
BEGINNER MODE

User may enable or disable the Beginner Mode under the following path: DRONE SETTINGS > AIRCRAFT > BEGINNER MODE. When enabled, the aircraft will take off within a 98 ft radius from the home point. The flight speed will also be reduced.



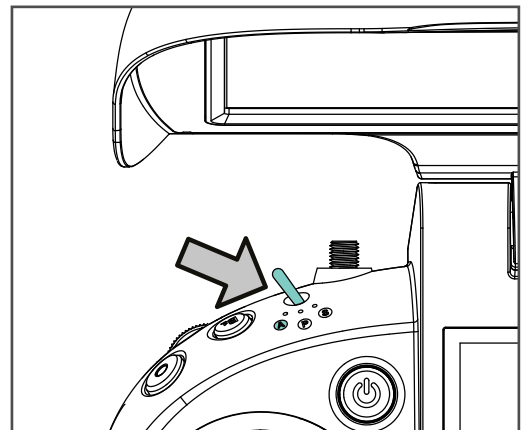
Multiple Flight Modes are not available when Beginner Mode is enabled.

FLIGHT MODES

The EVOLVE 2 aircraft has 3 flight modes that the operator can choose from. The modes are selected by a 3-position switch located on the top left of the Ground Station. Turn on the Multiple Flight Modes setting under the following path: DRONE SETTINGS > AIRCRAFT > MULTIPLE FLIGHT MODES.

ALTITUDE MODE (GPS Disabled)

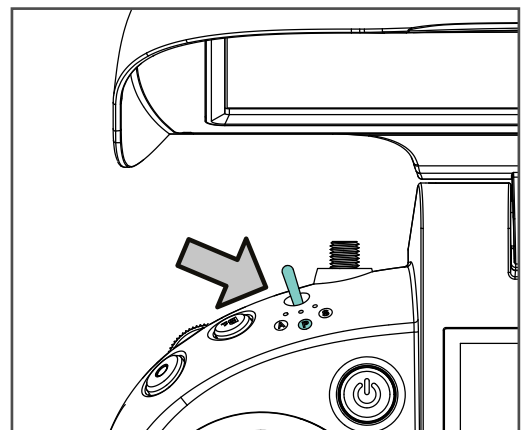
In this mode, the aircraft will hold its altitude when the control sticks are released, but not its position. This results in the aircraft drifting in the direction the wind is blowing and the operator must control position at all times. This mode is only recommended for experienced operators and is meant for smoother breaking reactions and camera panning while filming.



Position 1 (Left) - Attitude Mode

POSITION MODE (GPS Enabled)

In this mode, the aircraft will hold position using the GPS and/or optical flow. When the control sticks are released the EVOLVE 2 will hold its position in the air. This mode is suggested for beginner operators and is also used most frequently by professional users.



Position 2 (Center) - Position Mode



Aircraft will lock its maximum altitude at 13 ft when flying in area without GPS.



Aircraft cannot sense obstacles. Please pay close attention to your space during flight.

SPORT MODE (GPS Enabled)

In this mode, the EVOLVE 2 reaches its maximum speed and maneuverability. Increased yaw, roll and thrust give the user the ability to get the drone on target in the shortest possible time. This mode is recommended for experienced users who want to follow high-speed subjects and capture action packed videos.



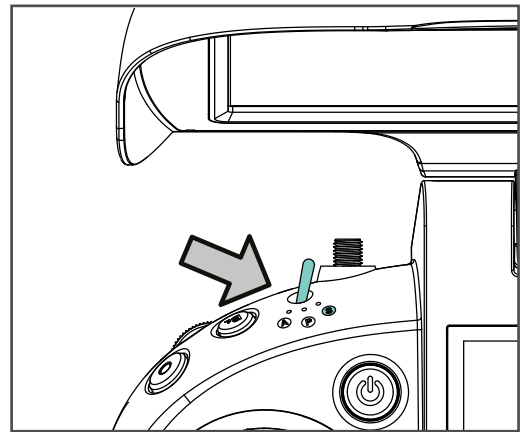
Pay close attention to the aircraft's battery level when flying in this mode.



Pay close attention to the aircraft's altitude when flying low.



Be vigilant and maintain adequate maneuvering space during flight.

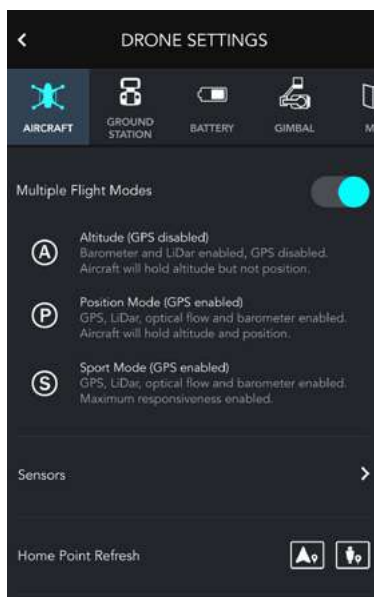


Position 3 (Right) – Sport Mode

HOME POINT

If a strong GPS signal is acquired at takeoff, the home point will be automatically recorded. If the aircraft takes off in a location with no/low GPS, the home point will only be recorded when sufficient GPS signal is detected on the ground station. If no home point is recorded, please be advised to land manually.

To update the home point, please use the following path in the user interface: DRONE SETTING > AIRCRAFT > HOME POINT REFRESH



YOU CAN UPDATE THE HOME POINT BASED ON:

- The Aircraft's Current Position ()
- Then Ground Station's Current Position ()



Pay attention to your Home Point's position when updated.



Pay close attention to your surrounding when landing on a moving object.

COMPASS CALIBRATION

The electronic compass on the EVOLVE 2 aircraft is used to determine the direction which aircraft is pointing to in reference to true north. The compass is a sensitive sensor that is affected by electromagnetic interference from sources such as radio towers and high voltage power lines. The compass can give false readings if the aircraft is placed over a surface composed of metal or if there is metal under the surface, such as rebar under concrete. If a compass error occurs simply relocate the aircraft in a different location until the metal interference is gone. If relocating the aircraft does not clear the compass error or if the Smart Pilot APP requires a compass calibration follow the steps below.

COMPASS CALIBRATION PROCEDURES

1. For safety reasons, please remove the propellers from the aircraft.
2. Make sure the Ground Station and aircraft are powered on and connected.
3. Navigate to the compass calibration page on the Smart Pilot APP: DRONE SETTINGS > AIRCRAFT > SENSORS > COMPASS
4. Follow the on-screen instructions to rotate the aircraft on the proper plane.
5. Only upon starting and ending will there be an audio prompt. Once successful, the aircraft will restart.
6. When complete the APP will indicate calibration success or failure.
7. If failed, switch off the aircraft and Ground Station power and restart at Step 1.

