



Trio-Scout

User Manual



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1. Welcome

Sections



1. WELCOME

Welcome to Angel Aerial Systems, the future in drone technology. We are happy you have chosen to fly with us. This user manual will guide you in starting your journey.

The scout trio is cutting edge in the drone industry, capable of flying over 100 continuous minutes. This provides essential time in critical situations for first responders, law enforcement and other public safety operations.

This user manual is a living document with regular revisions as updates to the scout are introduced. Printing this manual may not provide the user with the most updated version. The version of this document is labeled in the bottom left corner of the front cover. Updates and revisions are listed at the end of this document. If this is the first time flying the drone, it is recommended to read through the rest of the manual before flying to ensure a safe and enjoyable flight experience.



Note: Notes will be used throughout the document to provide additional context or special considerations for a particular context to support the user in understanding a feature.



Caution: A caution note is meant to highlight anything to help the user avoid situations which may be potentially hazardous or any situation in which damage to the drone or hardware may occur.



Warning: Warnings will highlight a potentially serious situation in which, if not heeded, could lead to dangerous situations where death or serious injury may occur.

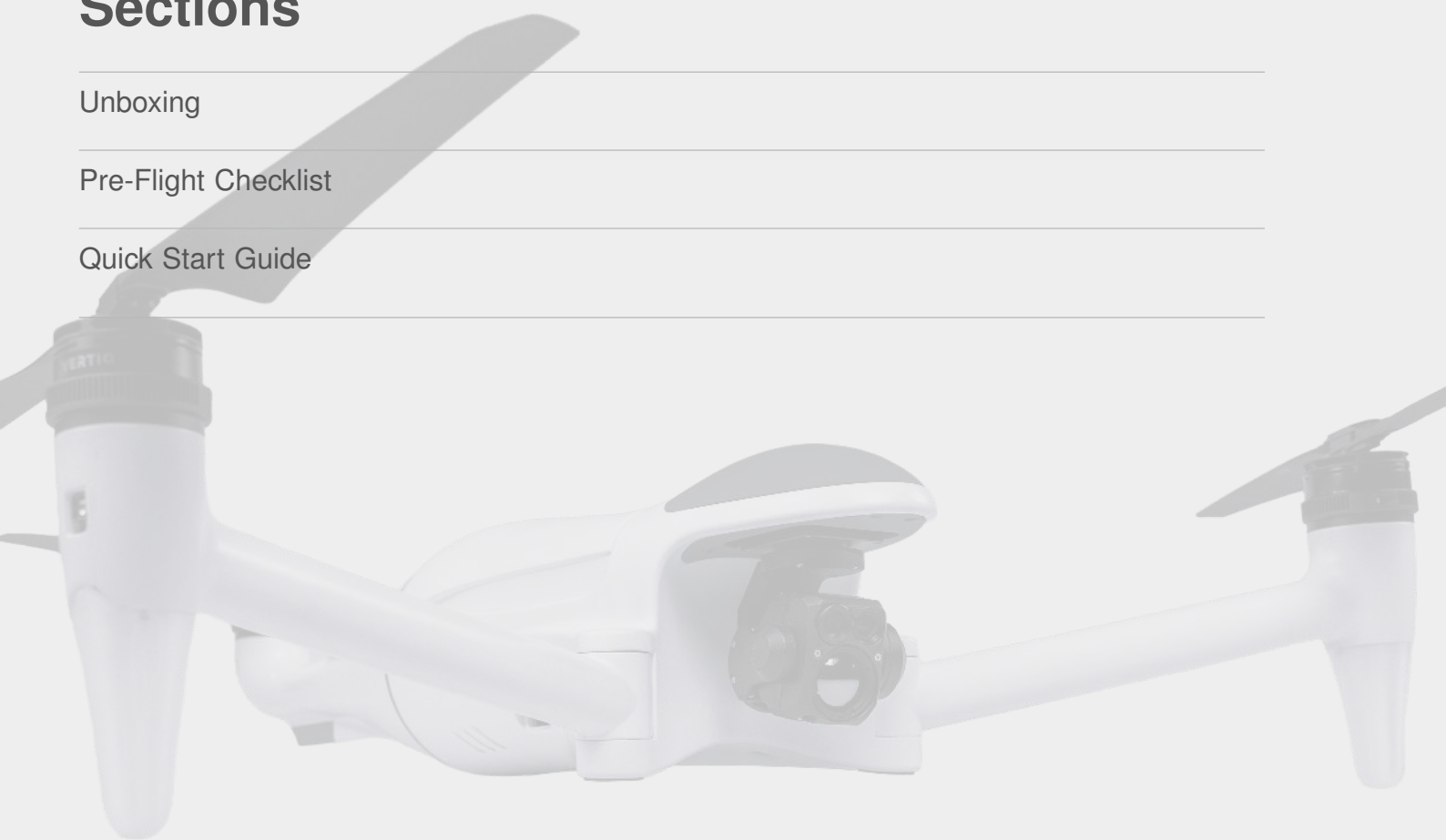
2. Getting Started

Sections

Unboxing

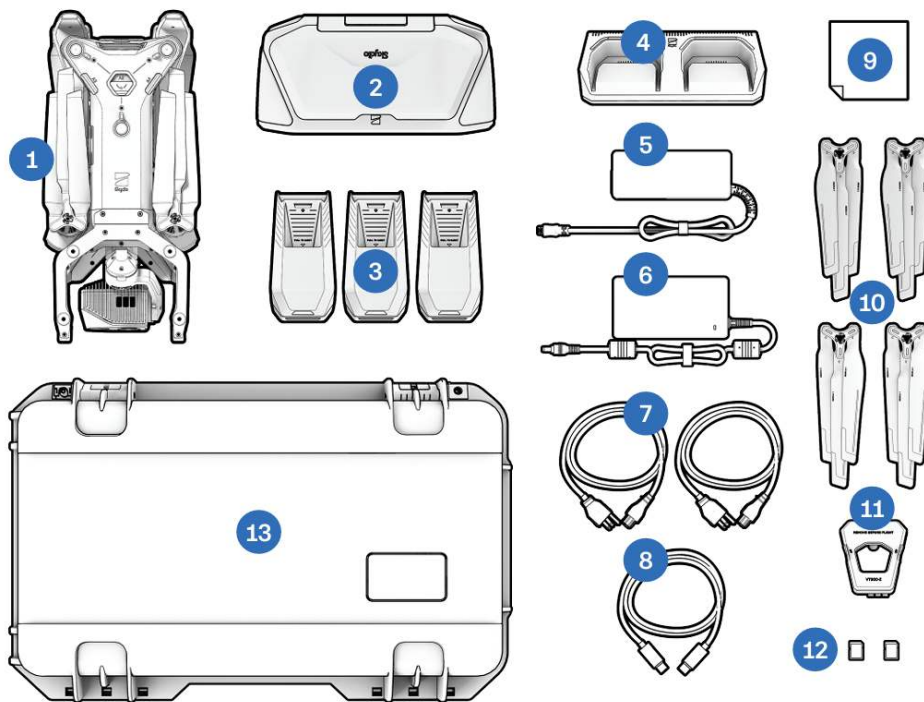
Pre-Flight Checklist

Quick Start Guide



Unboxing

The following items are included with the Angel Scout system. Inspect all components upon opening and verify that no items are missing or damaged before use.



1. Angel Scout Drone
2. Scout Controller
3. Controller Charger

4. Batteries (2)
5. Starter Case

Pre-Flight Checklist

Before operating the drone, verify the following:

- Battery is securely installed and sufficiently charged
- Propellers are unobstructed and free of damage
- Arms are fully extended and locked into place
- Operating area is clear of people and obstacles
- GPS signal is acquired and stable



Note: All status indicators on the user interface will turn green when the drone is ready for flight.



Caution: Failure to complete a pre-flight check may result in unsafe operation or damage to the aircraft.

Quick Start Guide

This section provides a rapid deployment procedure to get the drone airborne. For first-time users, the controller will guide the operator through this process automatically upon initial startup.

1. Remove the drone and controller from the case.
2. Place the drone on a stable, level surface with the front of the aircraft facing away from the operator. *The front of the drone is identified by the camera and gimbal.*



Caution: Ensure the operating area is clear of personnel, obstacles, and overhead hazards before takeoff. Maintain visual line of sight unless operating under approved procedures.

3. Unfold the drone arms as shown below. Ensure each arm is fully extended until a click is felt, indicating it is locked in position.



Note: The propellers do not need to be opened manually. They will unfold automatically when the motors start spinning.



