plug the Fotokite charging cable into the Flight Frame.

4. The charging behaves as follows:

- Lights will blink regularly during charging. Their color will go from **orange** (when battery almost empty) to **green** (when battery almost full)
- Once fully charged, the LEDs will turn to a **teal** color.

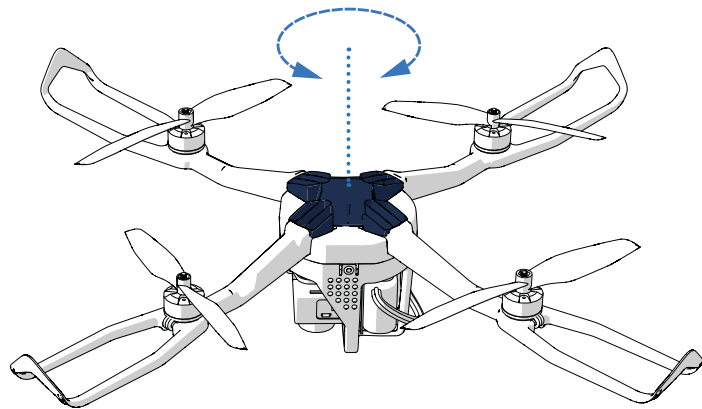
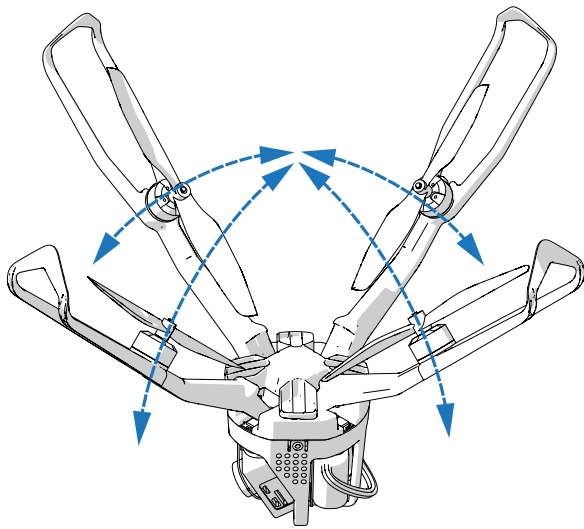
5. Disconnect the charging cable when charging is complete.



1. Plug the Fotokite charging cable into a USB power supply or a computer.

2. Plug the Fotokite charging cable into the leash.

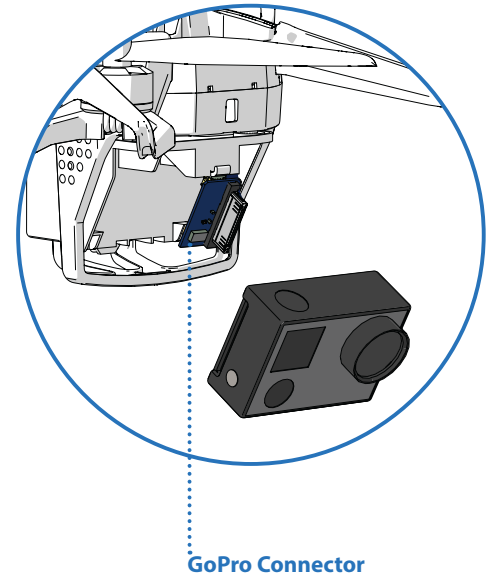
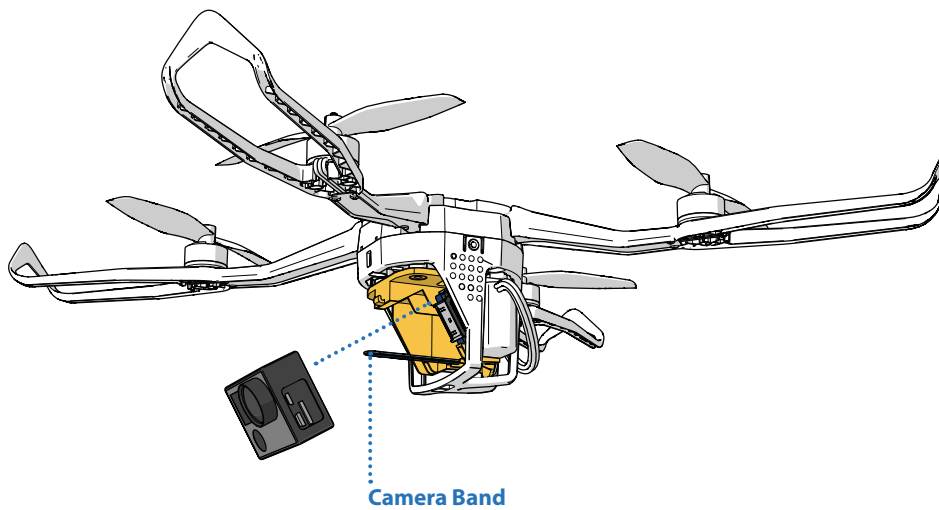
3. The charging behaves as follows:
- The LED will be **red** while the leash battery charges.
 - Once fully charged, the LED will turn **green**.