ACCELEROMETER CALIBRATION

Please note that the aircraft calibration procedures are subject to change. Always follow the procedures indicated in the Ground Station. Please ensure all firmware is up to date and follow on screen instructions if any variance from the instructions outlined below.

ACCELEROMETER CALIBRATION PROCEDURES

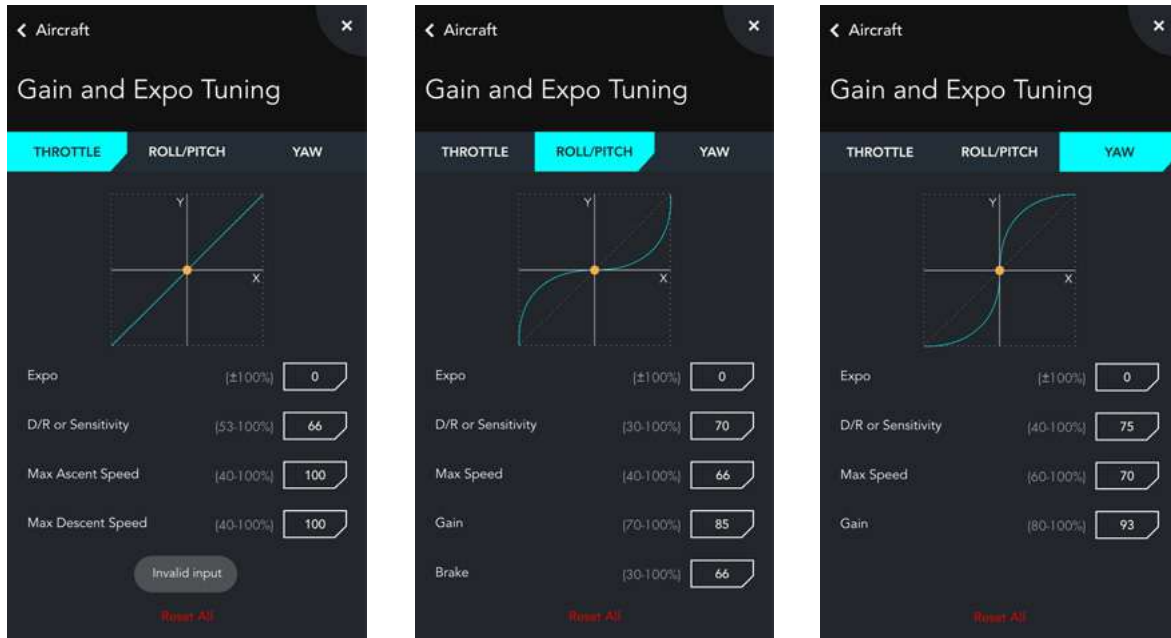
1. For safety reasons, please remove the propellers from the aircraft.
2. Make sure the Ground Station and aircraft are powered on and connected.
3. Navigate to the accelerometer calibration page on the Smart Pilot APP: DRONE SETTINGS > AIRCRAFT > SENSORS > ACCELEROMETER
4. Ensure that the aircraft is on a levelled surface and press "Next".
5. Follow the on-screen instructions for aircraft placement and push "Next" when prompted.
6. Once complete, the APP will indicate a failed or successful calibration.
7. If failed, switch off the aircraft and Ground Station power and restart at Step 1.



Accelerometer calibration is only required when requested by the Smart Pilot APP.

GAIN AND EXPO

Adjust the Gain and Expo under the following path: DRONE SETTINGS > AIRCRAFT > GAIN AND EXPO. All tuning only applies to POSITION mode.

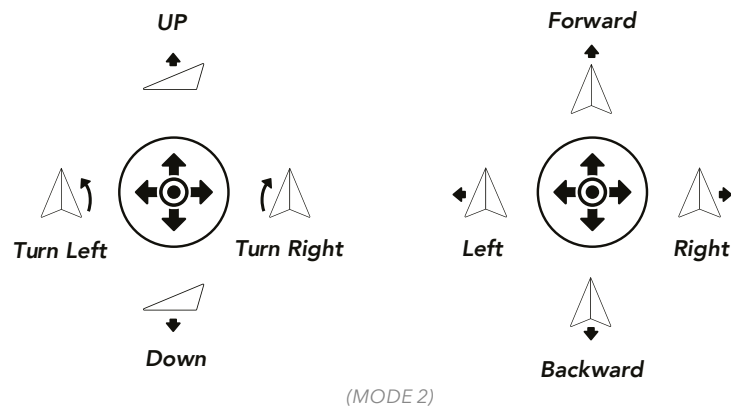


- **Expo:** Controls how much and how quickly the aircraft moves forward and backward, yawing and ascending
- **D/R or Sensitivity:** Determines how quickly the aircraft reacts to the commands put into the control sticks.
- **Max Speed:** Controls the top speed of the aircraft.
- **Gain:** Determines the reaction to outside forces (the larger the value, the stronger the reaction).
- **Brake:** Amount of time/distance it takes to stop the movement after input stops.

AIRCRAFT FLIGHT CONTROL

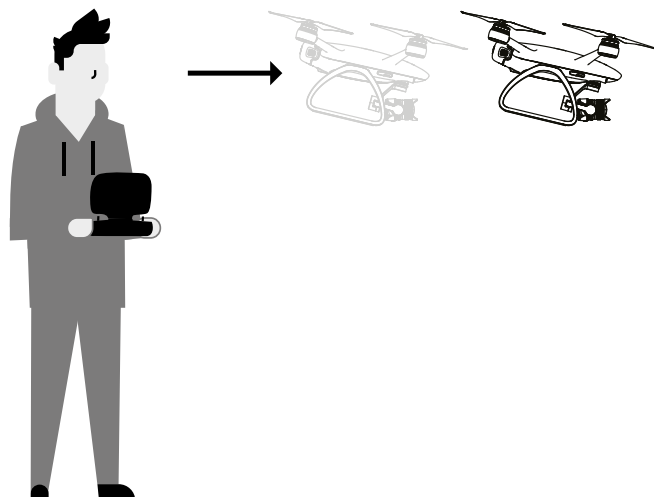
The flight control of the EVOLVE 2 is accomplished by manipulating the control sticks on the Ground Station. Proper orientation must always be considered when flying the aircraft. A basic rule of thumb when remote piloting an aircraft is to realize that when the aircraft's nose, or front end, is facing the pilot the control inputs for roll and yaw are backwards. This disorientation is the leading cause of all aircraft accidents that are due to pilot error. Therefore, it is very important to practice piloting in the proper orientation. This includes:

- Positioning the aircraft's nose, or front end, away from the pilot.
- Stand at least 6 ft directly behind the aircraft and keep the nose pointed away from you.
- Fly in an open area free of obstacles such as trees, power lines, and buildings.
- Make sure you are flying in POSITION mode. (The aircraft will automatically hold position when the control sticks are released)
- Ensure that all spectators are standing behind you.



