

XIRO



XPLORER
XPLORER 
XPLORER 

USER MANUAL V1.2 EN

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SAFETY PRECAUTIONS

Failure to follow these safety precautions may result in injury to yourself and others.

- Keep your face and body as well as all spectators away from the rotating plane of the blades whenever the battery is connected. Keep loose clothing, shirt sleeves, ties, scarfs, long hair or loose objects such as pencils or screwdrivers that may fall out of shirt or jacket pockets away from the rotors. The spinning blades of a model quadcopter can cause serious injury. When choosing a flying site for your Xplorer, stay clear of buildings, trees and power lines. AVOID flying in or near crowded areas. DO NOT fly close to people or pets. Maintain a safe distance from the drone.
- Your Xplorer should not be considered a toy. Because of its performance capabilities, the Xplorer, if not operated correctly, could cause injury to you or spectators and damage to property.
- DO NOT alter or modify the model. Doing so may result in an unsafe or non-flyable model.
- When and if repairs are necessary, you must correctly install all components so that the model operates properly on the ground and in the air. Please check the operation of the model before every flight to ensure that all equipment is operating and that the model has remained structurally sound. Be sure to check propellers before each flight. Replace them if they show any signs of wear or fatigue.

KNOW BEFORE YOU FLY

As a new owner of an unmanned aircraft system (UAS), you are responsible for the operation of this model and the safety of those around you. Please contact your local authorities to find out the latest rules and regulations.

knowbeforeyoufly.org faa.gov/uas



FOLLOW RULES FOR SAFE OPERATION OF FPV AIRCRAFT

Always follow the AMA Safety Code when operating model aircraft. Visit the Academy of Model Aeronautics: www.modelaircraft.org and search for "FPV 550" and read "Document 550 – Utilizing First Person View Systems" to learn about the safe operation of FPV "First Person View" systems in model aircraft.



BATTERY WARNINGS

- ALWAYS unplug your battery from either the charger or drone after use.
- NEVER store your drone with the battery plugged into the drone.
- DO NOT attempt to charge your battery if it becomes swollen or hot.
- The Xplorer does not have a voltage cutoff/failsafe. When the LEDs begin to flash, land the drone and disconnect the battery.
- It is best to store your batteries in a cool, dry location at 1/2 charge. Storing a fully discharged battery may cause irreversible damage to the battery.
- NEVER disassemble, puncture or modify the battery pack in any way.
- NEVER allow the battery temperature to exceed 150° F [65° C].
- If your battery begins to swell or "puff" during charge or discharge or becomes damaged in any way, stop using it.

Charge Smart Flight Battery and Remote Control

Prior to flying your new Xplorer, it is strongly recommended that you completely familiarize yourself with the drone as well as the complete contents of this manual. This will ensure many safe and pleasant flights and experiences.

- Firstly, we recommend watching our tutorial videos to show you the correct and safe way to use your Xplorer. **Please visit www.xirodrone.com/video/xplorer.**

CHARGING THE BATTERIES

- You will note that there are two batteries included with the Xiro Xplorer; one in the transmitter and a flight battery for the model. Both batteries should be charged using the supplied battery charger. DO NOT use any other chargers to charge the flight battery.

Charger

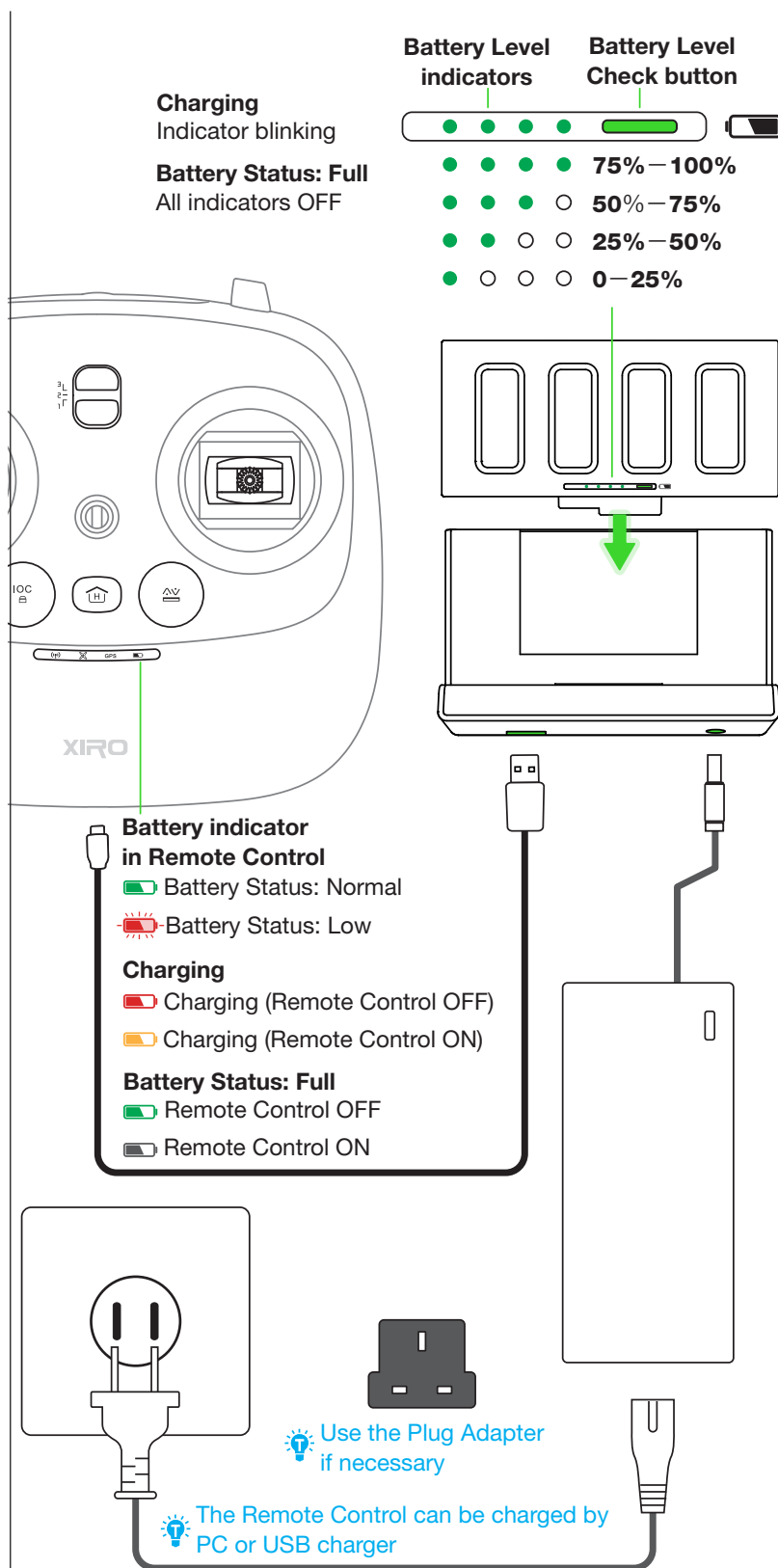
- Remove the charger and the charger accessories from the box labeled “Power Pack”.
- After you’ve attached the power cord to the AC adapter, plug the other end of the AC adapter into the charger base. Plug the power cord into the AC power source. The LED on the AC adapter should be solid green. Insert the appropriated end of the USB cord into the USB port on the rear of the charge base.

