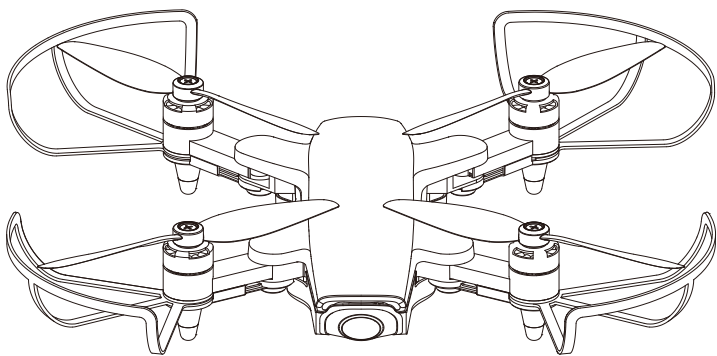


XPLORER Mini.5G

User Manual



▲ Important Safety Notice

Operating your Xplorer requires some basic skill training to enjoy safe and relaxed flights. It is recommended to read the user manual carefully. If you have any questions contact your regional XIRO Service Center via:

1. the support request form in your XIRO App,
2. the online support request form in the support section on Xirodrone.com or
3. send an email to:

XIRO Customer Support Mainland China: <as-cn@xirodrone.com>

XIRO Service Center Hong Kong: <as-hk@xirodrone.com>

XIRO Service Center Taiwan: <as-asia@xirodrone.com>

XIRO Service Center North America: <as-usa@xirodrone.com>

XIRO Service Center Europe: <as-europe@xirodrone.com>

XIRO Customer Support Asia: <as-asia@xirodrone.com>

XIRO Service Center Oceania: <as-au@xirodrone.com>

XIRO Service Center Other Area: <as@xirodrone.com>

For the most accurate info on email and hotline contact, we advise you to always check the support pages on <http://xirodrone.com/support>.

1.Video tutorials

Watch the XIRO video tutorials before your first flight and make sure you feel safe to fly the Xplorer. You can scan the QR code to watch the video tutorials or find the videos on <http://www.xirodrone.com/support>.



Video tutorials

2.Download and install XIRO App

Please download the XIRO App from application stores for your mobile device or scan the QR code here to download it and create your XIRO account.

For iOS 8.0 & Android 4.4 +

For more information check the FAQ part in the support section on <http://xirodrone.com/support/faq>

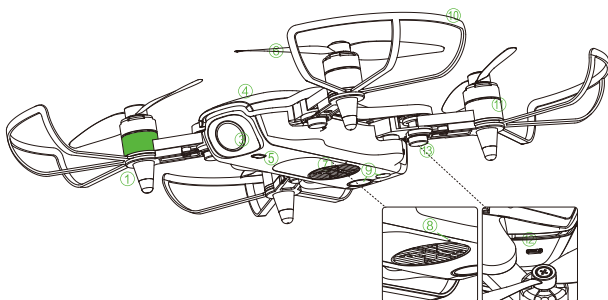


Install & Register

Overall view of Xplorer Mini

The Xplorer Mini

- | | |
|--------------------------------------|---|
| ① Front flight indicators | ⑦ Ventilator |
| ② Motor (4x) | ⑧ Wi-Fi default pin hole |
| ③ Camera | ⑨ Ultrasonic sensor and optical flow module |
| ④ Upper cover (Replacing of battery) | ⑩ Propeller guard |
| ⑤ power button | ⑪ Rear flight indicators |
| ⑥ Propeller | ⑫ Data transmission port (Micro USB) |
| | ⑬ Fold lock button (4x) |