AIRCRAFT AND PILOT ORIENTATION

Ensure that the operator and aircraft are both facing the same direction prior to launch.



CAMERA AND GIMBAL

Attaching And Detaching Gimbal

Attaching And Detaching Camera Lens

Recommended Lens

Camera Led Indicators

Memory Card Format (SD Card/CFast)

Shooting In ProRes

Camera Settings

Creative Assistant

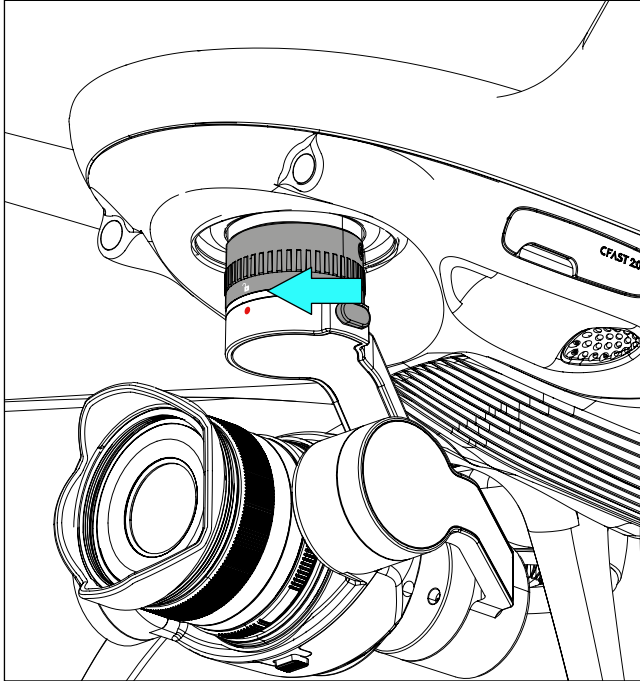
Gimbal Tilt Angle

Gimbal Pitch (Speed/Smoothness)

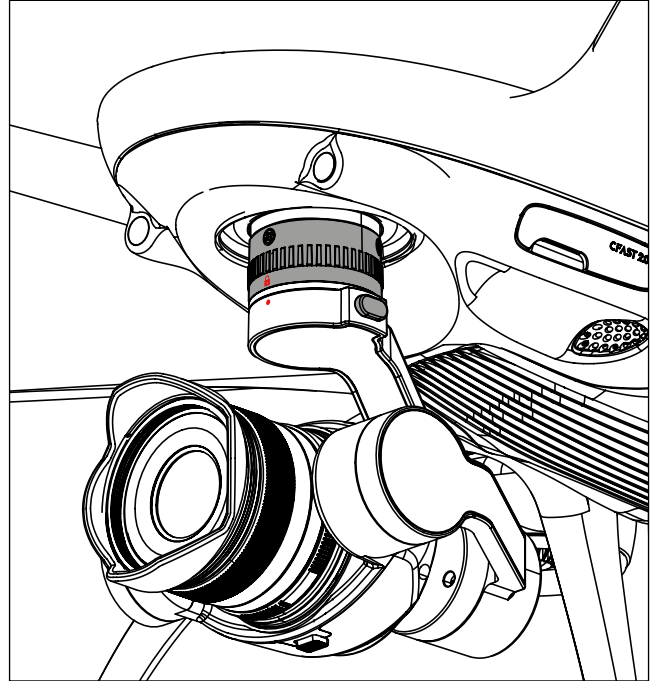
Auto Gimbal Calibration And Centralize Gimbal

ATTACHING AND DETACHING GIMBAL

ATTACHING THE GIMBAL

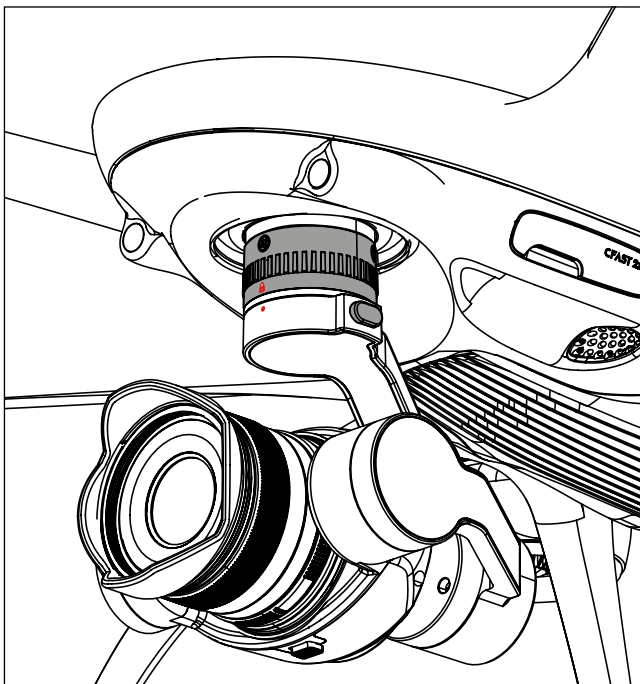


Locate the red mark on the gimbal and align it to the unlock icon on the attachment mount. Then screw the gimbal CCW.

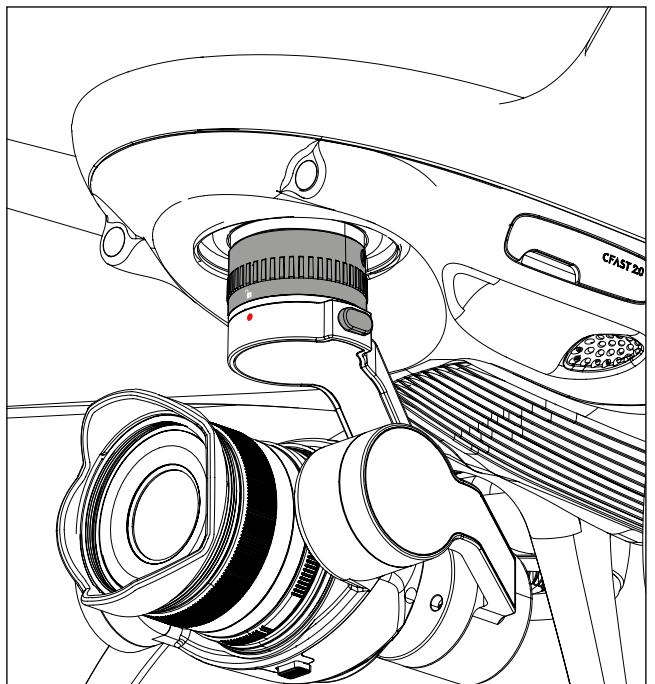


Release the gimbal release button when the red mark aligns with the lock icon on the attachment mount. You should also hear a click when gimbal is securely mounted.