4. Verify that the propellers are unobstructed and free of damage. Do not attempt to operate the drone if any propeller is cracked, chipped, or otherwise compromised.
5. Power on the drone by pressing the power button located on the top of the aircraft. A blue LED will illuminate, indicating the drone is powered on.

2. GETTING STARTED

Quick Start Guide



6. Power on the controller using the power button located on the top of the controller.
7. Arm the drone by holding both joysticks inward and downward simultaneously, as shown below.



2. GETTING STARTED

Quick Start Guide



Note: If the drone does not arm, verify that the system is fully initialized and that no warnings are present on the controller display.

8. Initiate takeoff by slowly pushing the left joystick upward.



Note: If the drone does not take off within 5 seconds after arming, it will automatically disarm as a safety precaution.

9. The drone is now ready for controlled flight. Use the left joystick to control altitude and yaw, and the right joystick to control pitch and roll.



Note: After takeoff, the drone will stabilize and maintain a hover when the joystick is released.

2. GETTING STARTED

Quick Start Guide

10. To land, hold the left joystick downward. Once the drone descends below a safe threshold, the automatic landing sequence will engage.



3. The Drone

Sections

Unfolding the Arms

Turning the Drone On and Off

Lights

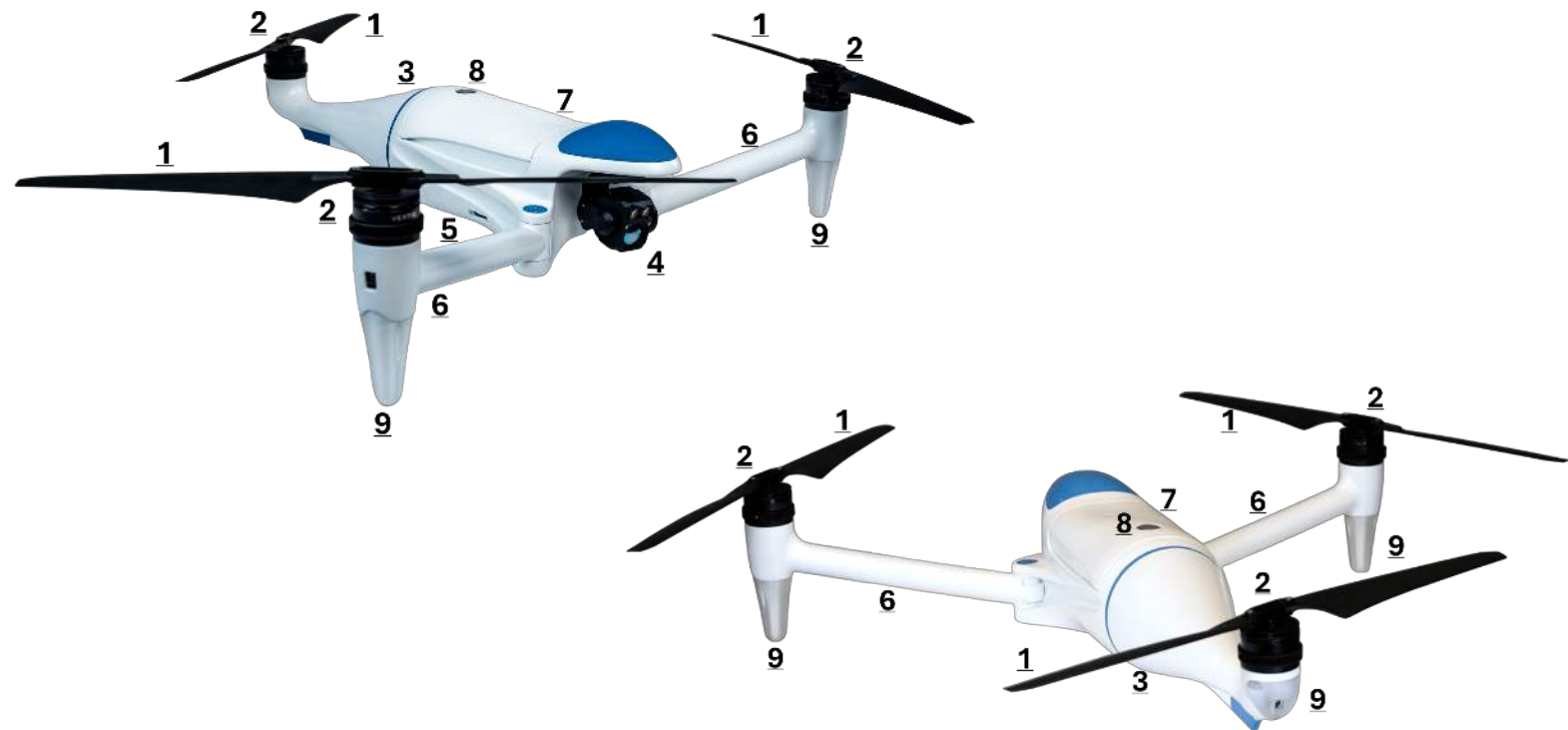
SD Card

Replacing the Battery

Charging the Battery



3. THE DRONE



- 1. Propellers
- 2. Motors
- 3. Camera
- 4. Servo
- 5. SD Card Slot

- 6. Arms
- 7. Battery Compartment
- 8. Power Button
- 9. LED Lights

Unfolding the Arms

The drone is shipped with the arms folded along the sides. Unfold each arm as shown below until it locks into place.



Note: A click should be felt and heard when each arm is fully extended and locked.



Caution: Do not attempt to operate the drone unless all arms are fully extended and securely locked.

Turning the Drone On and Off

To power on the drone, press the power button located on the top of the aircraft.



A blue LED will illuminate, indicating that the drone is powered on.

To power off the drone, press and hold the power button for approximately 3 seconds until the blue LED turns off.

Lights

The drone is equipped with status lights located beneath each motor, visible up to 3 miles in clear conditions. These lights provide a visual indication of the drone's current state.

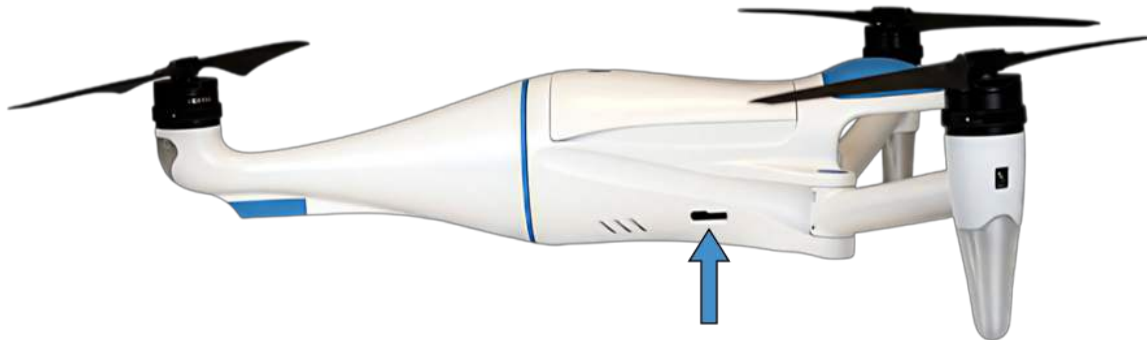
- **Red** Not Ready
- **Green Blinking** Ready with GPS Lock
- **Blue Blinking** Ready without GPS Lock
- **Amber** Low Battery
- **Purple** Fail Safe
- **Green** Armed with GPS Lock
- **Blue** Armed without GPS Lock



Note: Upon startup, the lights will display red until the drone is ready to be armed.

SD Card

The SD card stores photos and video recordings captured by the drone. The SD card slot is located on the right side of the aircraft for easy access.