Charging the Transmitter Battery

- When fully charged, the transmitter battery should provide approximately two hours of operational usage. It is strongly suggested that the battery is completely charged prior to each day’s flights. To do so:
 - > Remove the transmitter from the box labeled “Remote Control”.
 - > Plug the remaining end of the USB cord (micro) into the USB receptacle on the bottom of the transmitter, as shown. The battery indication LED will glow red while the battery is charging, or when the battery status is low. Once the battery has been fully charged, this LED will change to green, indicating that the transmitter is ready to use. Please make sure that the transmitter’s power switch is turned to the OFF position when charging.
- For more information on the status of the transmitter battery, please reference the “Battery Indicator Information” section located elsewhere in this manual.

Charging the Flight Battery

- The flight battery (also might be referred to interchangeably as a Smart Battery within this manual) for the Xiro Xplorer is a Lithium Polymer (commonly referred to as a LiPo) battery. Used properly and with caution, the battery is very safe and will provide many, many hours of pleasant and trouble-free operation. That said, this battery should be treated very cautiously to prevent any difficulties. Please refer to the section on the “Smart Battery Safety Guidelines” for additional information on how to do so.
- There are four LEDs on the battery. When in the charge base, the LEDs indicate the current charge status of the battery. If all four are lit, the battery is charged completely (100%). If only one is lit, the battery is at (or below) 25% of the charge capacity.

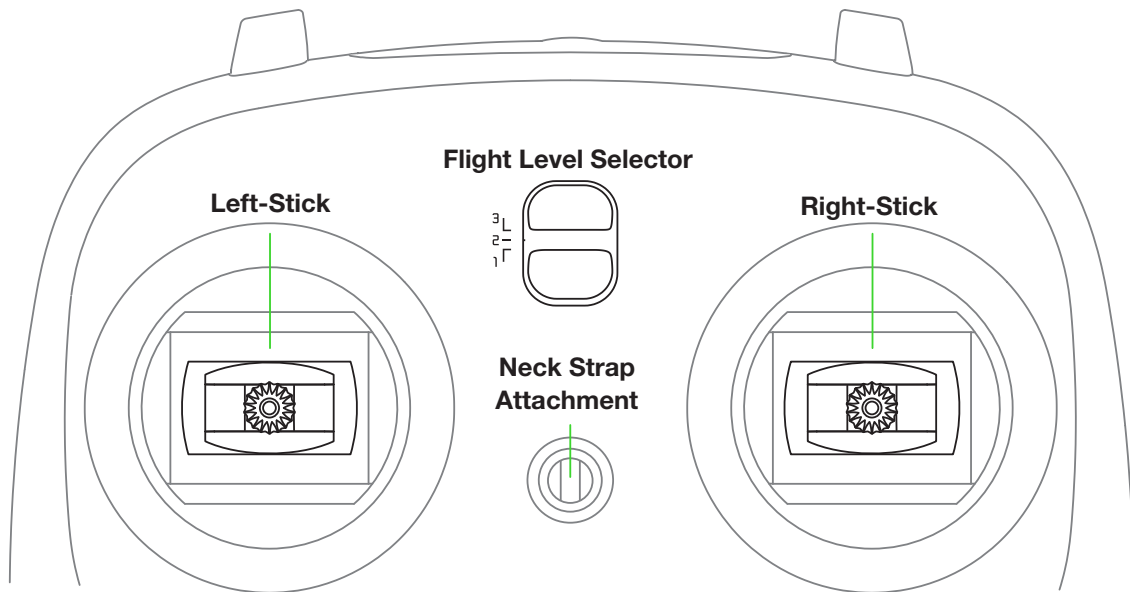


- To determine the battery charge status outside of the charge base, simply press the green button located next to the LED indicators. Again, if all four LEDs are lit, the battery is 100% charged and ready for flight.
- For more information on the status of the flight battery, please reference the “Battery Indicator Information” section located elsewhere in this manual.

Smart Battery Safety Guidelines

- Only use the Xiro battery and Xiro battery charger for the Xplorer. Xiro does not take any responsibility for damages caused by third party batteries or battery chargers.
- **Do Not** charge the battery immediately after a flight; allow the battery ample time to cool down prior to charging.
- Replace the battery if it has been discharged over 300 times.
- Never recharge or use a visually defective/damaged battery.
- When not using the battery for a long period of time, please make sure it is at 50% charge or less.
- Discharge the battery completely once every 20 charge/discharge cycles. This will help to optimize battery life.
- Please deliver used batteries to designated disposal locations.
- If battery acid gets on your skin or in your eyes, immediately wash your skin or eyes with fresh water for at least 15 minutes and contact medical personnel immediately.
- To put out a battery fire use sand or use a dry power extinguisher that is designed for this application. **DO NOT** use water.
- **NEVER** leave a charging battery unattended.
- It is suggested that batteries be both stored and charged in a fireproof container.
- **While the batteries are charging, it is a good time to go through this manual and familiarize yourself with the Xplorer, the transmitter and the gimbal unit (if applicable).**

Learning Your Transmitter



- One of the most important components of the Xplorer is the transmitter that is supplied with this drone. We've designed this transmitter with you, the user, in mind. The features and functionality of this controller are very intuitive and relatively easy to master after a few flights. However, it will be beneficial to review the information below before taking off with the Xplorer.
- Looking at the front of transmitter you will note that there are two sticks, three push-buttons and a selector with numerical indicators to the left (1, 2, 3). The purpose and functionality of these items will be covered in this section.

TRANSMITTER STICK INPUT

- The sticks on the front of the transmitter are used to control some of the functions of the drone's flight. They are also utilized to change the flight modes, alter the compliance configuration and arm/disarm the motors.
- For the purposed of this manual, we will utilize the Mode 2 flight mode, as this is the most popular in the North American market. Mode 2 is also the default mode for the transmitter.
- Please note that this information is conveyed assuming that the front of the drone is pointed away from the pilot. The front (nose) of the drone is indicated by the blinking triangular power button on top of the drone when the Xplorer has been turned on.