DETACHING THE GIMBAL



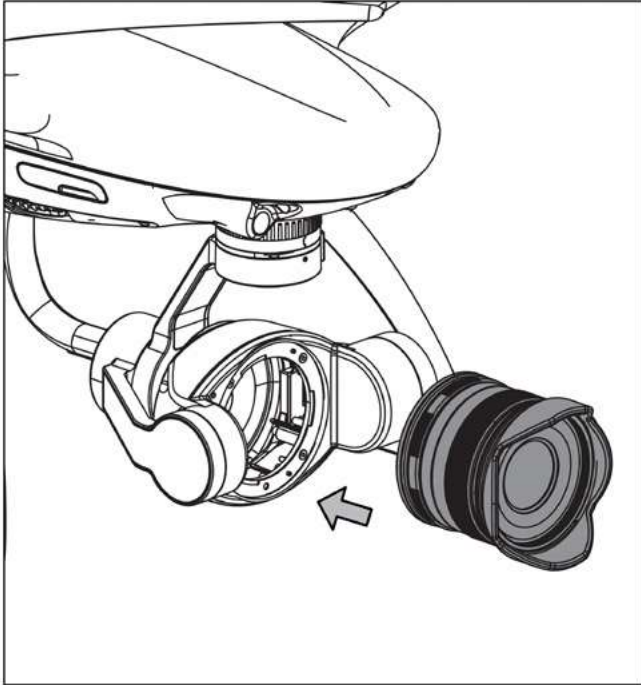
Press and hold onto the gimbal release button on the side, then turn the gimbal CW.



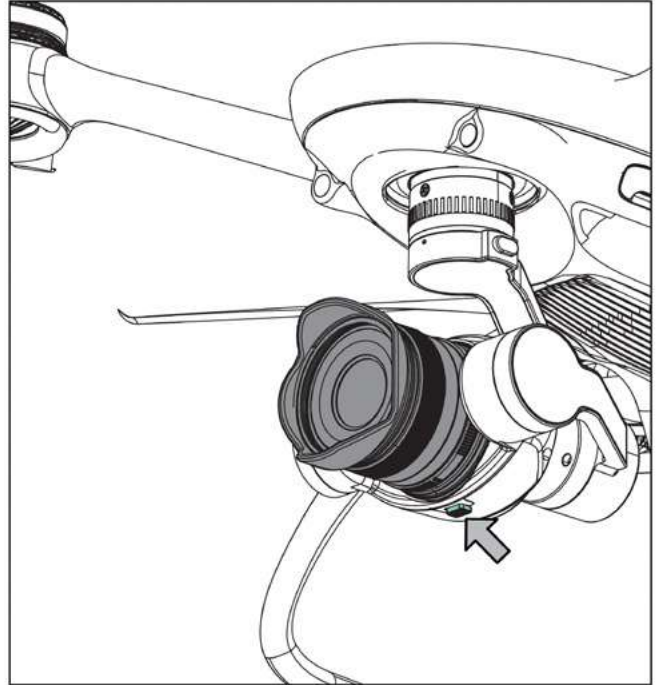
Release the gimbal release button when the red mark aligns with unlock icon on the attachment mount. Put the gimbal downward to remove it from the attachment.

ATTACHING AND DETACHING CAMERA LENS

ATTACHING THE CAMERA LENS

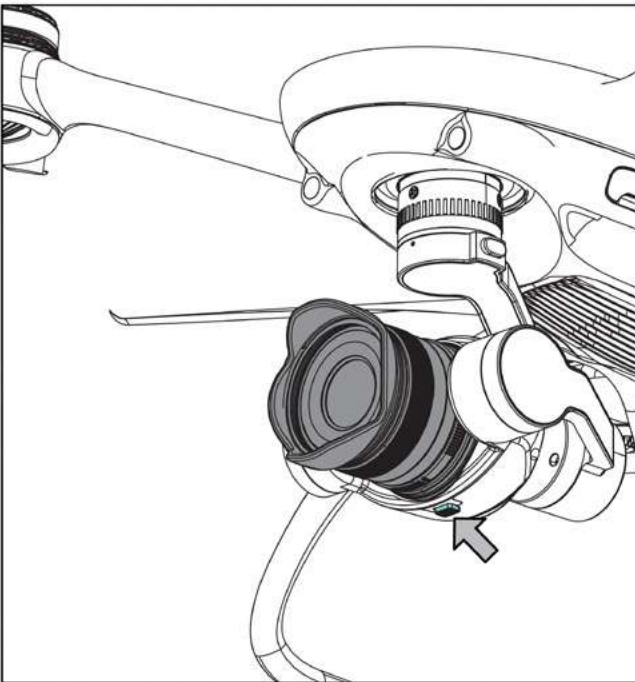


To attach the lens, align the red mark on the back of the lens with the red mark on the camera mount

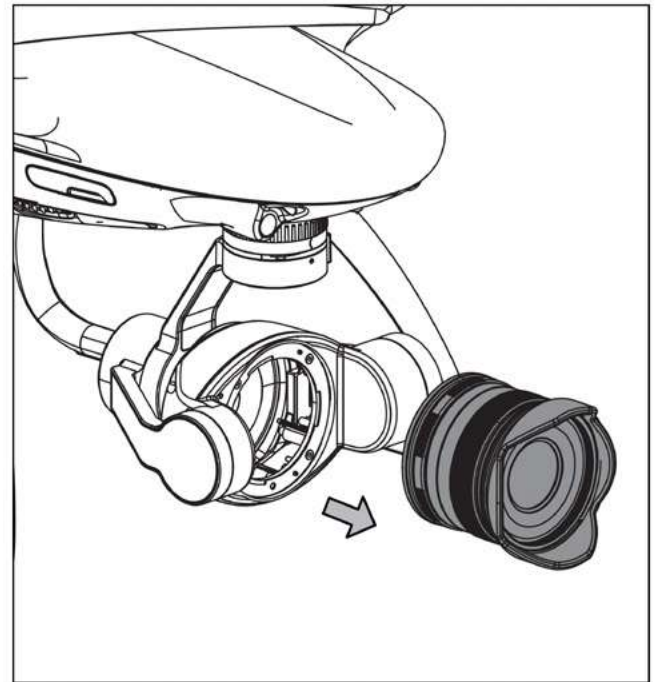


Once align, screw the lens CW. You should also hear a click sound when the lens is securely mounted.

DETACHING THE CAMERA LENS



To release the camera lens, press the release button located underneath the gimbal.



Unscrew the lens CCW and detach the lens from the camera mount.

RECOMMENDED LENS

The Astra m4/3 system supports a vast array of lenses from multiple manufacturers that are small, lightweight that let lighten the load while still performing beautifully. The smaller size, focal length (35mm equivalent), aperture and AF speed provide amazing choices for even the most discerning filmmaker. Olympus and Panasonic are two mainstream manufacturers of MFT format lenses. For those on a tighter production budget, there are also top-value alternatives that offer impressive performance.