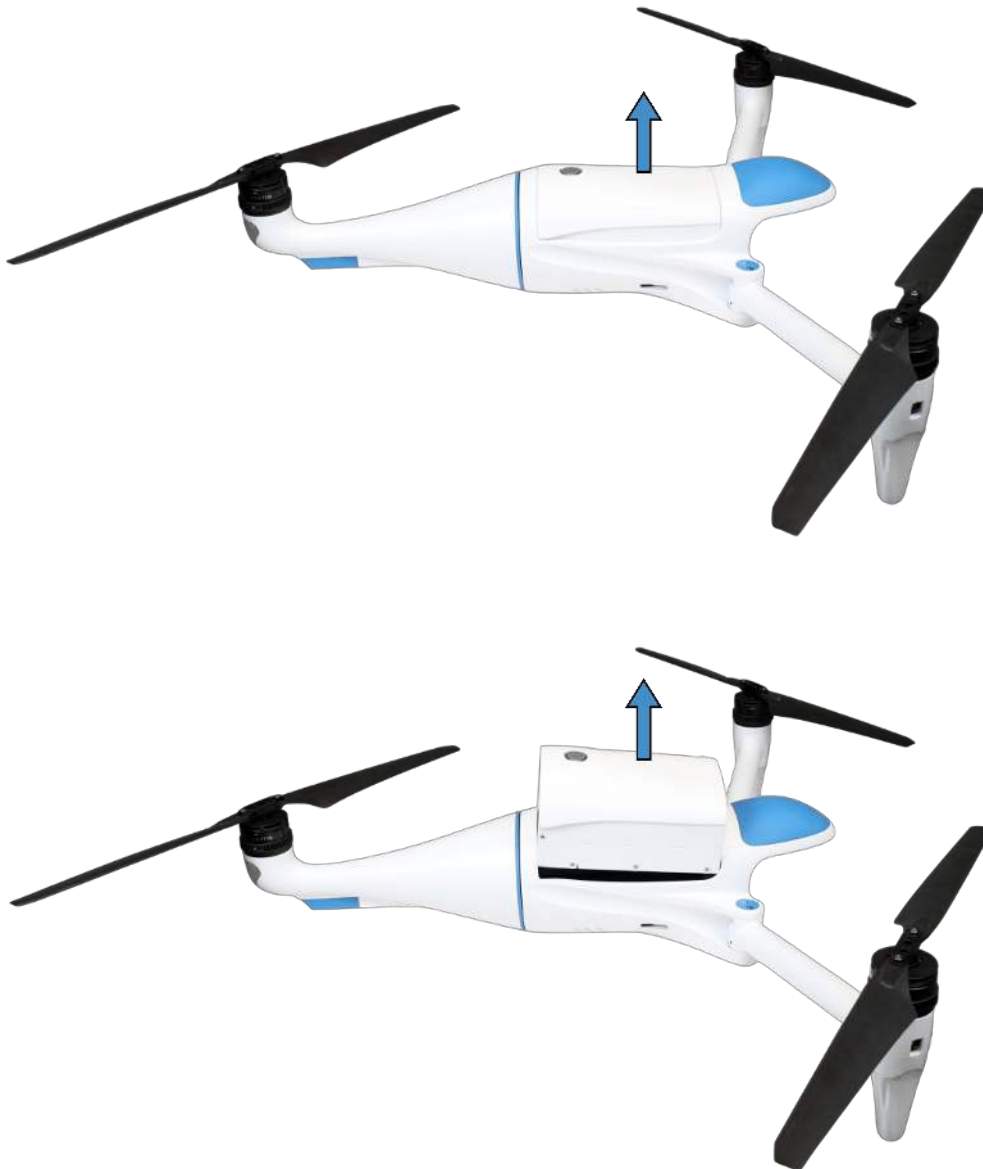


Note: Use only approved or recommended SD cards to ensure reliable data recording and storage.

Replacing the Battery

Before removing or installing a battery, ensure the drone is powered off.

To remove the battery, pull upward on the battery located on the top of the aircraft, as shown below.



3. THE DRONE

Replacing the Battery



To install a battery, align it with the battery compartment and press downward until it clicks securely into place.



Caution: Ensure the battery is fully seated and locked before powering on the drone.

Charging the Battery

Charge the battery using the provided charger.

Connect the charger to a power source, then connect the battery to the charger as shown below.



Note: Only use the provided charger or an approved equivalent to prevent damage to the battery.

4. The Controller

Sections

Joysticks

Turning the Controller On and Off

Radio

Charging the Controller



4. THE CONTROLLER



- 1. Select Button
- 2. X Button
- 3. Y Button
- 4. B Button
- 5. A Button
- 6. Left Joystick
- 7. Start Button
- 8. Right Joystick
- 9. Directional Pad (D-Pad)

- 10. Right Bumper (RB)
- 11. Right Trigger (RT)
- 12. Left Bumper (LB)
- 13. Left Trigger (LT)
- 14. Power Button
- 15. Volume Button
- 16. Radio Antenna Port
- 17. Charging Port
- 18. Joystick Storage

Joysticks

The controller is shipped with removable joysticks stored on the back of the device.



Remove the joysticks and securely screw them into the control sticks on the front of the controller before operation.



Caution: Ensure both joysticks are fully tightened before flight to maintain precise control.

Turning the Controller On and Off

To power on the controller, press the power button located on the top of the controller.



The controller will initialize and blue LEDs will illuminate around the joysticks, indicating it is powered on.

To power off the controller, press and hold the power button for approximately 3 seconds until the device shuts down.

Radio

The controller communicates with the drone using integrated radio transmitters. To power the radios, ensure that the radios are securely connected to the antenna ports on the top of the controller.



The lights on the back of the controller will illuminate, indicating the radios are powered on.



4. THE CONTROLLER Radio

To maximize signal strength and operational range, ensure the antennas are properly oriented toward the drone during operation.



Note: Ensure the radio antennas are securely connected to the antenna ports on the top of the controller before use.



Caution: Obstructions, interference, or improper antenna orientation may reduce signal quality and control range.



Warning: Keep the controller a minimum distance of 1 foot away from the user or other personnel during operation to minimize exposure to radio frequency emissions.

Charging the Controller

To charge the controller, connect the provided charger to the charging port located on the top of the controller.



The controller may be charged while powered on or off. A full charge typically takes approximately 2 hours and provides up to 4 hours of operation.



Warning: Only use the provided charger or an approved equivalent to prevent damage to the controller.