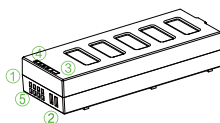
Flight indicators status

- Indicators blink yellow and green alternately | Self test.
- Indicators blink green slowly | GPS locked, GPS satellites signal is normal.
- Indicators blink green twice and then stop slowly | Visual positioning active, minimum number of GPS satellites cannot be locked or the GPS signal is not available indoors. The Xplorer now uses its visual positioning system to enable hovering.
- Indicators blink green fast | IOC (headless) mode, only available in GPS flight mode.
- Indicators blink yellow slowly | Attitude flight mode, GPS positioning and Visual positioning are not available.
- Indicators blink red slowly | The battery level is low and the Xplorer will suggest to return to its home position, normally the last takeoff point.
- Indicators blink red fast | Battery level is critical, the Xplorer will automatically land.
- Solid red | Return home, Lost connection - Auto return home.
- Indicators blink red and yellow fast and alternately | GPS failure, please restart the system.
- Indicators blink red and yellow slowly and alternately | Compass failure, please recalibrate the Xplorer.
- Solid green | Horizontal calibration.
- Solid yellow | Vertical calibration.
- Solid yellow | Sensor data abnormal.
- Indicators blink yellow fast | Unlock motors in restrict zone.

Smart flight battery and Charging kit

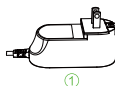
Smart flight battery

- ① Charging port
- ② Power output port
- ③ Power check button
- ④ Power indicators
- ⑤ Communication port

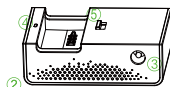


Charging kit

- ① Adapter
- ② Charger
- ③ DC port
- ④ Charging indicator
- ⑤ Battery lock



Smart flight battery



Charging kit

XIRO App interface

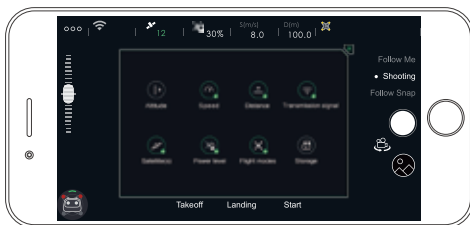
Connecting your XIRO App:

Enable Wi-Fi on your mobile device, search for the available Wi-Fi networks and then select the network named "XPLOER_XXXXXX" from your Wi-Fi network list. When requested for a password, enter the default password: XIRO1234. The Xplorer and the XIRO App are now connected. (New users, please register first.)

✕ Flight mode: Attitude flight mode / GPS flight mode / Visual positioning mode / IOC mode / One-key return home

✕ Visual positioning mode ✕ GPS flight mode ✕ Attitude flight mode ✕ Takeoff mode ✕ Landing mode

Altitude Speed Connected satellites Transmission signal Xplorer power level Remaining storage Distance



Check and Preparation

Flight environment requirements

1. Before every flight, check the local airspace legislation and policies regarding remote controlled aircrafts and follow these at all times.
2. Ensure to fly outside a radius of 3 km of any airport control zone (CTR) or governmental buildings.
3. Always fly in open areas and keep a minimum distance from people, animals and/or buildings. Do not fly directly over people or animals.
4. Avoid flying in areas that may cause magnetic interference, such as: power lines, tall buildings, shopping malls, residential areas or mines to avoid malfunctioning of the magnetic compass in your Xplorer.
5. Fly below heights of 4000 meter above sea level to avoid problems with the ascending power in your Xplorer.
6. Check your local UAV weather forecast for information on atmospheric factors that can interfere with controlling your Xplorer. Factors like GPS availability and solar flares can cause unexpected behaviour of your Xplorer. Fly your Xplorer only with a wind force 4 or below and stay out of weather conditions like rain, snow or fog.

Checking/Charging battery capacity

Press the power check button to check remaining capacity

Power indicator

LED1	LED2	LED3	LED4	Remaining capacity
■	■	■	■	87.5% ~ 100%
■	■	■	■	75% ~ 87.5%
■	■	■	■	62.5% ~ 75%
■	■	■	■	50% ~ 62.5%
■	■	■	■	37.5% ~ 50%
■	■	■	■	25% ~ 37.5%
■	■	■	■	12.5% ~ 25%
■	■	■	■	0% ~ 12.5%



■ Blinking ■ Off ■ Solid

- It is recommended not to fly the Xplorer when the remaining battery capacity is below 50%.
- Press the power check button to check the remaining battery capacity and only activate your Xplorer when the capacity is above 30%. When the remaining battery capacity is below 30%, first charge the battery before flight.