Auto Focus Lenses	Manual Focuses Lenses	Coming Soon
(Default) Olympus M.Zuiko 17mm/1.8	Laowa 7.5mm	Olympus M.Zuiko 12mm/2.0
Olympus M.Zuiko 25mm/1.8		Panasonic Lumix 15mm/1.7
Olympus M.Zuiko 45mm/1.8		Panasonic Lumix 42.5mm/1.7



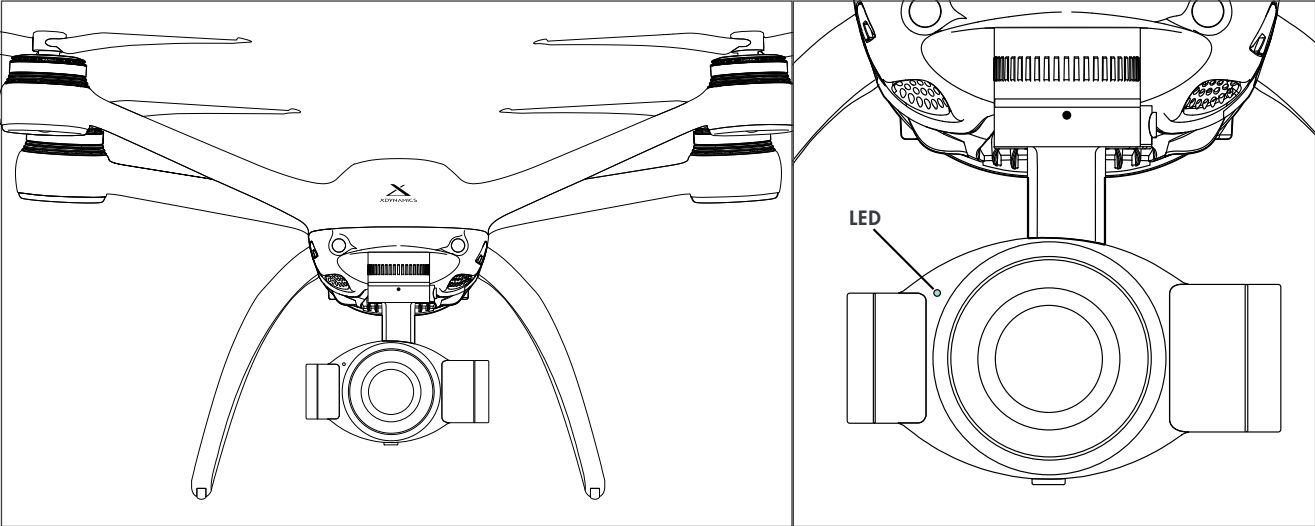
Please only change the lens when the aircraft is powered off.



Gimbal will produce abnormal sound when not balanced (e.g. incompatible lens/no lens mounted on gimbal).
Ensure that the lens is securely locked before you launch the aircraft.

CAMERA LED INDICATOR

The camera system has an LED indicator located beside the camera lens mount. This indicator displays the camera’s status.



Camera LED Indicator	Status
Green On	Normal, Idle
Green Toggles	Single Shot
Green Toggles Rapidly Till Shots Completed	Burst
Green Toggles Gently	Video Recording
Red Toggles Rapidly	System Starting Up
Red Toggles Gently	SD Card Failure
Red On	High Temperature/SD Card Missing
Red and Green Toggles Alternately	Firmware Update in Progress

MEMORY CARD FORMAT (SD CARD/CFast)

The EVOLVE 2 supports the following card formats for both SD and CFast Cards: ExFAT / FAT 32. If the ground station indicates a 'Card Format Error', please reformat the card via Windows/Mac computer and check if the problem persists.

SHOOTING IN PRORES

You can only shoot ProRes when using a CFast 2.0. Switch the Coding Standard under the following path: CAMERA SETTINGS (TOP SCREEN) > VIDEO > CODING STANDARD



xLog Profile only for H264 / H265

CAMERA SETTINGS

The aircraft camera has full control over key shooting settings, all of these settings can be found in the camera settings page in the Smart Co-Pilot System. Select the icon indicated in the diagram below to configure settings for the camera. Standard settings are similar to those found in most digital camera systems, including ISO, shutter speed, EV, quality, format etc.



- Auto exposure Lock
- Photo and video switch button
- Advance camera setting
- Record or Shutter

RESOLUTION	CAPACITY	SHUTTER	IRIS	ISO	EV	WB	TINT
4096x2160/119.89	01:20:45	1/2000	f 2.8	25600	+0.3	Sunny	3

Camera Adjustment Settings

ADJUST CAMERA SETTINGS WITH ROLLER CONTROLS

1. With no camera adjustment selected, press and hold on the B2 button for 2 secs (located on the top right). Release when one of the setting turns blue.
2. Roll the roller on the right (near the B2 button) to move through the different settings
3. Press the B2 button again to enter the setting, roll the roller to adjust
4. Once you have set your setting, press the B1 button (located on the left side) to exit the expanded menu
5. Press again to close/exit the entire camera settings menu

CREATIVE ASSISTANT

The Creative Assistant feature offers an on-screen template to easily optimize scene composition. Visual templates include circle, diagonal, grid, golden ratio, quadrant, simple division, thirds, triangle and vanishing.

To enable this feature, please use the following path: CAMERA SETTINGS (TOP SCREEN) > GENERAL > GRID DISPLAY.



Golden Ratio



Pyramid

GIMBAL TILT ANGLE

To capture even more challenging shots, the EVOLVE 2 allows you to add an extra +/- 20 degrees to your gimbal tilt angle. To enable this feature, please use the following path: DRONE SETTINGS > GIMBAL > GIMBAL TILT ANGLE

GIMBAL PITCH (SPEED/SMOOTHNESS)

To achieve a smoother and more cinematic footage, you can adjust your gimbal pitch settings under the following path: DRONE SETTINGS > GIMBAL > GIMBAL PITCH

- **Gimbal Pitch Speed:** Controls the top speed when tilting upward/downward
- **Gimbal Pitch Smoothness:** Controls the gimbal's braking sensitivity

AUTO GIMBAL CALIBRATION AND CENTRALIZE GIMBAL

If you have noticed that the gimbal is not centered, you can run the Auto Gimbal Calibration under the following path: DRONE SETTINGS > GIMBAL > AUTO GIMBAL CALIBRATION

Auto Gimbal Calibration will be disabled after takeoff. If you have noticed the gimbal is not centered during the flight, you can either press the C1 button (bottom left side of the ground station) OR DRONE SETTINGS > GIMBAL > CENTRALIZE GIMBAL OR land the aircraft and run the Auto Gimbal Calibration

You can also manually adjust the gimbal's center point by using the following path: DRONE SETTINGS > GIMBAL > GIMBAL ADJUSTMENT.