5. Operating The Drone

Sections

Controls

User Interface

Button Functions

Switching Flight Modes

Drone Lights

Streaming

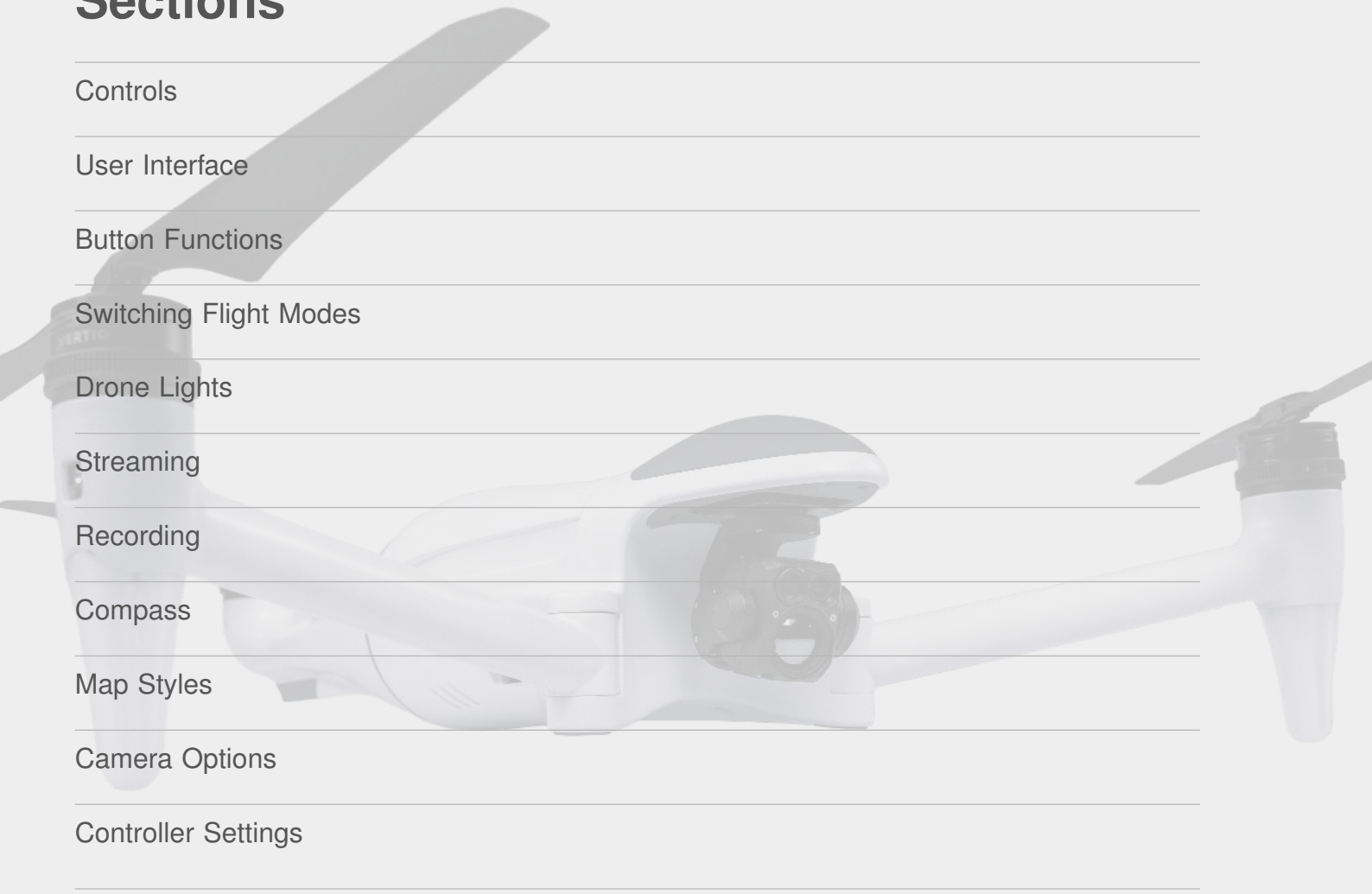
Recording

Compass

Map Styles

Camera Options

Controller Settings



Controls

1. LB: Start/Stop Video Recording
2. RB: Capture Photo
3. A: Cycle Screen Forward
4. B: Cycle Screen Backward
5. Start: Open/Close Menu
6. X: Reset Zoom / Return to Previous Zoom
7. Long Press X: Center Camera
8. Long Press X (when centered): Look Down
9. Long Press Y: Return to Land (RTL)
10. D-Pad Up: Camera Pitch Up
11. D-Pad Down: Camera Pitch Down
12. D-Pad Left: Camera Yaw Left
13. D-Pad Right: Camera Yaw Right
14. Left Joystick Up/Down: Throttle (Altitude)
15. Left Joystick Left/Right: Yaw
16. Right Joystick Up/Down: Pitch (Forward/Backward)
17. Right Joystick Left/Right: Roll (Left/Right)
18. Long Press Start & Select: Emergency Stop

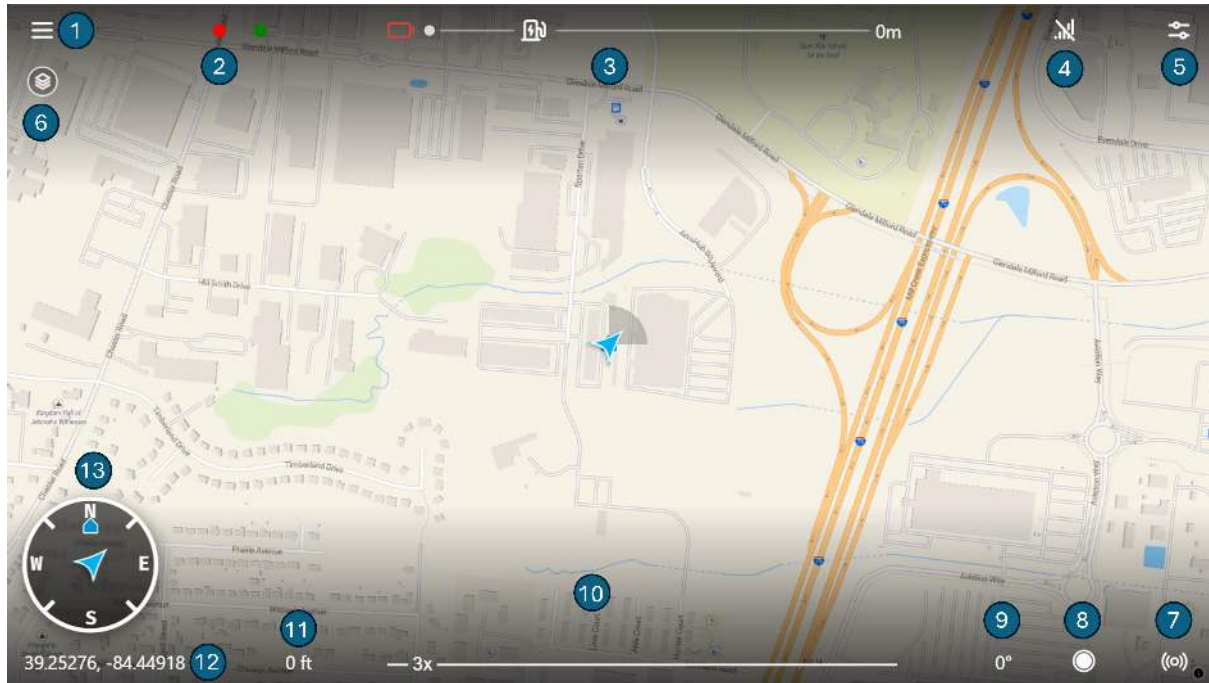


Note: A long press is defined as holding a button for at least 1 second.



Warning: The Emergency Stop will immediately shut down the motors. Use only in critical situations where immediate shutdown is required.

User Interface



- | | |
|-----------------------------------|---------------------------------|
| 1. Menu | 8. Recording Information |
| 2. Preflight Checks | 9. Camera Pitch |
| 3. Drone Battery | 10. Camera Zoom |
| 4. Radio Signal Strength | 11. Altitude |
| 5. Controller Menu | 12. Drone's GPS Coordinates |
| 6. Maps or Camera Settings | 13. Compass |
| 7. Streaming Information | 14. Drone Icon |



Note: Items shown in bold indicate interactive elements that can be selected to open menus or display additional information.

Button Functions

Selecting **Button Functions** from the main menu displays a visual layout of the controller controls.

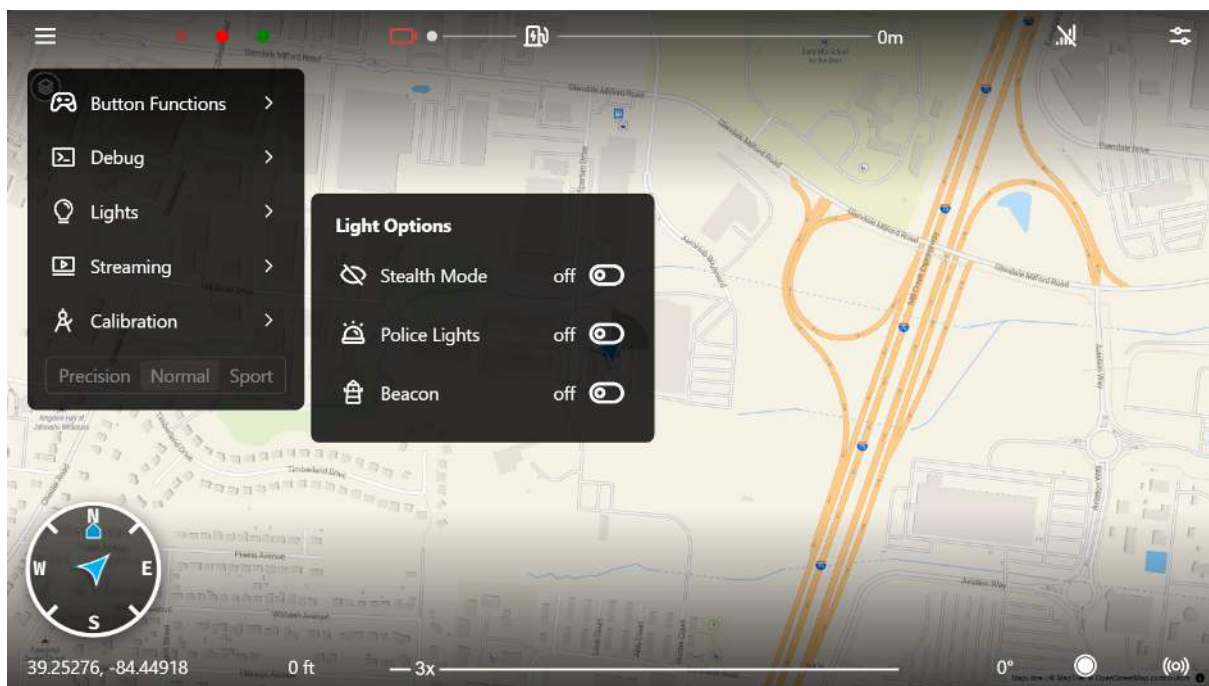


Switching Flight Modes

The Scout supports three preset flight modes:

- **Precision Mode** - Reduced speed for confined or complex environments
- **Normal Mode** - Standard flight performance for general operation
- **Sport Mode** - Increased speed with a fixed camera for FPV-style operation

To change flight modes, open the menu and select the desired mode at the bottom of the interface.