1. Fold the arms down, ensuring they are fully in the down position.

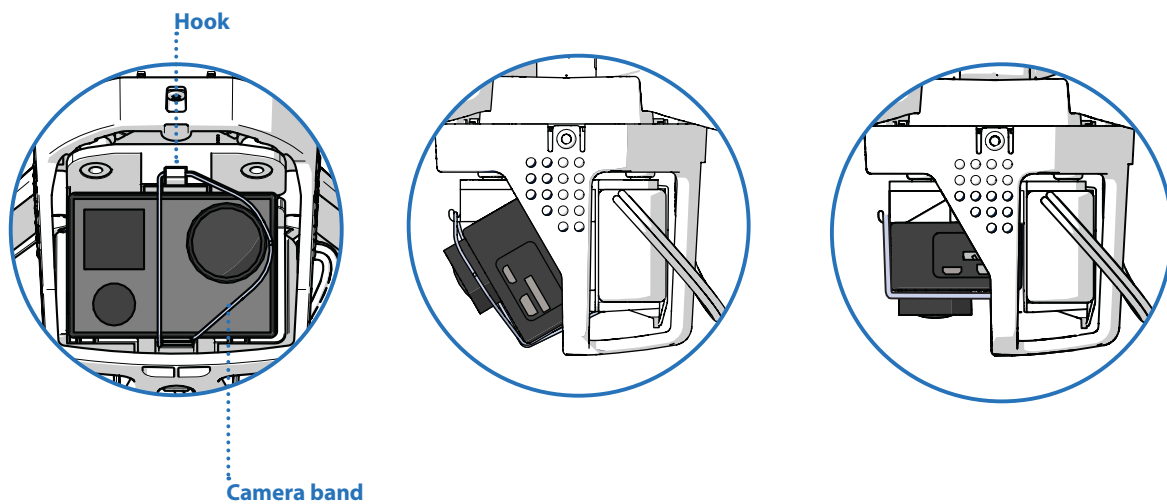
2. Twist the lock until it clicks into place, and ensure the arms are securely locked.

The Fotokite works best with the GoPro Hero 3, 3+ and 4. The GoPro Hero 4 can even be controlled in flight using the leash.



1. Remove the battery from your GoPro. The camera will be powered directly from the Flight Frame.
2. Plug in the GoPro connector of the Fotokite in the back your GoPro.
3. Verify that the GoPro is successfully connected by turning on your Fotokite, and then turning on the GoPro.

The camera can be positioned in two orientations; facing horizontally with a slight tilt or facing down. (Go Pro Hero 5 and other thicker models of cameras will not fit in the facing down position).