GROUND STATION

Inserting and Removing the Ground Station Battery

Turning On/Off the Ground Station Battery

Charging the Ground Station Battery

Ground Station LED Indicator

Pairing the Ground Station and Aircraft

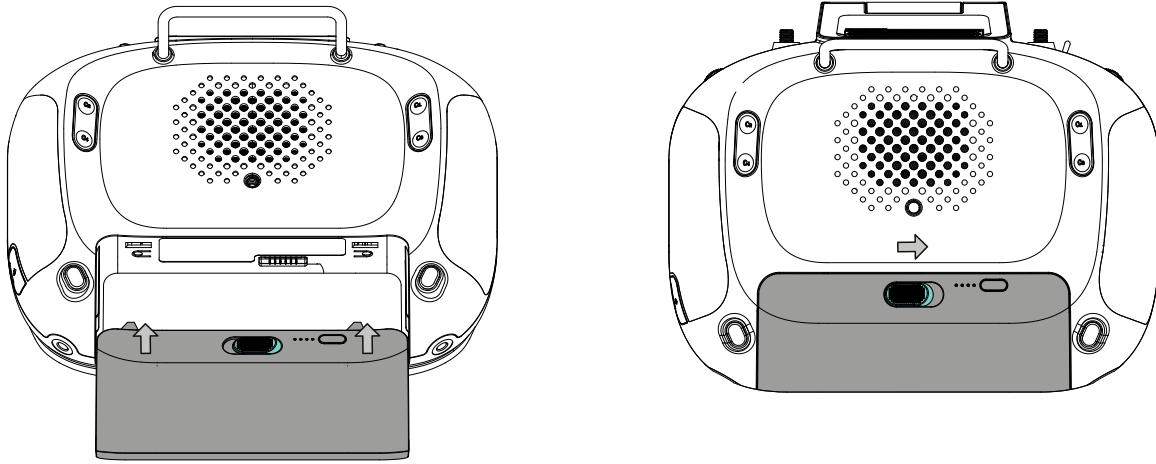
Antennas (Internal/External)

Image Transmission

Control Stick Modes

INSERTING AND REMOVING THE GROUND STATION BATTERY

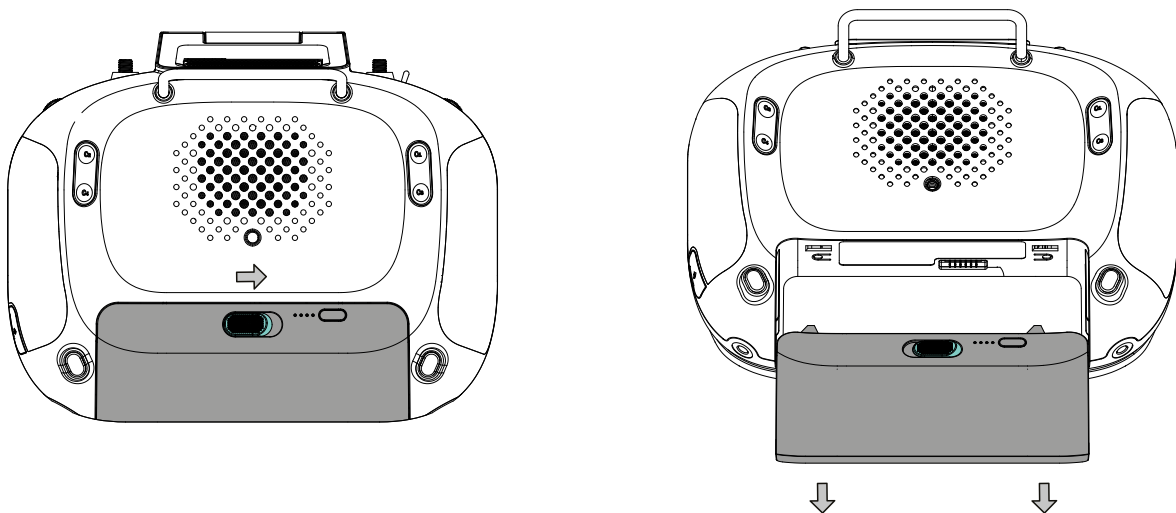
INSERTING THE GROUND STATION BATTERY



STEPS FOR INSERTING THE GROUND STATION BATTERY

1. First ensure the battery is powered off.
2. Slide the latch to the right and insert the battery into the Ground Station.
3. Release the latch when the battery is securely inserted.

REMOVING THE GROUND STATION BATTERY



STEPS FOR REMOVING THE GROUND STATION BATTERY

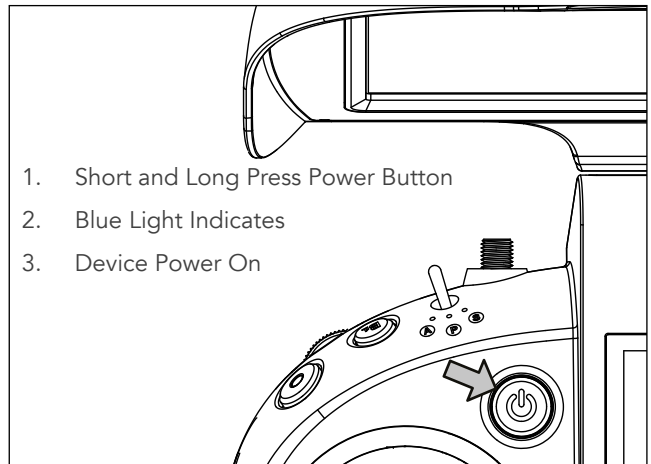
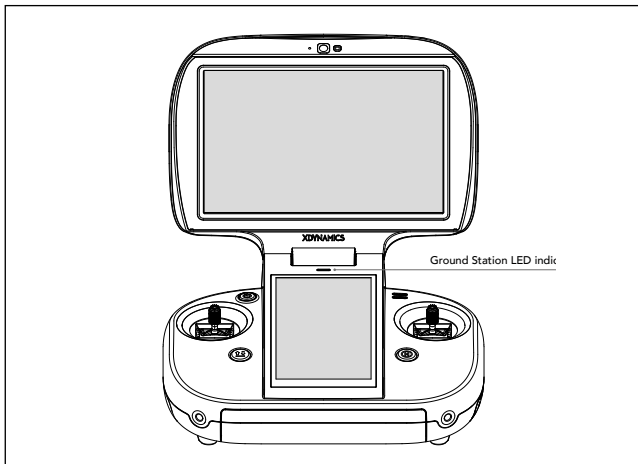
1. First ensure the battery is powered off.
2. Slide the latch to the right to disengage the lock.
3. Remove by firmly gripping and pulling the battery from the Ground Station.