- In Mode 2, the left stick will control the throttle (causing the Xplorer to rise or descend) and the yaw input. Advancing the throttle stick away (towards the top of the transmitter) increases the propeller speeds and will, therefore, cause the Xplorer to climb accordingly. Alternatively, pulling the throttle stick towards the bottom of the transmitter reduces the propeller RPMs and will cause the drone to descend.
- Once the Xplorer has landed and you have pulled the throttle stick all the way down and hold it for approximately three (3) seconds, the motors will disarm (stop the rotation accordingly).
- If the left stick is moved to the left, the front of the Xplorer will also rotate to the left (counter clockwise). Conversely, moving this stick to the right will move the nose of the Xplorer in a clockwise direction.
- The stick on the right side of the controller is responsible for moving the Xplorer forward/backward and for banking/angling the drone to the left or right, as the case may be. Moving the right stick to the top of the transmitter moves the Xplorer forward; pulling back will move the Xplorer in a rearward direction.
- Please see the sections entitled Changing the Transmitter Operation Mode and Compliance Version Configuration for additional information on stick input effects.

BUTTON INPUTS

As previously mentioned, there are three buttons on the face/front of the transmitter, each with a unique function.



IOC (Intelligent Orientation Mode)

- IOC is Intelligent Orientation Control. IOC makes drone flying easier, because there is no need for the pilot to know the drone's orientation to control its movements. If you do not use IOC mode you have to pay attention to the orientation of the drone as it moves through the sky.
- In IOC mode, the drone always goes in the same direction as the stick input. For example, in IOC mode when you push the right stick to the right the drone will always move to the right across the sky.
- We recommend newcomers use IOC because it makes flying much more intuitive.
- To activate IOC, press the button. The button's green LED will glow, indicating that this function is active. To deactivate, press the button once again. Once you push the IOC button, you can leave it on for the duration of the flight.

It is important to note that this is a location-based function. As such, it is only applicable when there is a GPS signal available with six or more satellites located.

Return Home

- As the name of this function implies, the Return Home button causes the Xplorer to return to the Home point (take-off point). This point is the area from which the drone was powered up and took off.
- When you are ready to have your Xplorer return home, press the Return Home button. The button's green LED will glow accordingly and the Xplorer will return home.
- After landing the Xplorer and disarming the motors, press the Return Home button once again to reset.

AUTO TAKE-OFF AND LAND

- The third button on the face of the transmitter, as noted graphically on the button, is used to either take off or land the Xplorer automatically.

Auto Take-off:

- If the Xplorer is on the ground, pressing the button will activate the automatic take-off function. When active, the green LED on the auto take-off button will glow. The Xplorer will increase the propeller speeds and slowly take off from the present location. It will then hover at a height of approximately three (3) meters above the ground.
- Press the auto take-off button once again to resume manual control of the Xplorer's functions.

It is important to note that this is a location-based function. As such, it is only applicable when there is a GPS signal available and the transmitter is in the GPS Flight Mode.

Auto Land:

- With the Xplorer hovering over the desired landing point, press the Auto Take-off/Auto Land button to activate the automatic landing function. When active, the green LED on the button will glow. The Xplorer will then decrease the speed of the propellers and descend slowly and land as desired.

It is important to note that this is a location-based function. As such, it is only applicable when there is a GPS signal available and the transmitter is in the GPS Flight Mode.

Resetting the Button Inputs

- By resetting the buttons it allows them to be ready for their next function, whether it be taking off/landing or Returning Home/Unlocking the drone.
- If the Return Home button is depressed it will not allow you to unlock the drone for take-off.

INDICATOR LIGHTS ON THE FRONT OF THE TRANSMITTER (from left to right)

- There are four LEDs on the face of the transmitter. These



LEDs will illuminate when the transmitter is powered on (or in the case of the battery status indicator, when the transmitter is charging as well). The indicators and conditions are as follows:

Wi-Fi Indicator

- Green: Gimbal and Range Extender connected
- Red: Gimbal and Range Extender connected, but not seeing Wi-Fi signals
- Not Lit: No Range Extender

Aircraft Connection Indicator

- Green: Aircraft Connected
- Red: Aircraft Alarm

GPS Indicator

- Green: GPS Mode
- Red: Attitude Mode
- Red Aircraft Connection Indicator and Red GPS- Aircraft Disconnected

Transmitter Battery Indicator

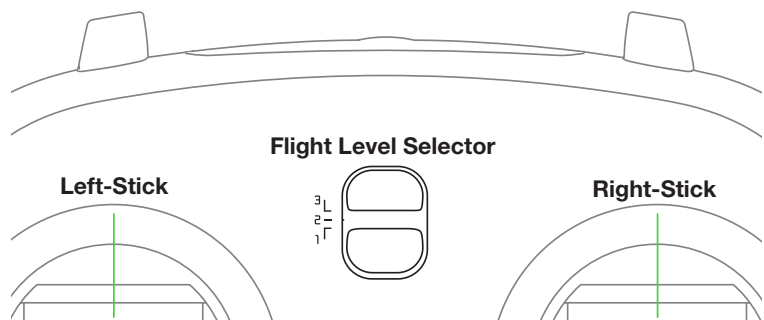
- **Transmitter ON:**
- Green: Battery Status: Normal
- Red: Battery Status: Low

Transmitter Charging:

- Red: Battery Status is Charging (Transmitter OFF)
- Yellow: Battery Status is Charging (Transmitter ON)

FLIGHT LEVEL SELECTOR

Near the top of the transmitter face is the Flight Level Selection slider switch. This might also be referred to as the Flight Mode elsewhere in this manual. It is important not to confuse flight mode with transmitter mode as they are very different from each other.



As the name suggests, this is used to determine the flight level, or performance, of the Xplorer. It is strongly suggested that users select flight level one (1) until they become familiar with the operation of the drone. As noted below, this will limit the height, distance and response of the Xplorer accordingly. Once the user has become more familiar with the inputs and performance, flight level two (2) and three (3) will allow increased performance.

- Flight Altitude 50 Meter limit
- Flight Distance 100 Meter limit
- Max Horizontal Speed 2 m/s
- Max Vertical Speed 2 m/s
- Attitude Mode Take off is prohibited
- GPS Flight Mode enabled

- Flight Altitude 120 Meter limit
- Flight Distance 300 Meter limit
- Max Horizontal Speed 6 m/s
- Max Vertical Speed 2 m/s
- Attitude Flight Mode is enabled
- GPS Flight Mode enabled

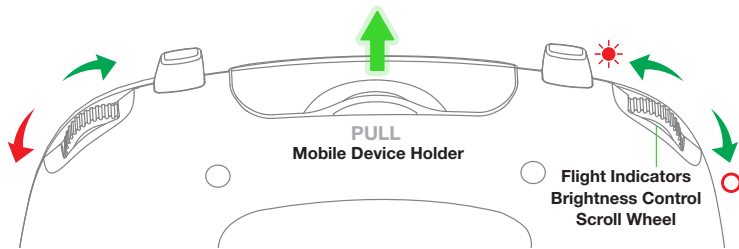
- Flight Altitude 120 Meter limit*
- Flight Distance 600 Meter limit*
- Max Horizontal Speed 8 m/s
- Max Vertical Speed 3 m/s
- Attitude Flight Mode is enabled
- GPS Flight Mode enabled

SCROLL WHEELS

- On the top of the transmitter, there are two scroll wheels (one on the left “shoulder” of the transmitter and the other on the right), as well as the recessed mobile device holder.