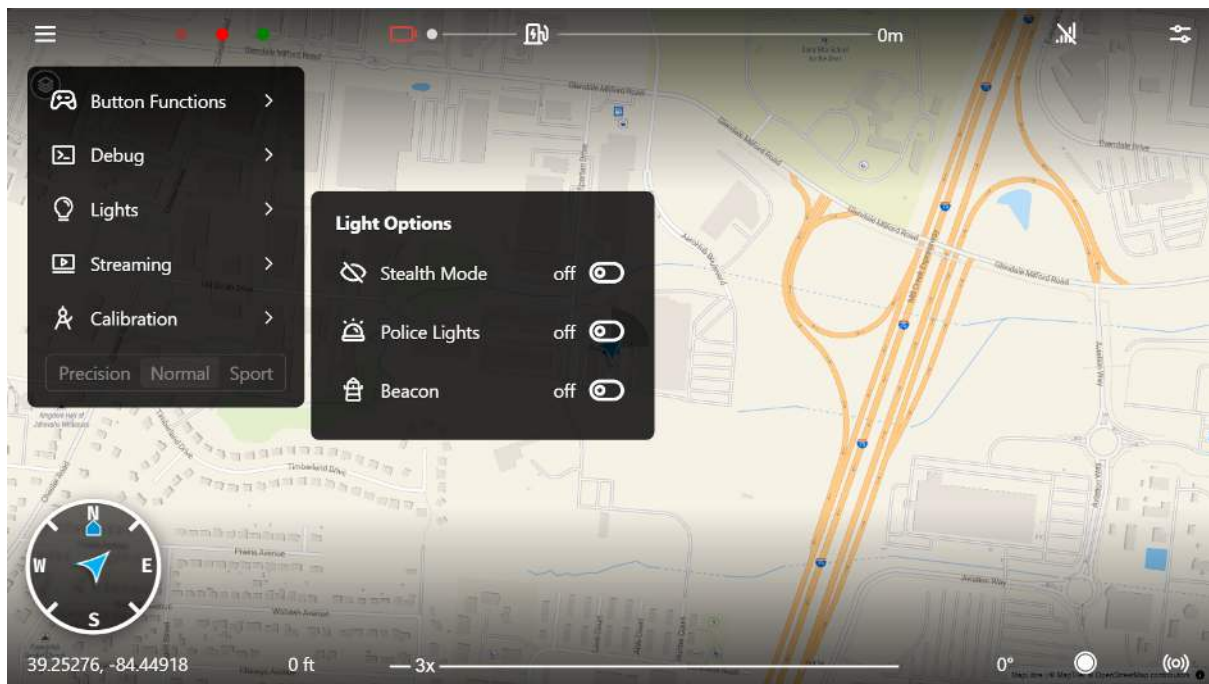


Caution: Sport Mode increases speed and locks the camera. This may reduce situational awareness in confined environments. Only operate in open areas with clear line of sight.

Drone Lights

The drone supports multiple lighting configurations for visibility and operational signaling.

- Default: Green (left), Red (right), White (rear)
- Beacon Mode: All lights flash simultaneously when above approximately 10 meters altitude
- Police Mode: Alternating red and blue lights
- Stealth Mode: All lights disabled

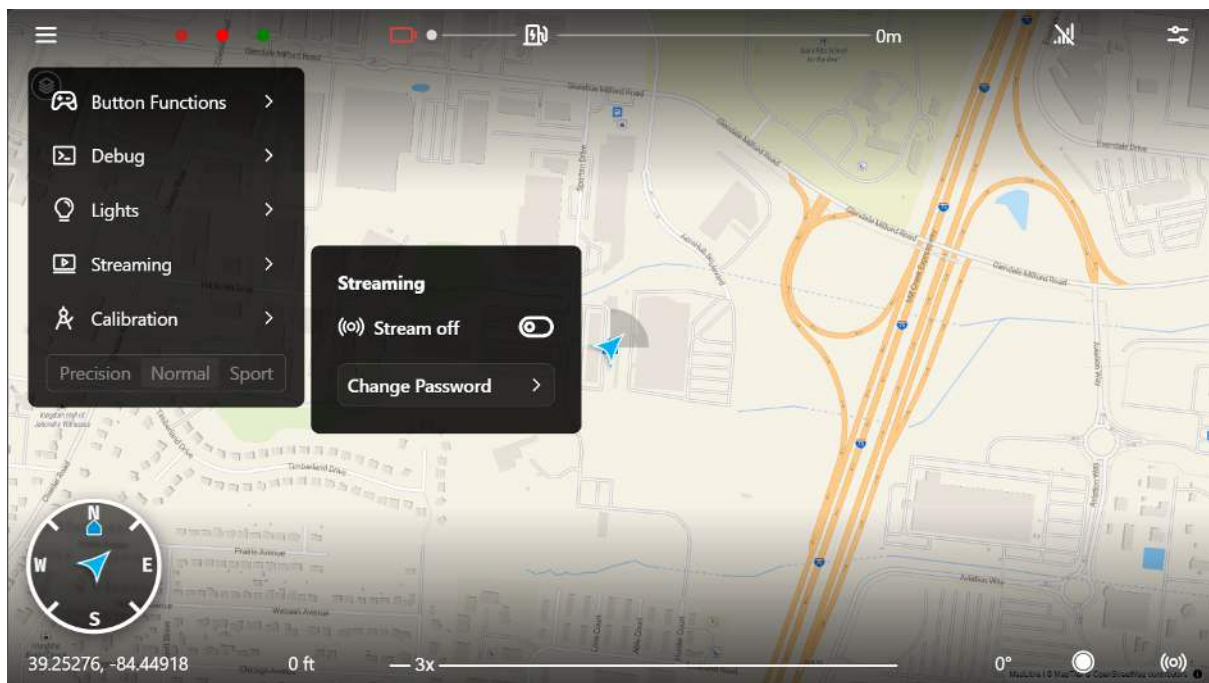


Streaming

To begin streaming:

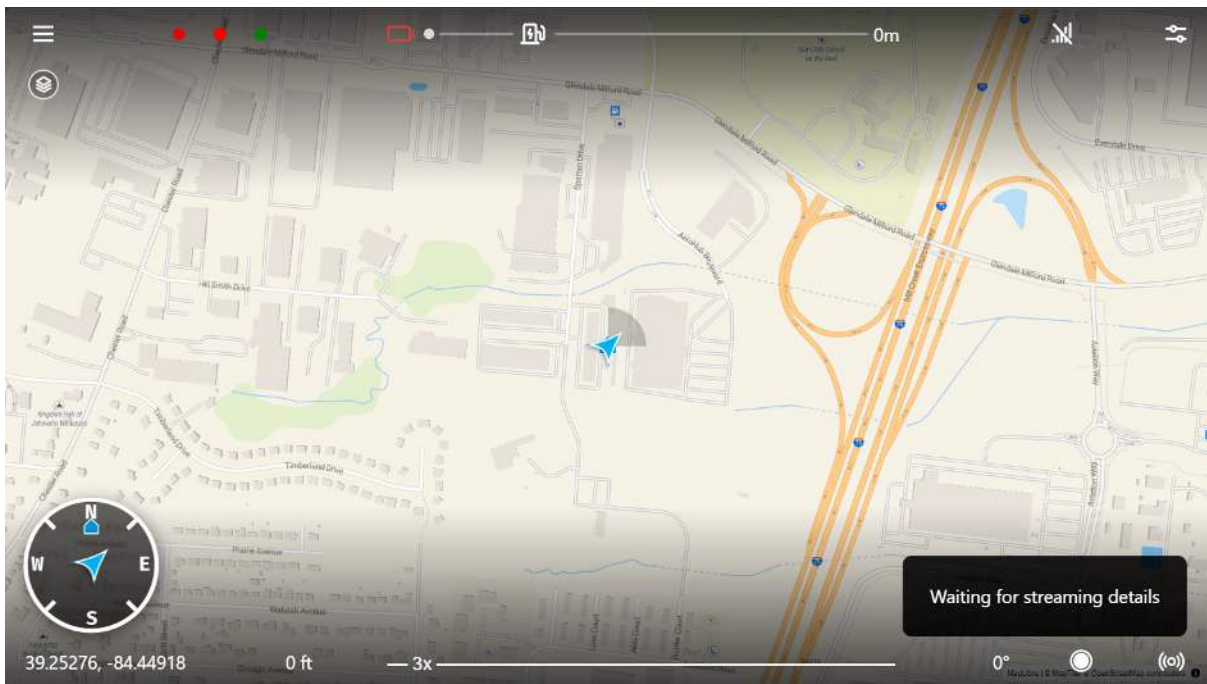
1. Open the main menu
2. Select **Streaming**
3. Toggle streaming **On**

The streaming icon will blink yellow while connecting. Once connected, the icon will turn green.