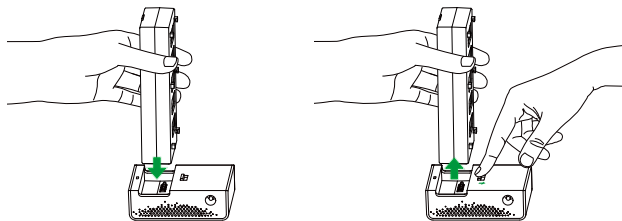
Charging the smart flight battery

Charging

1. Hold the battery with the connectors facing down and plug it into the slot. The battery is firmly installed when a "click" is heard.
2. Connect the DC cord to the charger and plug the adapter directly into the power outlet. Verify that the LED indicators on the charger indicate that the battery starts charging.

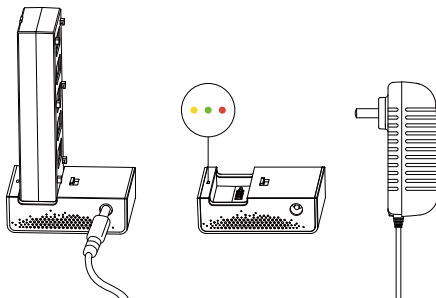
Removing the battery

Push the battery lock backwards and simultaneously remove the battery.



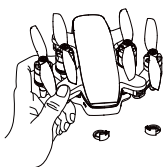
Indicators status of the Charger

- Charging.
- Charging completed.
- Connection failed or warnings (Overload, overcurrent or battery connection failure).



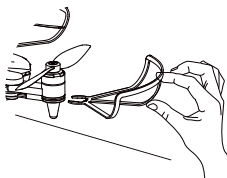
Preparing the Xplorer Mini

Unfolding the Xplorer



Remove the arm clamps, then keep the fold lock button pressed and simultaneously open the arms until a "click" is heard.

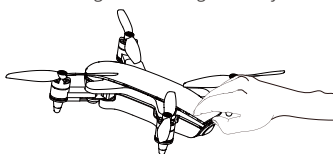
Mounting the propeller guards



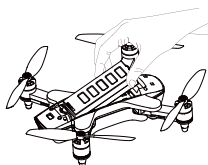
Attach the propeller guards into the propeller guard slot at the bottom of the motor in line with the Xplorer's arm.

Installing and removing the smart flight battery

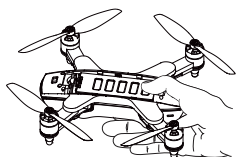
Installing the smart flight battery



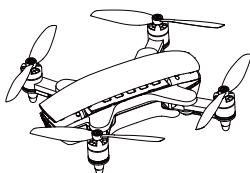
1. Use your thumb to lift the front of the cover then slowly further open the upper cover.



2. Place the battery flat into the body. Make sure the side with indicators is facing the connector in the front.

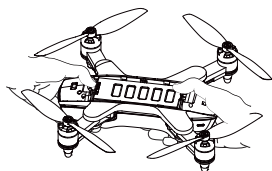


3. Push the smart flight battery into the connector until a "Click" is heard. The battery is now installed.

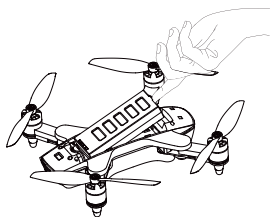


4. Place the upper cover back onto the drone and make sure it is firmly attached to the drone.

Removing the smart flight battery



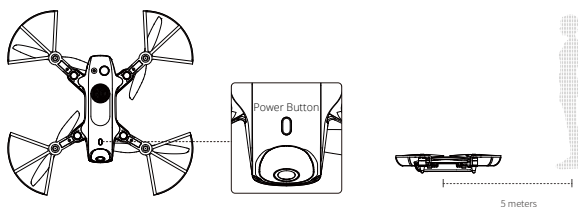
1. Use your thumb to lift the front of the cover, then slowly further open the upper cover. Pull the battery lock backwards and push the battery to the rear of the drone.