- The left scroll wheel is used to adjust the brightness of the LEDs on the Xplorer. Rolling the scroll wheel clockwise will brighten the LEDs; rolling the scroll wheel in a counter-clockwise direction will decrease the brightness, and will turn the LEDs off altogether, if so desired.

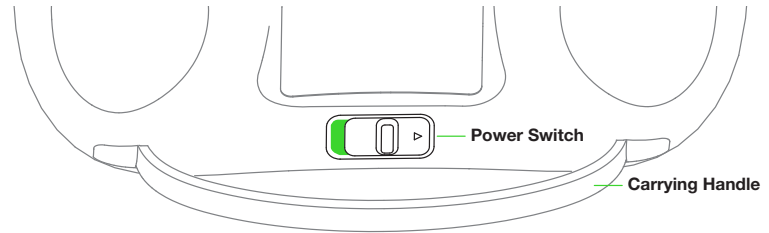
- The right scroll wheel is used to control the pitch of the camera gimbal, if applicable.



- Situated between the two shoulder scroll wheels is the mobile device holder. To access this item, gently pull upwards in the recessed area of the holder as indicated. This will extend the retractable unit.
- The top of the mobile device holder is spring-loaded and is capable of holding mobile devices up to 78mm X 100mm (3.07" x 3.94").
- Insert the desired mobile device accordingly, making sure that the holder firmly grasps the device.
- Adjust the mobile device holder to attain the desired position. When properly positioned, use the supplied wrench to tighten the composite joint, using care not to over-tighten. The wrench can be found in the "Propellers/Tools/Spare Parts" package.

TRANSMITTER REAR

Power Switch



Very close to the bottom/rear of the transmitter is the Power Switch. This switch, as the designation indicates, determines whether the transmitter is ON (active) or OFF. It is strongly suggested that the transmitter be turned ON prior to powering up the Xplorer. Additionally, we suggest that the user always ensures that the throttle stick is in the neutral (center) position before turning on the Xplorer.

Near the power switch is the transmitter's built-in carrying handle. This handle may also be used to allow the transmitter to stand upright.







Charge Port

On the very bottom of the transmitter is the transmitter's micro USB port. This port is used to charge the transmitter's battery. Information about charging the transmitter is found elsewhere in this manual. Please refer to the appropriate section for more information about the charging procedure.

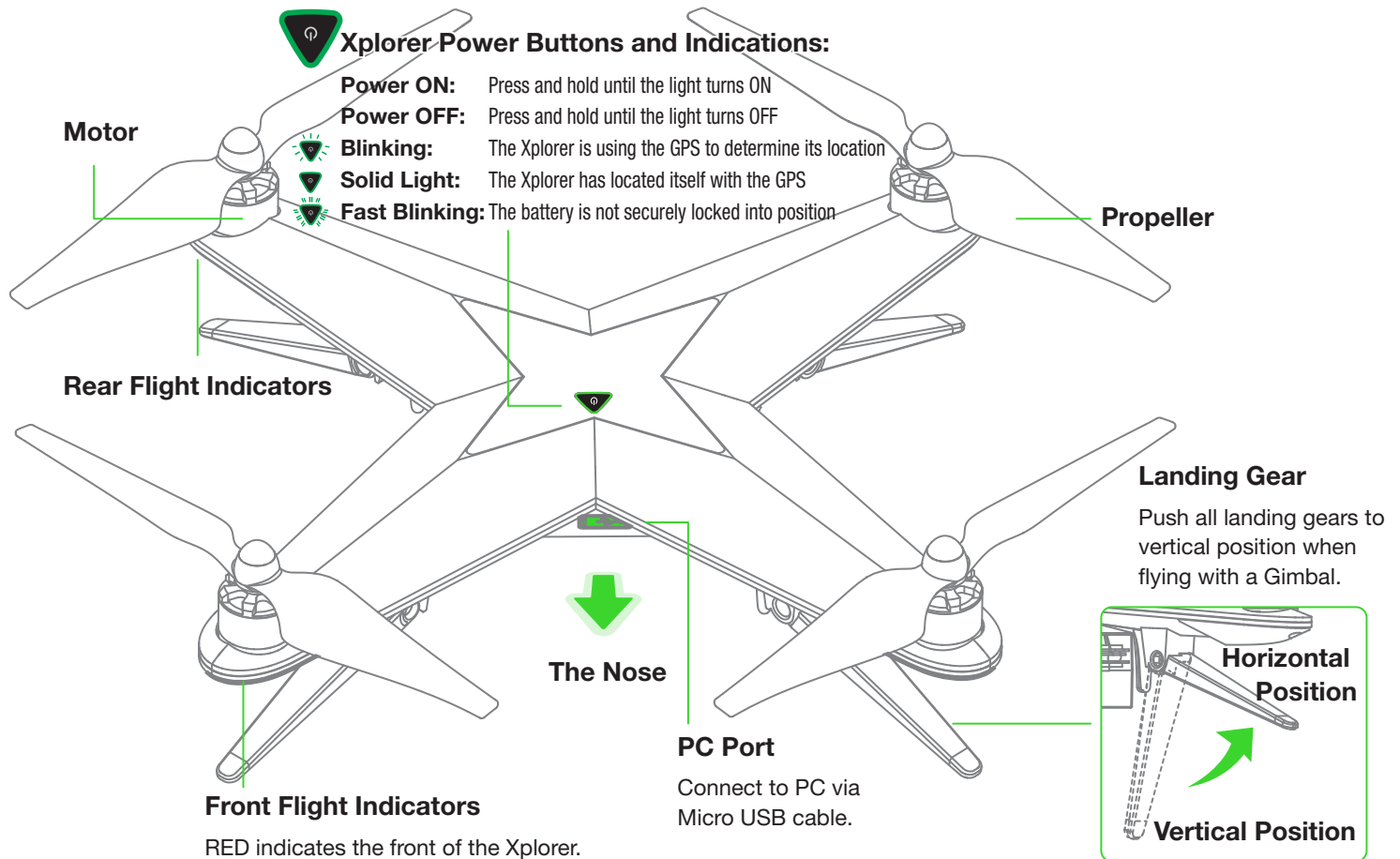
The rear LEDs are used as a visual indicator of the Xplorer's flight status. Please refer to the information below.

Rear Flight Indicators

Indicator	Status
Status	OK
Status	Checking
GPS Flight Mode	On
Attitude Flight Mode	Off
IOC status	On

Rear Flight Indicators	Status: Not OK
	Return Home/Disconnected with transmitter
	Battery: Low (Return home ASAP)
	Battery: Critical (Descend slowly)
	GPS failure (Reboot)
	Compass failure (Recalibrate)
	Gimbal connection failure

Assembling Your Xplorer



Understanding the Xplorer and its features and functions is also of great importance for enjoying successful flights with your drone.