TURNING ON/OFF THE GROUND STATION

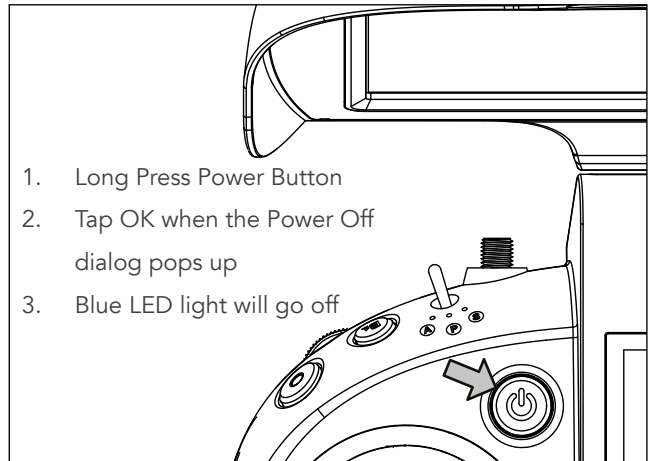
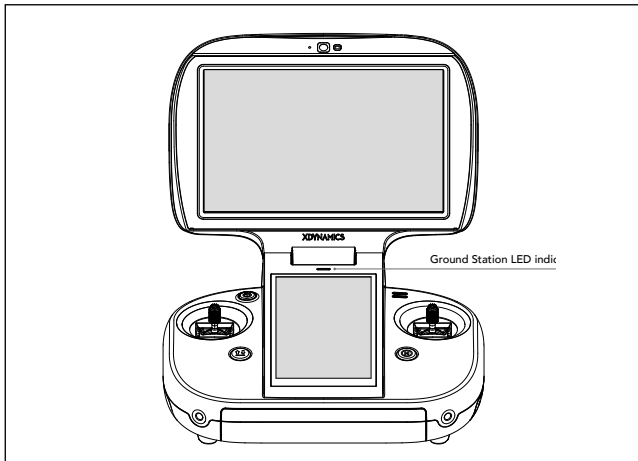
When powering on the Ground Station, be sure to provide at least 3 to 6 ft (1 to 2m) of space between the Ground Station and the aircraft. (If the Ground Station and aircraft are too close together the system may not properly connect.)

Short press and long press the power switch until the Ground Station screens turn on (this double press procedure prevents accidental power ups). While the Ground Station is initializing, power on the aircraft battery, it is important to power on the Ground Station first and the aircraft second, in that specific order, to achieve a proper RC connection.

TURNING ON THE GROUND STATION

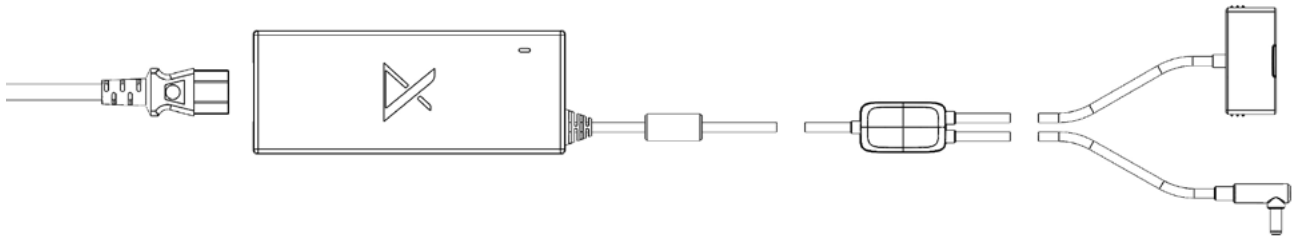


TURNING OFF THE GROUND STATION



You can also set the Ground Station Sleep Mode under the following path: PILOT > SYSTEM SETTINGS > SLEEP MODE (20 mins by default)

CHARGING THE GROUND STATION BATTERY

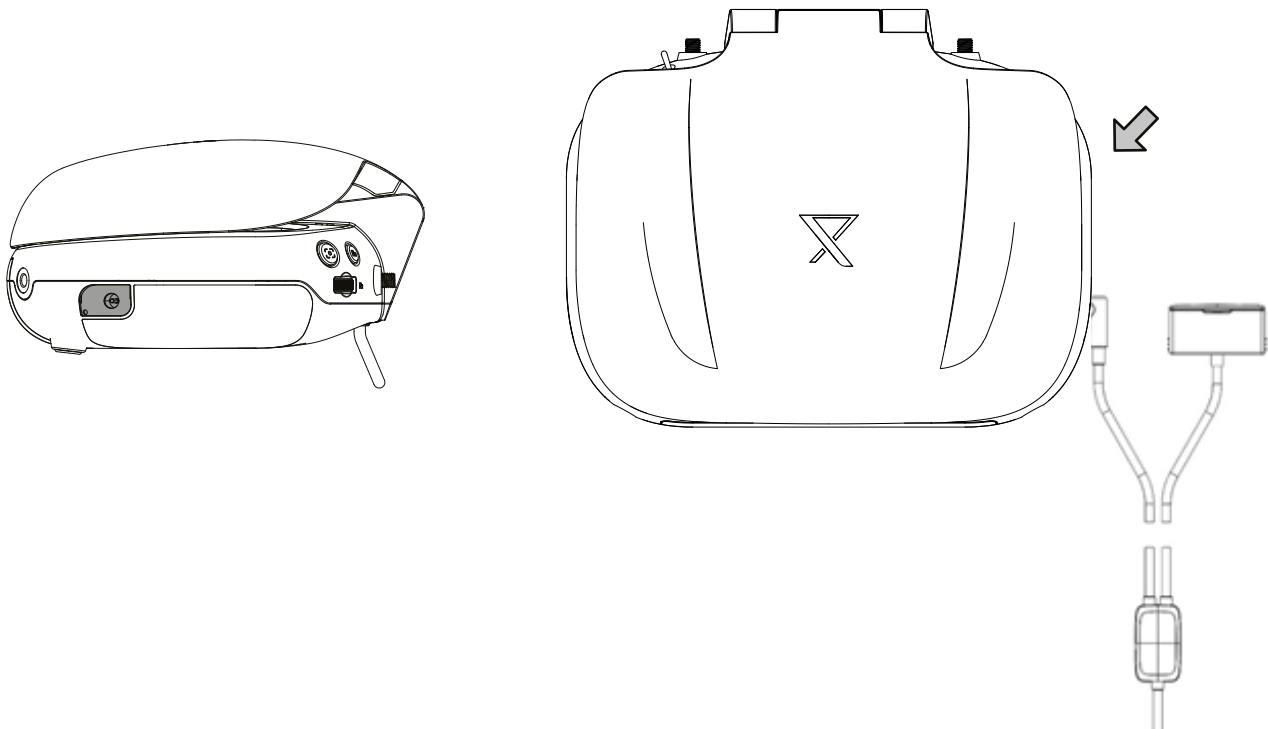


The Ground Station battery can be charged with the supplied battery charger whilst inserted into the Ground Station's main housing.

CHARGING THE GROUND STATION BATTERY

1. Connect the charger to a power source.
2. Connect the Ground Station Battery.
3. Connect the Ground Station Battery Charging Port.