2. Lift the rear part of the battery to remove it.

Flight

Power on the Xplorer Mini



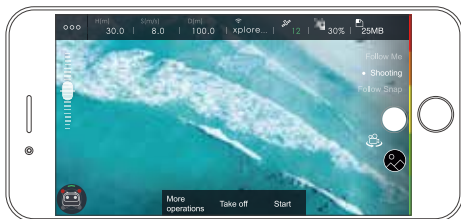
1. Press the power button at the bottom of the drone for 3 seconds, wait until you hear the power on sound and the flight indicator lights are turned on.
2. Place the drone in front of you with the front (camera) facing away from you. Keep a safe distance of a minimum of 5 meters between yourself and the Xplorer.

Note: After the Xplorer Mini is powered on

1. When the rear flight indicators slowly blink red and yellow alternately, the magnetic compass needs to be calibrated. (See calibration steps on page 12)
2. When the rear flight indicators fast blink alternately red and yellow, there is a GPS failure. Please restart your Xplorer.
3. When the rear flight indicators blink green or yellow slowly, the Xplorer is ready to fly.
4. Place the drone on the ground once it is powered on in case of accidents.

Connecting your XIRO App

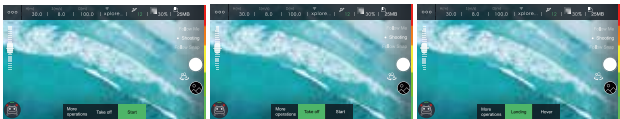
1. Enable Wi-Fi on your mobile device, search for the available Wi-Fi networks and then select the network named "XPLOER_XXXXXX" from your Wi-Fi network list. When requested for a password, enter the default password: XIRO 1234. The Xplorer and the XIRO App are now connected. (New users, please register first.)
2. Start the XIRO App to enter the real-time aerial photography interface.



- One Xplorer Mini can be controlled by only one mobile device. When using a second mobile device to connect to the Xplorer, the message "This drone is connected to another mobile device" will be shown on the interface.
- When the drone has successfully connected to a mobile device, the XIRO App will recognize the Xplorer Mini automatically.

How to start the motors

Click “Start” on the screen to start the drone

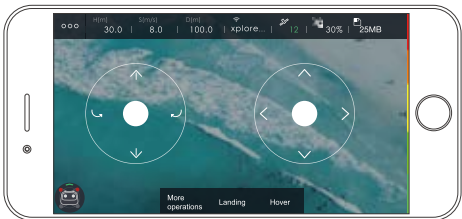


Operation details (Takeoff / Landing)

1. Click “One-key takeoff”, the drone will go up 1 meter and hover at that position waiting for your instructions.
 2. Click “One-key landing”, the drone will land at its current position and the motors shut off automatically.
- In GPS flight mode, when you power on the Xplorer Mini, the front flight indicators turn red and the rear flight indicators blink green. When the rear flight indicators blink yellow, the drone is in Attitude flight mode. It is advised to change your flight location.
 - When there are less than 6 GPS satellites locked, the Xplorer will enter the visual positioning flight mode (the rear flight indicators blink double green slowly). When the drone flies up to 0.5 meter, the optical flow sensors will automatically detect the environment. When the environment is not suitable for the visual positioning flight mode, the drone will land and a warning message will be shown in the XIRO App.
 - When in Attitude flight mode, the Xplorer is not allowed to take off.

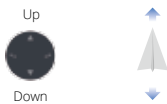
Flight Control

Click More operations in the XIRO App, select IOC to fly the Xplorer in IOC (headless) mode.