ASSEMBLING THE XPLOER

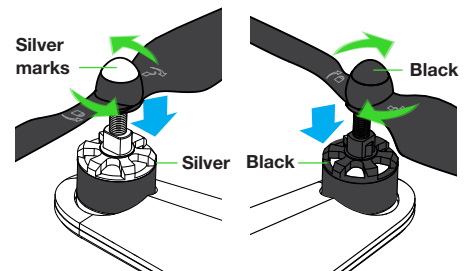
- Note: it is suggested that inexperienced users install the Xplorer propeller guards (if applicable) until they become more familiar with the drone and its flight characteristics. These guards will reduce the likelihood of propeller damage due to less-than-ideal landings, etc. The propeller guards are offered separately and may be purchased from wherever the Xplorer was purchased.

PROPELLERS

- The propellers are located in the packaged marked "Propellers/Tools/Spare Parts".
- It should be noted that the propellers are marked according to the brushless motor for which they are intended to be used. The propellers with the silver hub are meant to be attached to the corresponding brushless motor (which is also marked with silver). To further prevent any confusion or improper installation, the diameter of the silver hub and black hub are slightly different. This will prevent inadvertently attaching the incorrect propeller to a mismatched brushless motor.
- Simply put, silver to silver and black to black.
- Additionally, the propellers are self-tightening. When attaching them to the appropriate motor, please ensure that they are firmly tightened. However, it is not necessary (nor recommended) to over-tighten the propellers.

Attaching the Propellers

- As previously noted, it is imperative to place the correct propeller on the correct motor. There are two iterations of the propellers and two iterations of the motors. Please match them accordingly.
- Place the propeller on the motor shaft, grasp the motor firmly, and turn in the proper direction as indicated on the top of the propeller.



Removing the Propellers

- Removing the Xplorer propellers is very simple and quick. Grasp the motor and spin the propeller in the direction as indicated on the top of the propeller. Ensure that you are spinning the propeller in the unlock direction and not tightening it further.

Important Notes:

- Use only the propellers manufactured by Xiro that are designated for use with the Xplorer.
- DO NOT use broken or otherwise damaged propellers.
- Always use extreme care when attaching or removing propellers.
- Ensure that the Xplorer is away from all person and objects when preparing for flight and during the flight itself.
- It is a good practice to not install the flight battery until the propellers, gimbal, etc. have all been installed.

This will prevent any inadvertent start-ups.

- It is suggested to use a glove or some other form of hand protection when installing or removing the propellers on the motors. The edges of the propeller blades may be sharp and could lead to cuts.

GIMBAL

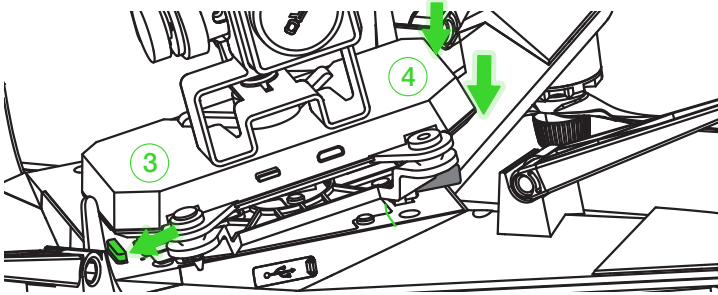
- The Xplorer V and the Xplorer G both include a 3-axis stabilized gimbal unit that may be used to capture the perfect video or still photo. The gimbal ensures that the camera is secured to the drone and that it remains level and stable throughout the flight.
- Note: if you have purchased the Xplorer Standard/Basic and will not be using a camera with your drone, please skip this section and proceed to the information on “Installing the Flight Battery”.

Installing the Gimbal

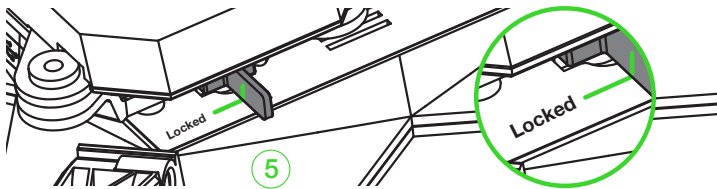
****Note**** The gimbal is a delicate item and needs to always be handled with extreme care. We suggest becoming familiar with the flight and flight characteristics of the Xplorer prior to installing the gimbal and camera unit.

Step 1: If the battery has already been installed on the Xplorer, it will be necessary to remove it from the drone prior to installing the gimbal unit. Once this has been done, place the Xplorer on its back (with the landing gear facing upwards) and position the landing gear so that they are in the horizontal position. That is, each of the legs should be positioned so that they are closest to the LED lamps on the drone.

Step 2: While grasping the gimbal securely, align the receptacle on the bottom of the Xplorer with the pins on the gimbal and insert the gimbal into the bottom of the Xplorer. Additionally, ensure that the tab on the gimbal is inserted into the slot on the Xplorer. Gently push the gimbal down, making sure to listen for the audible click.

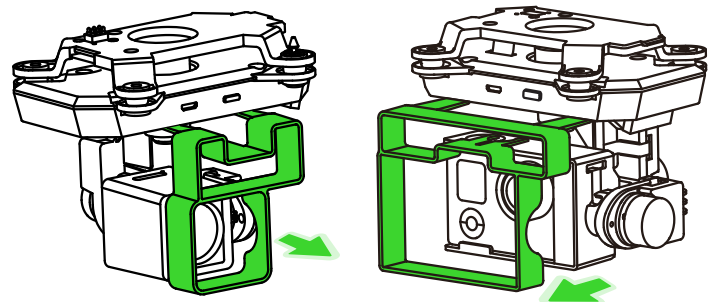


Step 3: Visibly inspect the locking mechanism to ensure that the gimbal is securely attached to the Xplorer. Make sure the gimbal pull tab shows in the locked position.



Step 4: Install/Reinstall the battery and position the landing gear to the vertical position. This provides clearance for the camera and the gimbal.

Step 5: The gimbal has been shipped with a composite gimbal protector to ensure that the unit does not get damaged in transit. Remove the protector from the gimbal by pulling it away from the gimbal. When removed, the gimbal will move freely. Please be cautious so that it is not damaged.



Xplorer V gimbal

Xplorer G gimbal
(optional camera shown)

XPLORER CAMERA INSTALLATION

Included with the Xplorer V, and available as an option item, Xiro has an action camera that is capable of capturing video and still photographs. The Xplorer G enables the user to install another manufacturer's camera in the supplied gimbal unit.

If using an action camera other than the Xiro-supplied unit, please install it at this time. Ensure that the desired camera will fit within the camera frame on the gimbal. Align the camera body and the pins on the gimbal frame and then slide the camera into the camera body so that the pins are firmly inserted into the camera's receptacle. The camera is now firmly attached to the gimbal unit.

Please note: the Xplorer's gimbal cannot control other action cameras. It is only able to support the real-time preview, etc.