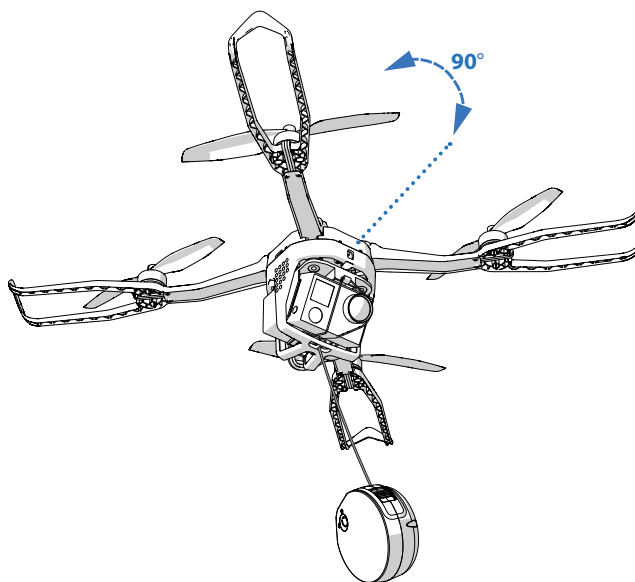
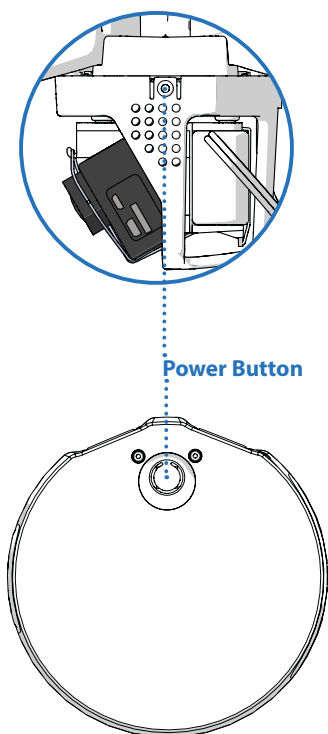


1. Pull the camera band holding the camera back and hold it.

2. Position the camera in the Flight Frame. Ensure it sits firmly inside the camera mount.

3. Place the camera band back over the camera and attach it to the yellow hook situated just above the camera.

4. For more stability and safety, the elastic can be placed around the objective of the camera.



1. Press and hold the power buttons to power on the Flight Frame and Leash.

2. Hold the Flight Frame firmly at arms length.

3. Tilt the Flight Frame slightly away from yourself.

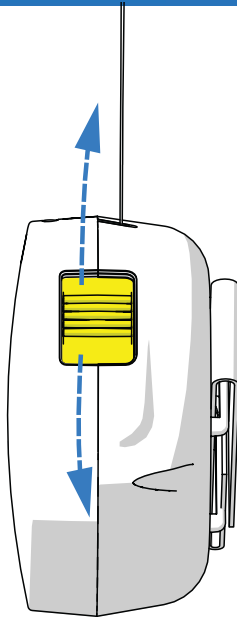
4. Twist the Flight Frame 90° and back to the right.

5. Don't let go yet. The propellers will start.

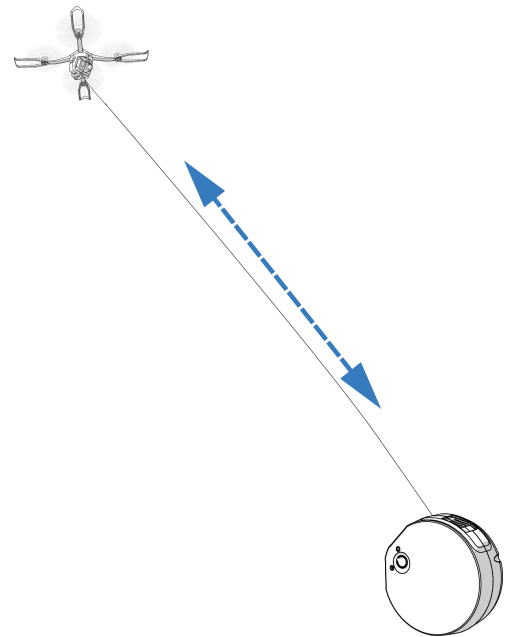
6. Hold the Flight Frame still as the propellers spin up.