The default operating mode in XIRO App is Mode 2 (American mode).

Left control stick



Press “ ▲ ” to make the Xplorer Mini vertically fly up.

Press “ ▼ ” to make the Xplorer Mini vertically go down.



Press “ ↶ ” to make Xplorer Mini turn counter-clockwise around its center.

Press “ ↷ ” to make Xplorer Mini turn clockwise around its center.

Right control stick

Forward



Backward

Press "▲" to make Xplorer Mini fly forward.

Press "▼" to make Xplorer Mini fly backward.

Leftward



Rightward

Press "◀" to make Xplorer Mini fly to the left.

Press "▶" to make Xplorer Mini fly to the right.

- Via the Operation settings in the XIRO App you can select different flight control modes. For more flight operation parameters, please go to Settings in the XIRO App.
- In Free control mode and Motion control mode, press the button and drag it, the range you drag the button will decide the speed.

Advanced flight function

One-key return home

When the option "One-key return home" is pressed, the Xplorer automatically determines its route to its takeoff position. When its height is less than 3 meters, the Xplorer will first climb to 3 meters and then fly back to its HOME point and land slowly.

One-key Shutdown

Press "One-key shutdown" to activate the One-key shutdown function.

- Note: Only use this function when the Xplorer is out of control. This function will force the motors to shutdown immediately and in flight cause the Xplorer to crash. Only use this function in case of emergency and you have to crash your Xplorer to prevent more severe risks..

Hover

Press "Hover" in case of emergency to clear all operations except hovering.



More operations



One-key Shutdown



Hover

IOC (headless) mode

In GPS flight mode, when you press "IOC", the Xplorer will use its HOME point as reference for its orientation. Pull the stick backward: the Xplorer will fly towards HOME point and vice versa. The front of the drone (the red light indicators) is no longer important for controlling the flight direction of the drone.

1. Pull the stick forward, the Xplorer will flyes toward away fromn its HOME point.
2. Pull the stick backward, the Xplorer will fly towards its HOME point.



Smart flight mode options

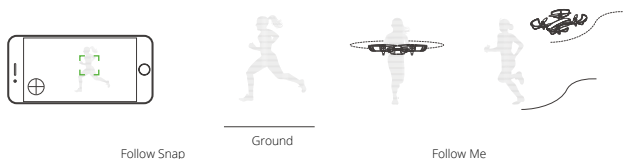
You can select Follow Me / Follow Snap at the right side of the XIRO App preview screen.



Follow Snap

In the Follow Snap mode, you can select an object or person on the preview screen in the XIRO App by drawing a square around your target. When the target is correctly selected, the red rectangle becomes green. Next press Follow and the Xplorer Mini will track the object and you can start recording or shooting pictures.

- Make sure there are no tall buildings or obstacles between the drone and the target.
- In the Follow Snap mode, when the drone loses connection, please exit Follow Snap by switching to other modes.



Follow Me

In the Follow Me mode, you have two different options: Self-Circling and the Follow mode.

1. In the Self-Circling mode, the front of the Xplorer will face the connected mobile device and take a 360° picture based on the position of the mobile device. Press Self-Circling again to exit the Self-Circling mode.

In the Follow Me flight mode, you can select either the Self-Circling function or the Follow function. It is not possible to select both options simultaneously.

- Make sure the Xplorer can target the object with the mobile device successfully. When the front of the drone is not facing the object, targeting is not possible. You have to exit the Follow Me mode, reposition the Xplorer and restart the Follow Me mode.
- Make sure the Xplorer can target the object with the mobile device successfully. When the front of the drone is not facing the object, targeting is not possible. You have to exit the Follow Me mode, reposition the Xplorer and restart the Follow Me mode.