Connecting the Camera

- Please go to your app store, download the Xirodrone Application for your mobile device, and refer to the “Xirodrone Application” section of this manual for additional information.
- Regardless of the camera utilized with your Xplorer, the steps to connect them are the same. Please follow the steps as listed below:

Step 1: Power ON the transmitter.

Step 2: Following the safe practices noted throughout this manual, turn ON the Xplorer.

Step 3: When the Wi-Fi connection indicator turns green, enable the Wi-Fi in the mobile device and select “Xplorer XXXXXX” from the Wi-Fi list.

Step 4: Open the Xiro App on your mobile device.

Step 5: Scroll through the Xiro product offerings until the applicable Xplorer is shown. Then press the “Start Aerial Photography” button in the application.

****Note**** If you want to rename the Range Extender SSID this can be done in the App. To do so, please reference the information found elsewhere in this manual.

Lens Filter

The camera supplied with the Xplorer V includes a lens filter that is already in place on the camera as shipped from the factory. This filter should be used on sunny days to eliminate some of the brightness from the videos/images. If it is sunny, please leave the lens filter in place and only remove the lens cover itself. To remove the lens filter simply pull outwards on the lens cap. The lens filter is attached magnetically, so it should be fairly easy to remove.

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Guideline

Flying Your Xplorer

PRE-FLIGHT FOR THE XPLORES

- Of course, flying the Xplorer is fun and exciting. However, prior to doing so we strongly recommend adhering to the pre-flight check list that follows. Doing so will ensure a safe and pleasant flying experience.

Step 1: Determine if you will be flying with, or without, the Xplorer's camera/gimbal unit.

- If flying without the Xplorer gimbal, please make sure the landing gear are in the horizontal position. That is, the gear should be positioned so that they are extended towards the drone's body. This will lower the center of gravity and prevent any inadvertent tip-overs during take-offs and landings.
- If flying with the gimbal, please make sure the landing gear are in the vertical position. This will provide ample clearance for the gimbal and camera assembly and prevent any damage from occurring to these components.
- Additionally, if flying with the gimbal installed, please confirm that the gimbal is securely locked into place.

Step 2: Confirm that the battery is locked into position as described elsewhere in this manual.

Step 3: Ensure that you have good weather to fly in and that the area is safe and free of people and obstructions before flying. Failure to do so could result in an unenjoyable flying experience, damage to the Xplorer, etc.

Step 4: Turning on the transmitter and power to the Xplorer:

- Slide the transmitter's power switch to the ON position.
- To power up the Xplorer press the triangular button on top of the drone until it turns green.

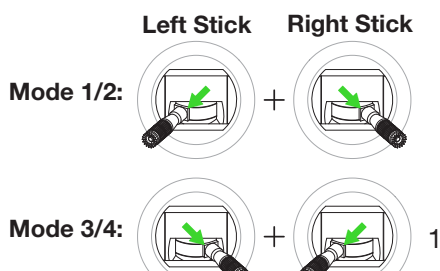
Flight Precautions

- Do not fly the Xplorer in severe weather conditions, such as high winds, snow, rain or smog.
- Ensure that the flight path does not have the Xplorer flying over any persons, animals, etc.
- Make sure that there is ample room and a safe area to take off and land the Xplorer. It should be clear of obstacles.
- Flying near tall buildings and steel structures may affect the accuracy of the on-board compass and should be avoided.
- Do not operate your Xplorer in Polar Regions.
- Do not fly your Xplorer in No-Fly zones specified by law enforcement or other such regulations.

Arming/Starting the motors

- With all of the pre-flight checklists completed, it is safe to arm and start the motors for the Xplorer's flight.

Step 1: Ensure that everything and everyone is clear from the Xplorer's propellers. A stick combination command is used to start the motors. For a transmitter configured for Mode



or Mode 2 operation, both sticks have to be moved to the bottom outside corners at the same time. Hold the sticks in this position until the motors are armed and the propellers begin to spin. (If in Modes 3 or 4 then move both sticks to the bottom inner corners.)

Step 2: Once the motors have started, release the sticks simultaneously.

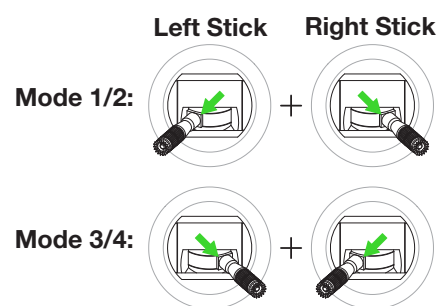
****Note**:** You cannot start the motors when the flight level is set to Level 1 and the Xplorer is in Attitude Flight Mode. The rear indicators will blink rapidly as a reminder.

Stopping the motors

Please note: This will immediately stop/disarm the motors. As such, it is not recommended to do so in flight, unless necessary in an emergency situation. Rather, this should be performed once the Xplorer has safely landed.

Step 1: The same stick combination command for starting the motors is used for stopping the motors. If the transmitter is operating in the Mode 1 or 2 configuration, place both sticks to the bottom and outside corners. (If in Modes 3 or 4 then move both sticks to the bottom inner corners.)

Step 2: Once the motors have stopped, release both sticks simultaneously.



****Note**** Again, do not execute this stick combination command during flight. By doing so you will cause the motors to stop immediately and the Xplorer will fall from the air. Alternatively, with the Xplorer on the ground, hold the throttle stick in the lowest position for approximately three (3) seconds.

FLIGHT TEST

Step 1: After all of the pre-flight checklist, etc. have been completed, place the Xplorer in a wide-open area with the front of the drone directly facing away. That is, the smart battery should be closest to the pilot.

Step 2: Select an appropriate flight level (1, 2 or 3).

Step 3: Power on the transmitter, ensuring that the LED indicators are as desired.

Step 4: Power on the drone.

Step 5: Wait until the rear light indicators blink green for GPS mode or yellow for attitude mode, as dictated by the selected flight level.

Step 6: Calibrate the drone's compass following the procedures noted elsewhere in this manual.

Step 7: Arm/Start the motors as described previously. Be sure to follow all safe practices when doing so.

****Note**** Please keep as least 5 meters away from the Xplorer during take-off and landing.

TAKE-OFF AND LANDING USING THE GPS FLIGHT MODE

- With the GPS flight mode active, it is possible to allow the Xplorer to automatically take off and/or land as desired.

Auto Take-off

- Ensure that the Xplorer and the transmitter GPS indications are positive. The rear LEDs on the Xplorer should be blinking green; the transmitter GPS LED should be a solid green.
- Press the “Auto Take-off/Land” button.
- The Xplorer will take off and reach an altitude of 3 meters. When it has done so, please press this button once again. This resets the function for the auto landing.

Auto Landing

- With the Xplorer in flight, begin to hover over the desired landing spot. This should be a spacious area and should also be a flat surface. This will prevent any inadvertent tip-overs.
- Once the drone has settled into the hover, press the “Auto Take-off/Land” button.
- The Xplorer will slowly descend and land. Once it has done so, the motors will automatically disarm and shut themselves off.
- Press the button again after landing to reset it for a later take-off.