Selecting the streaming icon in the lower-right corner displays connection details and a QR code for remote viewing.

5. OPERATING THE DRONE Streaming



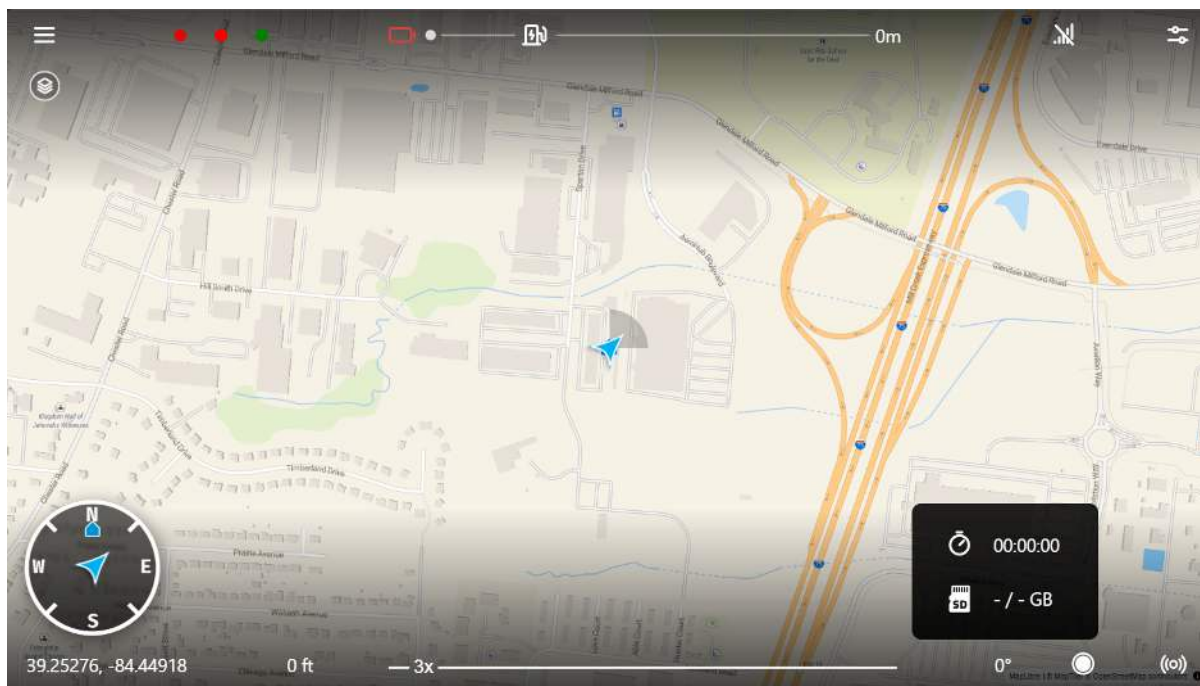
Note: An active internet connection is required for streaming.



Note: If the streaming password is lost, contact Angel Guardian Care. Password recovery is not available.

Recording

To begin recording video, press **LB**. The recording indicator will turn red.



Selecting the recording icon displays remaining storage and recording duration.

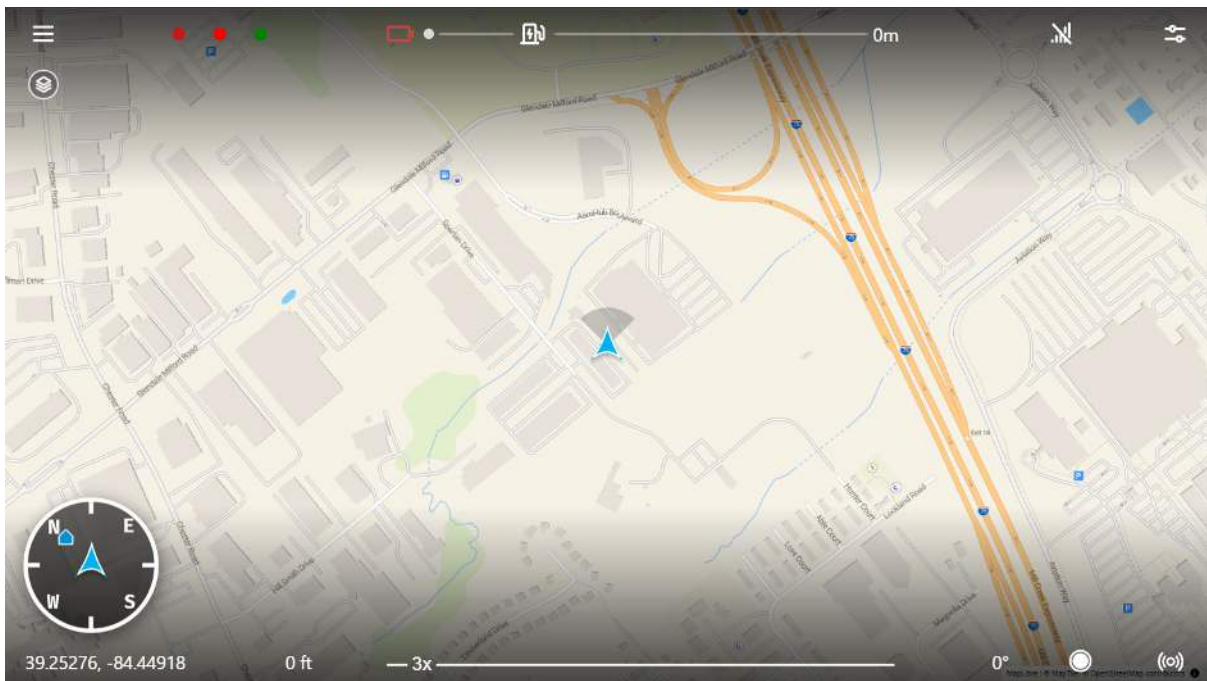
Press **LB** again to stop recording. Press **RB** to capture a photo.

Compass

The compass provides orientation, wind direction, and navigation references including takeoff position and placed markers.

The compass is also interactive:

- Press once: Recenter the map on the drone
- Press again (when centered): Enable forward-facing (heading-up) view
- Press again: Return to default north-up orientation



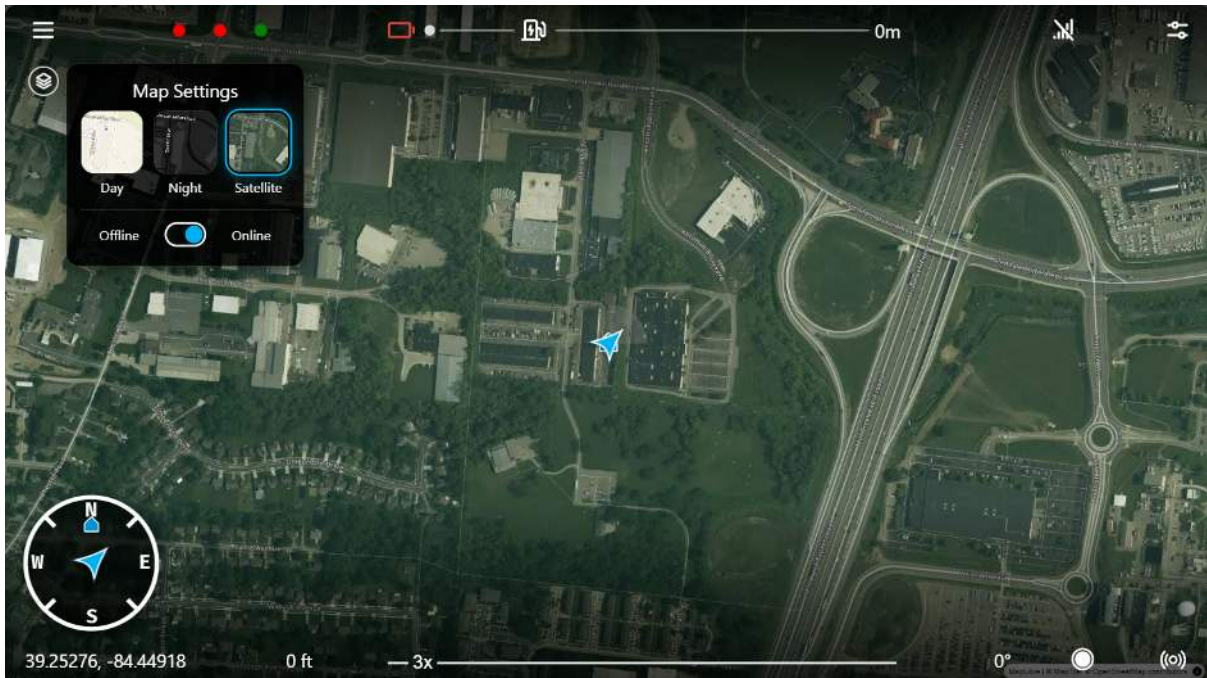
Note: If the map is rotated, recentering will preserve orientation. A second press resets the map to north-up.