Hints and Tips

Maintenance tips

1. Store the Xplorer and all parts at normal room temperature and in a dry environment.
2. Do not put heavy stuff on your Xplorer Mini.
3. Do not insert anything into the ventilator opening in case of damaging the ventilator.
4. Remove the smart flight battery from the Xplorer when not using the Xplorer.

Smart flight battery safety guideline

1. Only use the XIRO smart flight battery and the XIRO charger with the Xplorer. XIRO does not take any responsibility for damages caused by third party batteries or battery chargers. Your warranty will become void when using the third party parts in combination with the Xplorer.
2. Do not charge a battery that is still warm from usage and never use a battery in your Xplorer that is still warm from charging.
3. Replace the battery when it has been discharged over 300 times.
4. Never recharge or use a (visually) defective battery.
5. When you store your Xplorer for longer period make sure the battery power level is around 50% to optimize its lifespan.
6. Discharge the battery completely once every 20 charge/discharge cycles. This will optimize the battery lifespan.
7. Please deliver used batteries to the designated battery disposal locations in your area.
8. When you come in contact with battery acid, immediately wash your skin or eyes with fresh water for at least 15 minutes and see your doctor instantly.
9. A LiPo battery fire is similar to a chemical fire. Put out the fire by using sand or use a Class D, dry powder fire extinguisher. DO NOT use water!

Battery Lifespan

Checking battery lifespan: Long press the power button on the smart flight battery for 5 seconds, LED indicators will show you the battery lifespan.

LED1	LED2	LED3	LED4	Remaining battery lifespan
				90% ~ 100%
				80% ~ 90%
				70% ~ 80%
				60% ~ 70%
				50% ~ 60%
				40% ~ 50%
				30% ~ 40%
				20% ~ 30%
				< 20%

The GPS failure protection (Only available in GPS flight mode)

GPS failure during flying

When GPS becomes instable during the GPS flight mode, the Xplorer will hover at its current position when the conditions for Visual positioning mode are available. Otherwise, the drone will switch to the Attitude flight mode and land slowly. You can control the height of your Xplorer Mini during landing until the conditions for the Visual positioning mode are valid again.

GPS failure during returning

When GPS becomes instable during auto return home function, the drone will stop this function and a warning will be shown in the XIRO App. When Visual positioning conditions are available the Xplorer will hover at its current position. Otherwise, the Xplorer will switch to the Attitude flight mode and land slowly. You can control the height of your Xplorer Mini during landing until the conditions for the Visual positioning mode are valid again.

Lost-connection protection (in GPS flight mode)

In GPS flight mode, when the Xplorer loses connection with the mobile device, it will return to the last "connected" position. The Xplorer will try to reconnect for 3 seconds before automatically return to its HOME point.

- Note: When the Xplorer reconnects with the mobile device during the auto return home function, it will stop and hover at the reconnection point. The user is able to regain full control.
- XIRO's Collision avoidance system is NOT available in the Xplorer Mini. Your Xplorer is not yet capable to avoid obstacles automatically. DO NOT fully trust the auto return home function, actively try to regain control again.

Lost-connection protection (in Visual positioning mode)

The drone will hover at the height where visual positioning is available and wait for re-connection. The drone will start to descend slowly when the battery power gets low.

Lost-connection protection (in Attitude flight mode)

The drone will automatically switch to the Visual positioning mode. When current height is over 3 meters, your Xplorer Mini will descend to 3 meters and wait for reconnection until the battery level becomes critically low. The Xplorer will then slowly land at its current position.

Low battery level warnings and protection

Low battery level warning (Level 1)

The Xplorer will trigger a low battery warning when the battery capacity gets low.

Xplorer: At this level the rear flight indicator will not change.

XIRO App: A warning message: "Return Home?" will appear.

- When the low battery warning is triggered in the GPS flight mode, you can press the One-key return home button in the XIRO App to recall your drone.

Low battery level protection (Level 2)

The Xplorer will trigger the battery level protection when the battery capacity is very low.

Xplorer: The rear flight indicator will blink red slowly.