7. *Gently* release the Flight Frame!
fly

8. To stop, grab the Flight Frame and press the power button. Long press turns off.



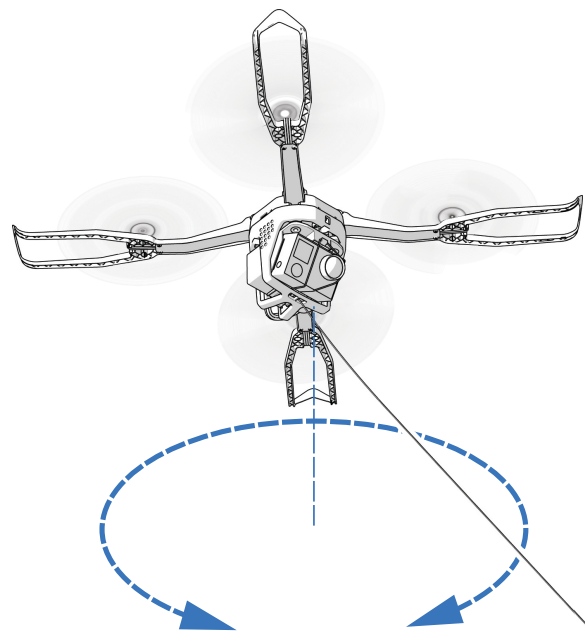
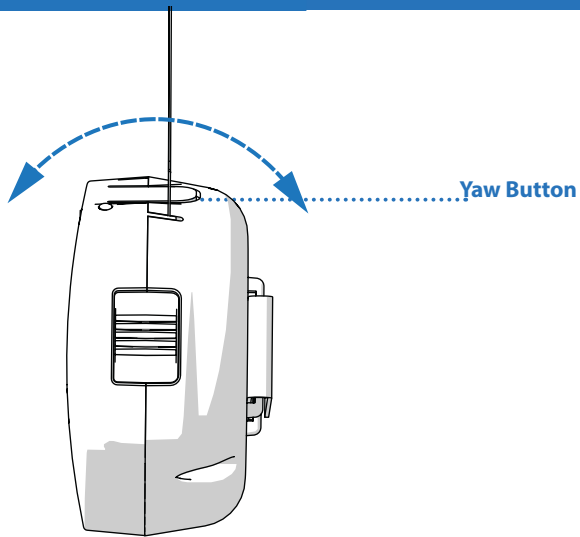
1. To increase tether length push the length control button forward. This will cause the Fotokite to fly away in the direction it is headed



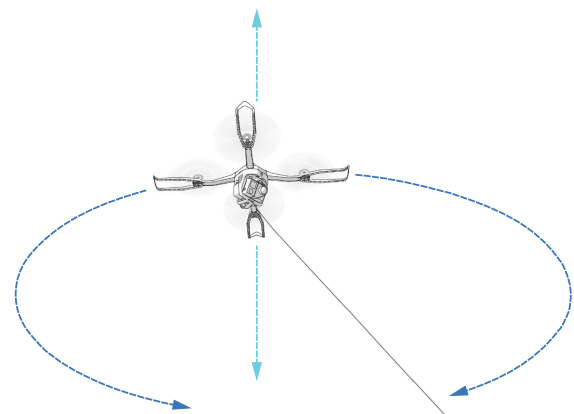
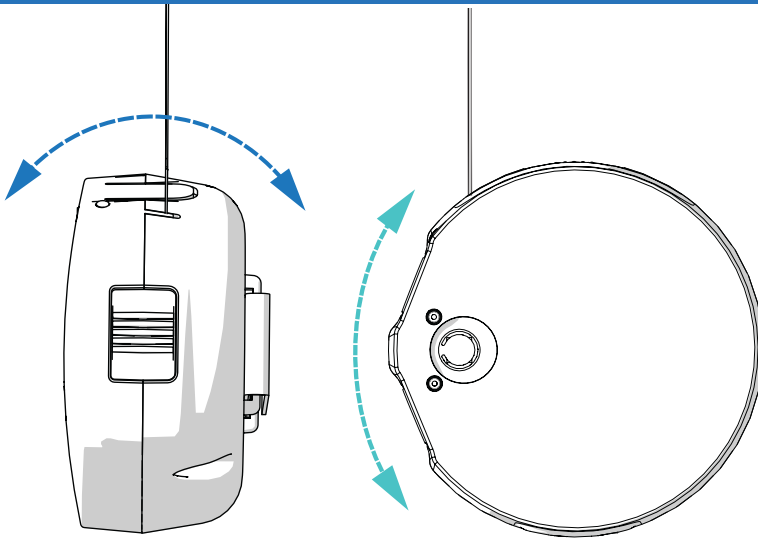
2. When you want the Fotokite to stop, let go of the length control button, and it will stop the tether release.