Map Styles

When online, the user can select between the following map styles:

- Day
- Night
- Satellite

Offline map styles (Day and Night) are also available on the controller.



Note: If internet connection is lost during flight, cached map tiles may remain visible. Switching styles may trigger a warning if online maps are unavailable.

Camera Options

The interface supports multiple viewing modes:

- Map - Full map display
- Camera - Full camera view
- Camera/Map - Camera with map overlay
- Map/Camera - Map with camera overlay
- Thermal - Thermal camera view



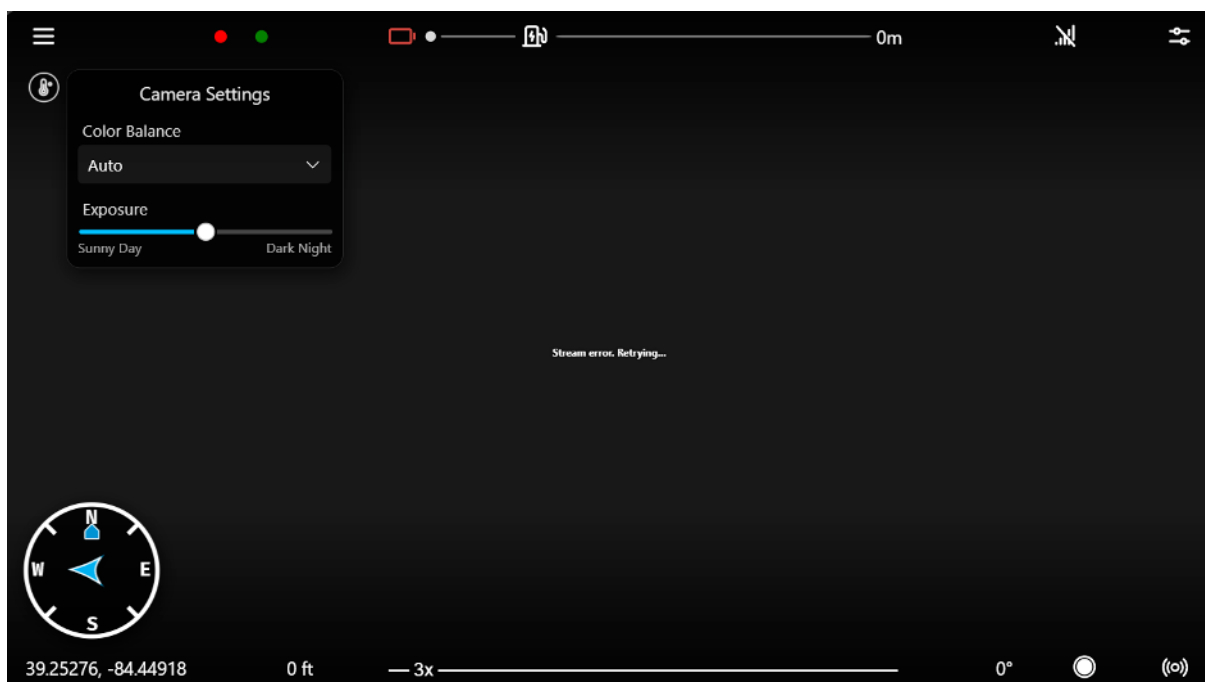
Note: Available settings depend on the active view mode.



Note: Overlay modes allow access to settings for both views simultaneously.

When in camera mode, the following color balance options are available:

- Auto
- Sunrise/Sunset/Candlelight
- Two Hours After Sunrise
- Cloudy Sky
- Shade on a Clear Day



5. OPERATING THE DRONE

Camera Options

In thermal mode, the following controls are available:

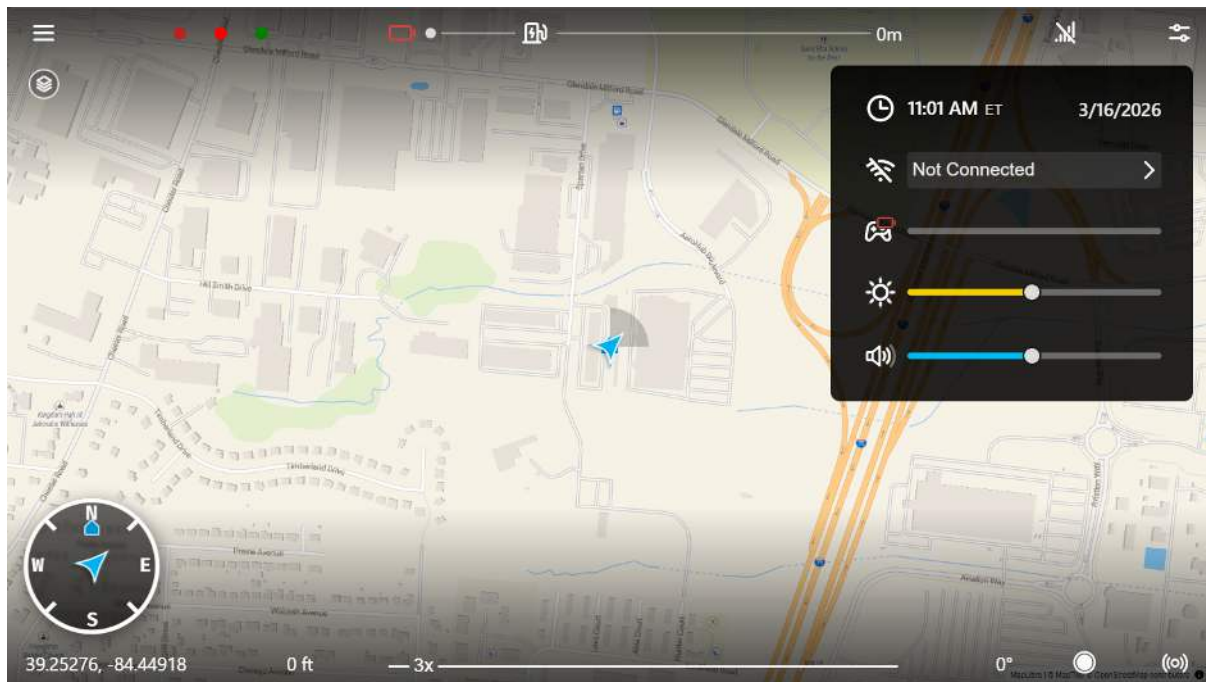
- Polarity: Black Hot / White Hot
- Color Mode: Monochrome or Colorized
- **Gain**: Temperature sensitivity range
- **Level**: Center point of the temperature range

Controller Settings

Selecting the settings icon in the top-right corner provides access to controller configuration options:

- Time and Time Zone
- Wi-Fi Settings
- Brightness
- Volume

The controller battery level is also displayed in this menu.



5.11.1 Time Settings

Switch between 12-hour and 24-hour formats using the clock icon.

If offline, time zones can be adjusted manually by selecting the displayed time zone.

5.11.2 Wi-Fi Settings

Selecting the menu icon next to a network opens network settings.

Available options:

- Remember Network - Saves credentials

5. OPERATING THE DRONE Controller Settings

- Auto-Connect - Automatically connects when in range

Wi-Fi can be enabled or disabled using the toggle at the top of the menu.



Note: Disconnecting from a network with Auto-Connect enabled will cause the controller to attempt reconnection.

5.11.3 Brightness and Volume

Adjust brightness and volume using the on-screen sliders.

Selecting the volume icon will mute the controller.



Note: Volume can also be adjusted using the physical buttons on the controller.