XIRO App: A warning message: "The drone is returning home" will appear. The drone now automatically returns to its HOME position.

Critical battery level protection (Level 3)

The drone will trigger a critical battery protection when the battery capacity gets critically low. The auto pilot calculations indicate the Xplorer can not reach its Home point.

Xplorer: The rear flight indicator will blink red fast.

XIRO App: A warning message: "The drone is landing" will appear. The Xplorer will now slowly land at its current position.

Critical Low Battery Level warning (in Attitude flight mode)

The rear flight indicators will blink red fast and the drone will begin to descend and land automatically.

Advanced Operation

Magnetic compass calibration

Always calibrate when you start flying in new locations. The compass is very sensitive to electromagnetic interference. This can cause unexpected flight behaviour. Regular calibration of the magnetic compass is required for an optimal performance of your Xplorer.

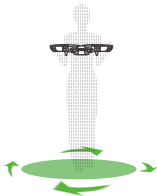
Calibration Procedures:



1. Press the power switch until the Xplorer is completely started. Wait until the rear flight indicator blinks green slowly or yellow slowly.

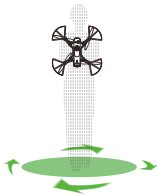


2. Press "☰" -> Operation settings -> "Calibrate" to calibrate your Xplorer.



3. Hold the Xplorer horizontal with the rear flight indicators pointing towards yourself. When the rear flight indicators turn into solid green, the Xplorer is in the correct horizontal position. Slowly rotate 1-3 circles, wait until the rear flight indicators blink yellow fast.

- When the rear flight indicators start blinking green fast, the Xplorer is no longer in an exact horizontal position. This may result in having to make more circles to finish this stage of the calibration procedure.



4. For the next stage, hold the Xplorer vertical with the rear flight indicators pointing up. When the rear flight indicators turn into solid yellow, the Xplorer is in the correct vertical position. Slowly rotate 1-3 circles, wait until the rear flight indicators start blinking green or yellow slowly.

- Note: When the rear flight indicators start blinking yellow fast, the Xplorer is no longer in an exact vertical position. This may result in having to make more circles to finish this stage of the calibration procedure.



Calibration successful:
Indicators blink green slowly



Calibration failure:
Indicators blink red and yellow alternately

5. The rear flight indicators will blink green slowly or yellow slowly when the calibration procedure ended successfully. The calibration procedure has been unsuccessful when the rear flight indicators blink red and yellow alternately. You have to repeat the calibration procedure to ensure a safe flight.

Wi-Fi

Reset Wi-Fi password

Power on the drone, while pressing the Wi-Fi reset button with a pin. After 3 seconds you can stop pressing the reset button and your Wi-Fi will be restored to the factory default.

Modify Wi-Fi name and password

Enter Go to My Homepage, press Settings on the top left, select "Aerial photography settings" and then the "Wi-Fi settings" to modify your Wi-Fi name and password.

Copy the recordings and shootings

You can download the videos and pictures via the XIRO App Album function or via a micro-USB cable connected to your PC.

Upgrade firmware

Your Xplorer Mini upgrades its firmware via the XIRO App. Please pay attention to following reminder in the XIRO App: "Download the latest version firmware to your mobile device". First the latest firmware will be downloaded to your mobile device. Then the firmware will be uploaded to your Xplorer Mini and the firmware upgrade sequence is finished by restarting your Xplorer Mini. The improved firmware will now be available in your Xplorer.

For iOS 8.0 & Android 4.4 +

For more information check the FAQ part in the support section on <http://xirodrone.com/support>

Video tutorials

Scan the QR code to watch the video tutorials or find the videos on <http://www.xirodrone.com/support>.

Download and install XIRO App

Please download the XIRO App from application stores for your mobile device or scan the QR code here to download it and create your XIRO account.



Video tutorials



Install & Register

Compliance Information

FCC Compliance Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF Exposure Statement:

The equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

The transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.