3. To bring the Fotokite back down, pull the tether length control button back.

Upon pulling the length control button back, the Leash will communicate with the Fotokite and send a signal to reduce thrust, this will cause it to reduce altitude, however to increase speed you can pull the Fotokite towards you.

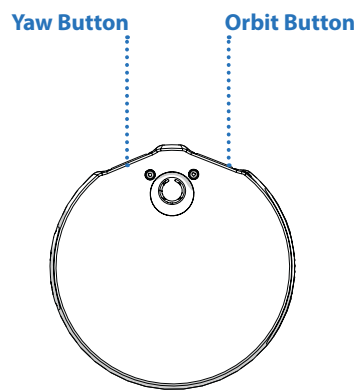


To spin the Fotokite in place, press and hold the Yaw button, whilst using the gesture control of the Leash to choose which direction you want the Fotokite to spin.



1. To orbit the Fotokite around you, press and hold the Orbit button and use the gesture controls left or right to control the Flight Frame.

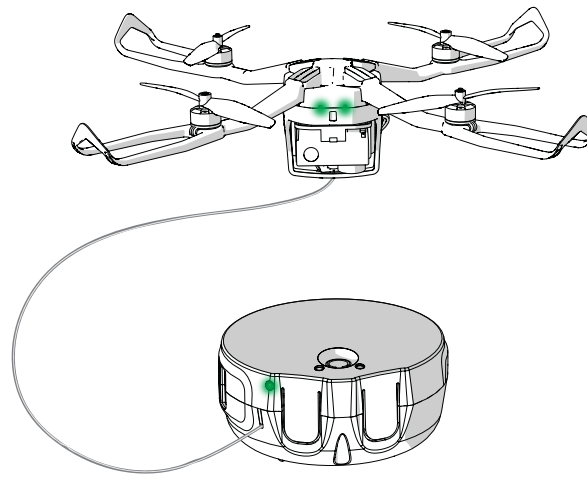
2. To change the the Flight Frames altitude relative to the user, press and hold the Orbit button, and use the gesture controls up or down to control the Flight Frame.



Press Yaw+Orbit buttons together to use.
Short press: start/stop video / take photo.
Long press: mode (photo<->video).

The Leash communicates with the Fotokite Flight Frame via a Bluetooth connection. Upon Powering both the Leash, and the Flight Frame ON the status light on the Leash should turn solid **green**.

If the Leash status light flashes, and the leash vibrates, this is because the the two are not paired, follow the below instructions to Pair the Leash with the Fotokite Flight Frame.