Please note that the Ground Station battery can also be charged simultaneously with the EVOLVE 2 aircraft battery.



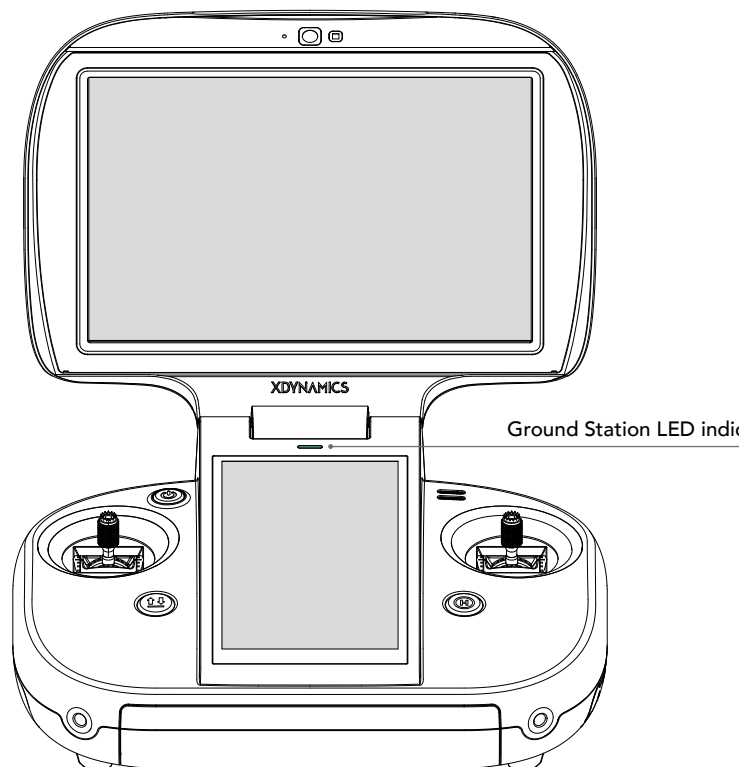
GROUND STATION LED INDICATOR

The Ground Station LED indicator is located below the bottom screen. The LED indicates the current state of the Ground Station battery.

When on charge, the Ground Station LED will blink Red, until the battery fully charged. Once charged, the LED will stop blinking.

During normal operation, the LED will be displayed in constant blue. When the Ground Station battery level has dropped to a point requiring immediate recharge, the LED will turn to Red.

It is not recommended to start a new flight with an amber indication on the LED.

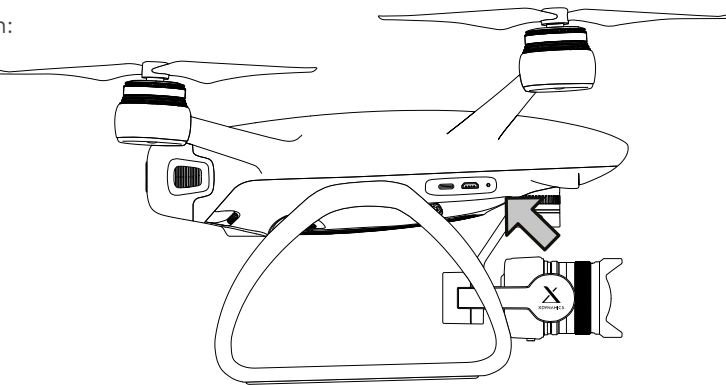


PAIRING THE GROUND STATION AND AIRCRAFT

The EVOLVE 2 aircraft and its Ground Station should be paired out of the box per factory settings. In the event you need to repair the aircraft and the Ground Station, please follow the steps below:

PAIRING PROCEDURES

1. Navigate to the Pairing Page under the following path:
DRONE SETTINGS > GROUND STATION > PAIRING
2. Turn on the aircraft.
3. Keep the aircraft at least 3 ft away from the Ground Station.
4. Tap "Start Pairing" on the Ground Station screen.
5. Follow the on-screen instructions until the pairing is complete.



Only required if pilot is trying to pair a new aircraft to the Ground Station or a new Ground Station to the aircraft.

ANTENNAS (INTERNAL/EXTERNAL)

You can fly with the built-in antennas or mount external antennas for extra range or stronger signal. To enable external antennas on the User Interface, please use the following path: DRONE SETTINGS > GROUND STATION > ANTENNAS OR DRONE > START HERE > CHECKLIST > ANTENNAS (Bottom of the list)



Always make sure that your external antennas are securely mounted to the ground station before switching to externals. Switching to EXTERNAL antennas without securely mounting external antennas may result damage to the ground station when using incorrectly



If you encounter short distance range issues (1 km), tap the 'Run Diagnostics' button to check the health of your built-in antennas.

IMAGE TRANSMISSION

In wide open areas with no electromagnetic interference, the EVOLVE 2 can smoothly transmit video signal up to 1080p resolution. EVOLVE 2 operates on the 2.4 GHz band, automatically selecting the best transmission channel. You can access more information under the following path: DONE SETTINGS > GROUND STATION > IMAGE TRANSMISSION

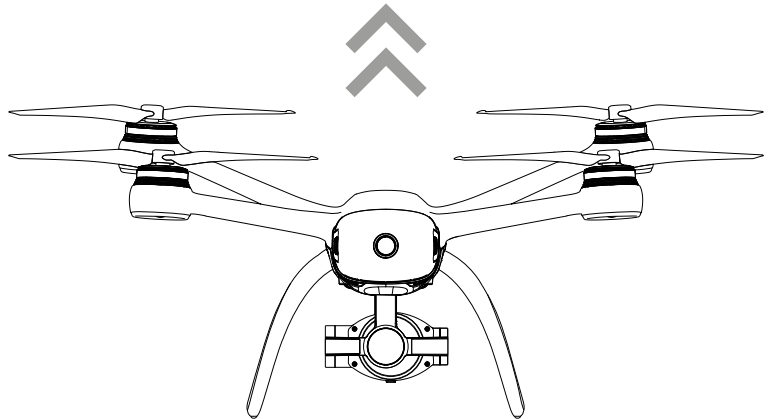
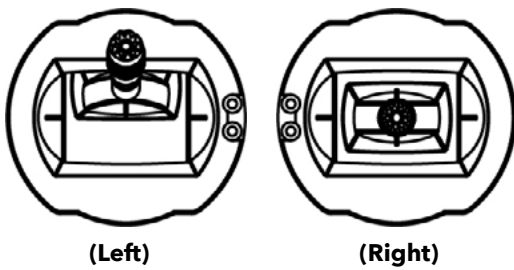
CONTROL STICK MODES

FLIGHT MODE (MODE 2)

Throttle - Increase (Aircraft rises up)

Move left thumbstick up

Keep right thumbstick centered



Throttle - Decrease (Aircraft lowers down)

Move left thumbstick down

Keep right thumbstick centered