TAKE-OFF AND LANDING IN ATTITUDE FLIGHT MODE

Take-off

- Some users will find that it is easier and more precise to ‘pinch’ the stick between the thumb and forefinger accordingly. Others prefer to simply use their thumbs for controlling the transmitter’s input. It is a matter of personal preference and we suggest trying both to determine which is better suited for each individual pilot.
- Again, following all previously described safety precautions and safe practices, gently push the left stick (throttle) on the transmitter forward slowly to take off.

****Note**** Again, this manual is written based on using the Mode 2 transmitter. If this transmitter mode has been changed, it will impact the stick inputs accordingly.

Landing

- Gently and slowly decrease the throttle input by pulling the left stick back, towards the bottom of the transmitter. The Xplorer will slowly start to descend and will eventually land.

****Note**** Once the Xplorer is on the ground, if the throttle stick is placed in the lowest position (towards the bottom of the transmitter) for three seconds, the motors will be disarmed and stop rotating.

- Once the Xplorer has reached the ground, the motors will stop automatically after landing (when using the Auto Land function).

****Note**** If Flight Level 1 is selected on the transmitter, the Xplorer cannot take off in Attitude Flight Mode. This is a safety precaution for entry-level drone operators to prevent any mishaps. As an indicator, the rear LEDs on the Xplorer will rapidly blink yellow.

- It is suggested that the users NOT attach the gimbal for the test flight or for training flights.
- Use the Xiro App to further your flight training and increase your skills.
 - This can be found under My Home Page, then Settings on the App.
 - Click Flying College, then you will enter the basic Flight Maneuvers.
 - Swipe down to go through these.

- Swipe Right to move to the advanced Flight Training and Right again to get to Special Flight Training.

LOST CONNECTION FUNCTIONALITY

- As an added safety precaution, we’ve included a function that will prevent the Xplorer from performing unwanted maneuvers should it lose connection with the transmitter’s control inputs. The manner in which this function is dictated by whether the pilot is using the GPS Flight Mode or the Attitude Mode. Please see the appropriate section below for additional information:

In GPS Mode

- Should the Xplorer lose connectivity with the transmitter control inputs, it will automatically return to the point where it last had a strong connection with the transmitter.
- It will hover in this known position for a period of 15 seconds, during which it will attempt to recover the connection with the transmitter. If this attempt is unsuccessful, the Xplorer will then begin to return to the home point.
- If connection with the transmitter resumes while the Xplorer is on the path to the home point, the Xplorer will cease movement and begin to hover. The user may then assume full control at that point.

In Attitude Mode

- Should the Xplorer lose connection with the transmitter, it will start to drift as it attempts to constantly reconnect with the transmitter. When it does so, the drone pilot will assume complete control of the Xplorer.
- If battery power is low and the Xplorer has not regained connectivity, the drone will descend accordingly.

****Note**** If connection is lost, try walking in the direction of the Xplorer. Occasionally, reducing the distance between the Xplorer and the transmitter can help re-establish the connection.

BATTERY INDICATOR INFORMATION

Low Battery Level Warning

- The Xplorer will trigger several low battery warnings when the battery capacity is low.
- **Transmitter:** Intermittent vibrations will be felt in the transmitter; the battery LED, furthest on the right, will turn red.
- **Xplorer:** The rear Flight Indicator lights will slowly blink red.
- **App:** A warning message will appear on the screen.

Critical Low Battery Level

- **Transmitter:** The transmitter will begin vibrating constantly; the indicator light will be red.
- **Xplorer in GPS Mode:** The rear Flight Indicator lights will begin blinking rapidly (red). Additionally, the Xplorer will begin to descend and automatically land if the distance between the Xplorer and the home point is more than 100 meters. If this distance is less than 100 meters it will return home prior to landing.
- **Xplorer in Attitude Mode:** The rear Flight Indicator lights will begin blinking rapidly (red); the drone will begin to descend and automatically land in the location in which it is currently flown.

****Note**** The user can always recall the Xplorer by pressing the “Return to Home” button when the battery runs low. The Xplorer will start flying home, and will land when it gets back to the home point, or it will land where the battery goes flat.

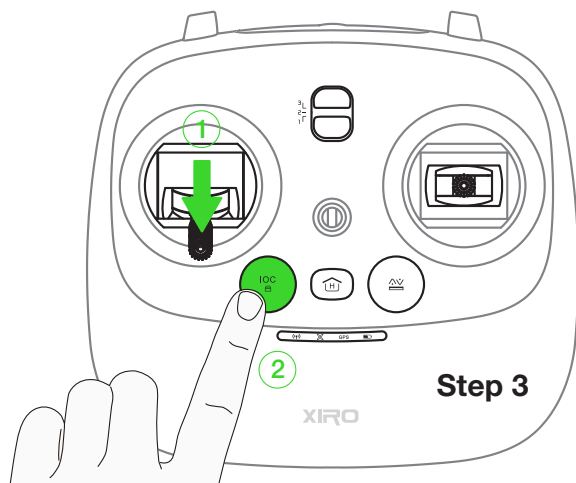
COMPASS CALIBRATION

- One of the most important facets of drone flight is to ensure that the drone is properly calibrated. Doing so will greatly increase the enjoyment and satisfaction of the flights and the drone's performance. This frequently overlooked task reduces drift and makes sure that there aren't any compass issues during flight. We strongly suggest doing so prior to each flight, but at the very least doing so before each flight when changing flying sites/locations.
- When doing so, avoid areas of potential magnetic interference or large metal objects or structures. It is highly recommended that all propellers be removed prior to calibration to prevent accidental engagement.

Step 1: Place the Xplorer on a horizontal surface and press the drone's ON button.

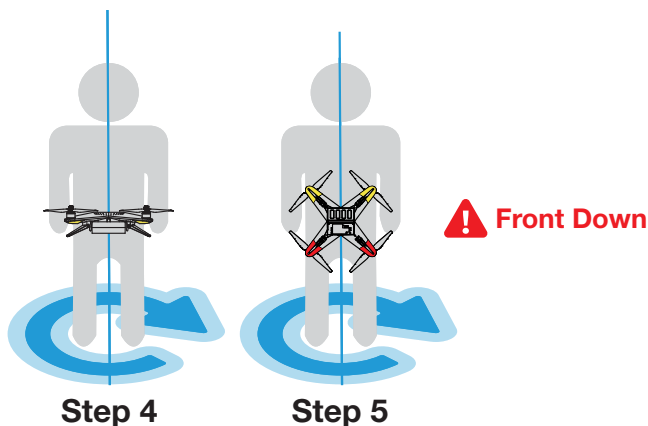
Step 2: Wait until the Rear Flight Indicator blinks green for GPS Mode, or yellow for Attitude Mode.