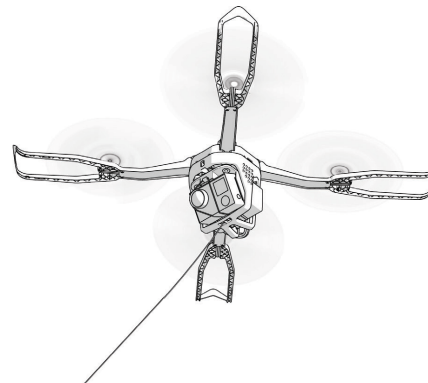
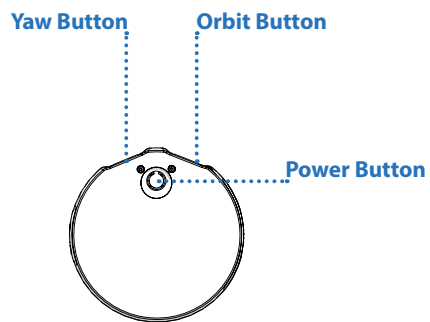
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|---|---|--|---|---|
| 1. Start with both the leash and the Fotokite turned OFF. | 2. Press and hold the Yaw button on the leash. While holding it, turn on the leash with the Power button. | 3. The leash will turn on with both the Orbit light and the status light being blue. | 4. Turn on the Fotokite normally. As you do so, the status light on the leash will turn green (the Orbit light will remain blue) | 5. Exit the pairing setup by turning off the leash. Your Flight Frame and Leash are now paired. |
|---|---|--|---|---|

When operating the Fotokite at an altitude way above sea level:

The Fotokite is calibrated to fly at an altitude slightly above sea level (0-1000m). If you go higher than this altitude, the air gets thinner and the thrust provided by the Flight Frame needs to be increased.

When carrying a heavy payload:

The Fotokite is calibrated to function with a GoPro Hero4 from which the battery has been removed. If you operate the Fotokite with a different and heavier device, you will need to increase the thrust provided by the Flight Frame.



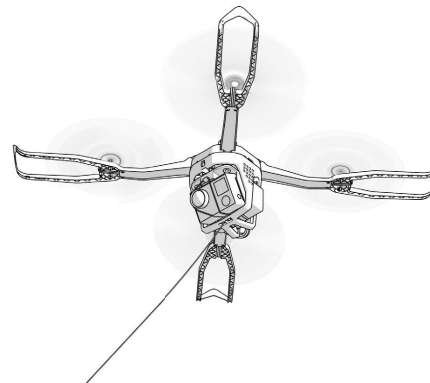
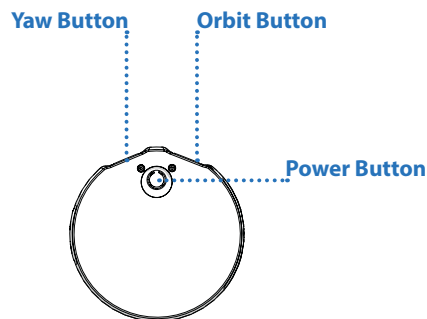
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|---|--|---|--|--|--|
| <p>1. Turn on the Flight Frame and the Leash, making sure that they are paired.</p> | <p>2. Press and hold the Yaw and Orbit buttons of the leash. Then, press the Leash power button to enter the calibration menu. The leash will buzz and vibrate to confirm and the Yaw and Orbit lights will turn yellow.</p> | <p>3. Press the Yaw button to navigate through the calibration menu until the Yaw and Orbit lights are purple (normally reached after one press).</p> | <p>4. Press the Orbit button to start the calibration.</p> <p>WARNING: THE MOTORS WILL START SPINNING</p> | <p>5. The calibration is ideal when the Fotokite hovers in the air: it does not fall to the floor nor does it fly to the up. The calibration is done by increasing or decreasing the overall thrust: Increase the thrust by pressing the Yaw button Decrease the thrust by pressing the Orbit button</p> | <p>6. Once the Flight Frame successfully hovers with minimal vertical movement, press both the Yaw and Orbit button to validate the calibration. Then, restart the Flight Frame.</p> |
|---|--|---|--|--|--|

When carrying a heavy payload:

The Flight Frame is calibrated to function with a GoPro Hero4 from which the battery has been removed. If you operate the Fotokite with a different and heavier device, your unit's center of gravity shifts, which can cause it to fly unbalanced.

When experiencing odd flight behaviour:

All Fotokites are calibrated during production. However, it can happen that the calibration is not done perfectly or needs to be done again for various reasons.



1. Turn on the Flight Frame and the Leash, making sure that they are paired.

2. Press and hold the Yaw and Orbit buttons of the Leash. Then, press the Leash Power button to enter the calibration menu. The Leash will buzz and vibrate to confirm and the Yaw and Orbit lights will turn yellow.

3. Press the Yaw button to navigate through the calibration menu until the Yaw and Orbit lights are teal (normally reached after two presses).

4. Press the Orbit button to start the calibration.

WARNING: THE MOTORS WILL START SPINNING

5. The Fotokite will hover slightly. Simply hold it by the string at about 5-10 cm from the flight unit. Move as little as possible.

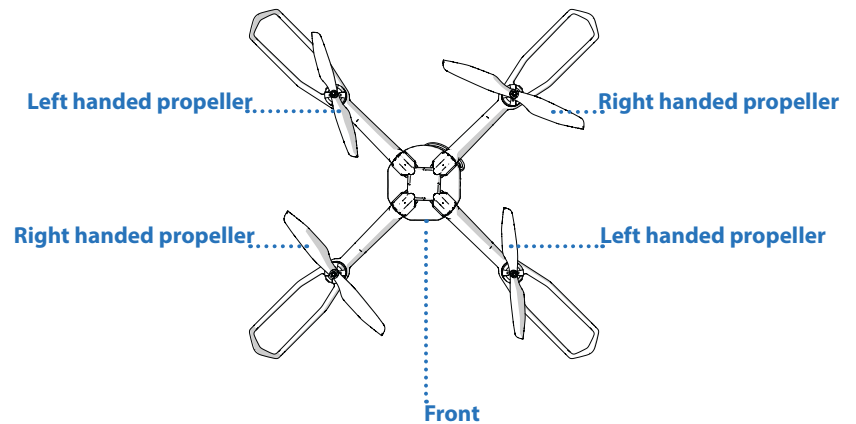
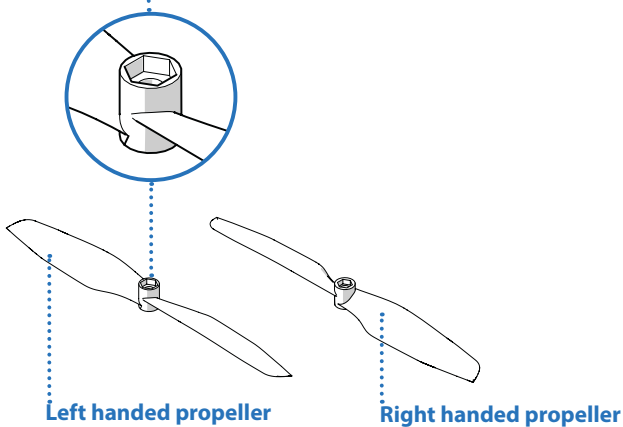
6. The 4 lights situated under each arm of the Fotokite will turn red when the calibration starts. They will change color gradually as the calibration progresses, going from red, to orange, to yellow, to green.

7. When the calibration is complete, the 4 lights will turn blue. Additionally, the Leash will buzz and vibrate. Grab the Fotokite and turn it off to complete the procedure.

The Fotokite uses two types of propeller; left handed propeller, and right handed propeller. These must be fitted to the correct motor for the Fotokite to fly. Each Propeller turns in a different direction, and as such has to be unmounted from the Flight Frame by turning in the opposite direction.

To remove a left handed propeller, turn it clockwise. To remove a right handed propeller turn it counter-clockwise.

Top of propeller, recess for mounting nut



1. Identify the correct propeller (Left or Right) that needs to be replaced.
2. Remove the damaged propeller, by holding the motor in one hand to prevent it from turning, and with the other hand turn the propeller either anti clockwise, or clockwise accordingly.
3. Turn the propeller until the securing nut become free.
4. Fit the new propeller onto the motor ensuring it is in the correct orientation. Fit the securing nut onto the motor shaft by gently turning and into the nut shaped recess on the top of the propeller. Rotate the nut and propeller until it is hand tight. The nut will self tighten upon propeller start up.