Step 3: Pull down on the Throttle stick all the way to the bottom and hold it there while pressing the IOC button in three cycles ON/OFF, then release the throttle stick. The Rear Flight Indicator will turn solid green to show that you can now start to calibrate.



Step 4: Rotate the Xplorer horizontally 720 degrees until the Rear Flight Indicators are rapidly blinking yellow. (The Rear Flight Indicators will be solid green while rotating.)

Step 5: Next, rotate the Xplorer vertically 720 degrees (nose down) until the Rear Flight Indicators slowly blink green or yellow. (The Rear Flight Indicators will be solid yellow while rotating.)



****Note**** If the calibration failed the Indicators will flash red and yellow, and you will need to repeat the process.

- Recalibrate when the compass data is abnormal or the Rear Flight Indicators blink red and yellow.
- If the compass is not calibrated you will notice severe drifting during flight and while hovering.
- Be aware that flying in wet (or even cloudy) conditions can lead to a temporary failure of the gimbal. After drying out it will again function normally.

****Note**** If a gimbal motor error is detected or the gimbal protector is not removed after powering up the Xplorer a warning message will appear on the Xiro App camera page.

AERIAL RECORDINGS

- Aerial recording can be performed in any flight mode.
- It goes without saying that images will be much sharper and more vivid in clear, dry weather conditions. Lighting also has a significant impact on the images and videos as well. As such, we suggest always flying in dry and clear weather conditions.
- Adjust the camera settings to get the best picture by using the app.

FINAL CHECK BEFORE FLIGHT

- Are the flight battery and transmitter battery fully charged?
- Is the smart battery mounted securely to the bottom of the Xplorer with the lock in place?
- Ensure that the lens cover has been removed from the camera, if applicable.
- Be sure to remove the gimbal protector and make sure that the gimbal is fully functional, if applicable.
- Ensure that an appropriate micro SD memory card has been installed in the camera, if applicable.
- Prior to take-off, make sure that the Xiro App is connected to the camera.

GPS Flight Mode: with more than 6 GPS satellites available, the Xplorer is ready to fly with all location-based functions enabled.

Attitude Flight Mode: with less than 6 GPS satellites available, the Xplorer is ready to fly in Flight Level 2 or 3 with NO GPS. No location-based functions are enabled.

Home Point: the GPS position that the Xplorer receives after achieving 6 or more GPS satellites. Once 6 or more satellites are achieved the Xplorer will automatically be in GPS Flight Mode.

Return Home: the Xplorer will automatically return to the HOME point.

Return Route: when the horizontal distance between the Xplorer and the HOME point is less than 25 meters, or its height is more than 20 meters, the Xplorer will fly back at its current altitude. When the distance between the HOME point and the Xplorer's position is less than 20 meters the Xplorer will first climb to 20 meters and then return to the HOME point.

****Note**** Inexperienced users should always start in Flight Level 1. It is suggested that an inexperienced user be sure they are in an area that will allow the Xplorer to enter GPS Flight Mode.

COMPLIANCE VERSION CONFIGURATION

- In order to adhere to the local rules and regulations, the Xplorer's transmitter's transmission power levels are adjustable to meet both Federal Communication Commission (FCC) and European Community (EC) regulations. Be sure to configure the transmitter's power output to follow the rules and regulations as they pertain to the region in which the Xplorer is being flown.
- When the transmitter is first turned ON, the GPS and Aircraft Connection LEDs will flash to indicate the current configuration. If these LEDs are flashing green, the

transmitter is in the CE mode; if the LEDs are flashing red, the transmitter complies with the FCC regulations. The FCC configuration allows for a slight increase in the power which enables the Xplorer to be operated at distances up to 600 meters. The CE compliance has a slight reduction in power and the operating distance is approximately 400 meters.

Adjusting the Compliance Version Configuration

- **Step 1:** Ensure that the transmitter's power is OFF.
- **Step 2:** Move the right stick to the upper right corner and hold. Simultaneously, move the left stick to the upper left corner and hold.
- **Step 3:** With both sticks in the positions as noted above, turn the transmitter ON.
- **Step 4:** To comply with CE regulations, move the camera pitch scroll wheel (right shoulder of the transmitter) clockwise. Moving this scroll wheel counter-clockwise will adjust the transmitter to meet FCC regulations.
- **Step 5:** With the transmitter adjusted to the desired configuration, turn OFF the transmitter. This will finalize the setting.
- **Step 6:** Turn ON the power once again and observe the respective LEDs to ensure that the transmitter has been adjusted accordingly.

TRANSMITTER OPERATION MODE

- As noted elsewhere in this manual, the transmitter defaults to Mode 2 operation. This is the most popular and widely used method of control. If this is not the desired mode, the transmitter allows you to choose amongst the other three operational modes.
- The mode of operation is indicated by the Aircraft Connection and the GPS LEDs when the transmitter is turned ON.

Changing the Transmitter's Control Operation Mode

Step 1: Ensure that the transmitter's power is OFF.

Step 2: Move the right stick to the upper left corner and hold. Simultaneously, move the left stick to the lower right corner and hold.

Step 3: With both sticks in the positions as noted above, turn the transmitter ON.

Step 4: Press the Return to Home button to change the operational mode of the transmitter, observing both the Aircraft Connection and GPS LEDs. Flight Modes are indicated in the diagram below:

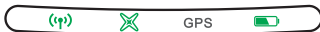
Mode 1 Indicator



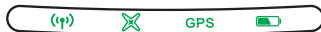
Mode 2 Indicator



Mode 3 Indicator



Mode 4 Indicator



Step 5: With the transmitter adjusted to the desired configuration, turn the transmitter OFF. This will finalize the setting.

Step 6: Turn ON the power once again and observe the respective LEDs to ensure that the transmitter has been adjusted accordingly.

Range Extender SSID Information

- The range extender for the Xplorer is used to increase the transmission distance. The range extender has its own Service Set Identifier (also known as SSID). This is a unique set of alphanumeric characters that are used to connect the range extender to the Xplorer accordingly.
- The wider portion of the range extender is the top of this device.

With the transmitter's power in the OFF position, insert the range extender (top upward) into the receptacles on the rear of the transmitter. Gently push the range extender towards the bottom of the transmitter, ensuring that the range extender is firmly attached to the transmitter and making good connectivity.

To check whether or not the range extender has been installed correctly, turn the transmitter ON, observing the Wi-Fi Connection Indicator LED. If properly connected, the LED will be glowing green.

- Some users prefer to alter the SSID accordingly by going into the App, going to Personal/User>System Set up. You can then set the Range Extender Name and Password when required.

Xirodrone Application

- As noted elsewhere in this manual, there is a free application (or App) available for the Xplorer. If applicable, this not only enables the pilot a real-time view of what the camera/gimbal is recording or capturing, it also displays much information about the Xplorer's flight.
- To learn more about how to use the App please visit <http://xirodrone.com/video/xplorer>. Select the app menu from the available menu options.
- This video will also assist you in learning the App functions: <https://youtu.be/reVQmw8SAkw>.