6. Regulatory Information

Sections

Federal Communications Commission (FCC) Compliance

FCC Host Product Identification

Approved Antennas and RF Hardware

RF Exposure Information

Ground Control Station Operating Position

Co-Location and Simultaneous Transmission

Service and Installation Restrictions



Federal Communications Commission (FCC) Compliance

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Angel Aerial Systems, Inc. could void the users authority to operate this equipment.

This equipment has been tested and found to comply with the limits applicable to the device authorization and configuration identified in this manual. These limits are intended to provide reasonable protection against harmful interference when the equipment is installed and used in accordance with the instructions provided. If this equipment does cause harmful interference to radio or television reception, 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 the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult Angel Aerial Systems, Inc. or an experienced radio/TV technician for help.

FCC Host Product Identification

This product contains certified radio transmitter module(s). The FCC identifier(s) applicable to this host configuration are provided on the product label and/or regulatory label.

Drone Host:

- Contains FCC ID: 2BUWQHP900
- Contains FCC ID: 2BUWQ18PMDDL2450
- Contains FCC ID: XPYANNAB4

Ground Control Station:

- Contains FCC ID: 2BUWQHP900
- Contains FCC ID: 2BUWQ18PMDDL2450
- Contains FCC ID: 2BUWQ-MT7922A12L

Only the module combinations, antenna types, cable assemblies, and installation configurations approved by Angel Aerial Systems, Inc. are authorized for use in this product. FCC modular guidance requires the final host to be identified with the relevant Contains FCC ID information and to follow the approved integration instructions for the authorized module configuration.

Approved Antennas and RF Hardware

This equipment shall be used only with the antenna(s), antenna placement, cable type(s), cable length(s), and radio module configuration approved by Angel Aerial Systems, Inc. for this host product.

Substitution of antennas, modification of antenna mounting location, use of unapproved cables or adapters, or replacement of internal RF components with non-approved parts is not permitted.

The radio module(s), antennas, RF cables, and related RF hardware inside the product are not user-serviceable. Installation, replacement, rework, or modification of RF components shall be performed only by Angel Aerial Systems, Inc. or authorized service personnel.

Use of the equipment with unapproved RF hardware or in an unapproved configuration may invalidate the FCC authorization and void the users authority to operate the equipment. FCC modular guidance specifically ties host compliance to the approved antenna and integration conditions.

RF Exposure Information

This equipment has been evaluated for radio-frequency exposure for the configuration authorized by Angel Aerial Systems, Inc. The equipment shall be installed, operated, and maintained only in the manner described in this manual and in the approved product configuration.

For normal operation of the Ground Control Station, the operator shall hold the controller only by the designated grips and shall not place the hands, fingers, or other body parts directly over, against, or wrapped around the antenna surfaces, antenna radomes, or antenna mounting regions while the transmitter is operating.

For normal operation of the Drone, users shall not modify antenna placement, add accessories that change antenna spacing or orientation, or operate the aircraft with non-approved external RF attachments.

This product must be used only in the operating configurations authorized by Angel Aerial Systems, Inc. and described in the FCC equipment authorization filing for this host product. Radio-frequency exposure compliance depends on the approved host configuration, installation, and operating conditions.

Ground Control Station Operating Position

The Ground Control Station is intended to be operated in the normal hand-held position defined by Angel Aerial Systems, Inc. During operation:

- Hold the unit by the designated grip areas only.
- Do not cover antenna regions with the hands or body.
- Do not press the device against the torso, face, or other parts of the body during RF transmission.
- Do not use aftermarket antenna accessories, antenna covers containing metal, or attachments that alter the approved antenna geometry.
- Maintain the product in the orientation and grip posture described by Angel Aerial Systems, Inc.

This language should be used only if it reflects the actual operating posture evaluated for the product. FCC exposure treatment depends on the actual user separation and operating condition, including whether operation occurs within 20 cm of the user.

Co-Location and Simultaneous Transmission

This product shall not be modified to add transmitters, amplifiers, or antennas not specifically approved by Angel Aerial Systems, Inc. Any simultaneous transmission, co-location, or alternate radio configuration is permitted only if it is included in the FCC authorization for this host product.

Service and Installation Restrictions

No user installation of radio modules is permitted. No user replacement of antennas, RF cables, shielded enclosures, or RF interconnect hardware is permitted.

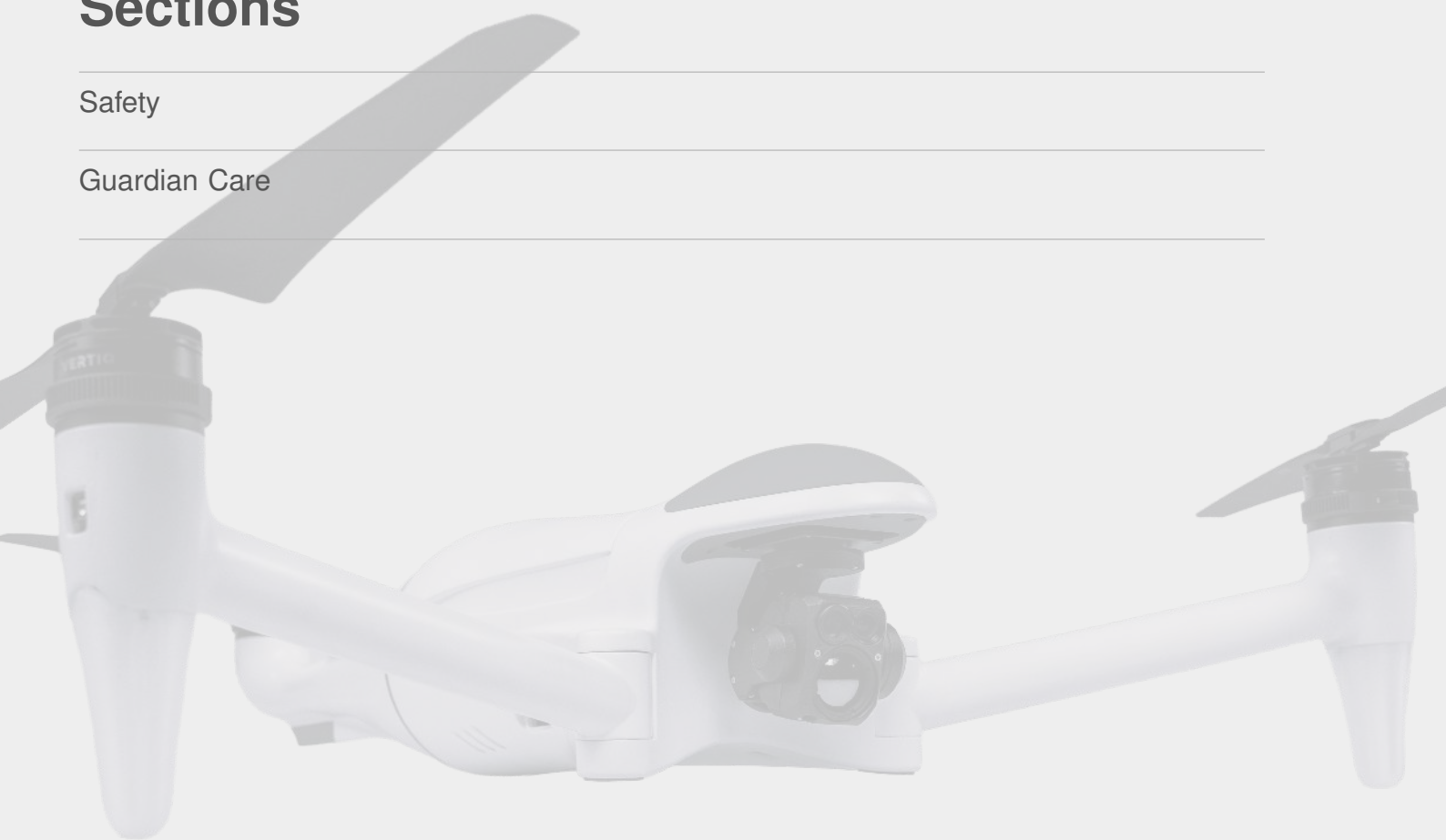
Repairs affecting any RF path, antenna assembly, shield, cable, connector, or radio module shall be performed only by Angel Aerial Systems, Inc. or authorized service personnel using approved parts and approved procedures.

7. Support

Sections

Safety

Guardian Care



Safety

Safe operation of the Angel Scout system is the responsibility of the operator. Always follow established procedures and situational awareness protocols when operating the aircraft.

7.1.1 General Safety Guidelines

- Maintain visual line of sight with the drone unless operating under approved procedures
- Avoid flying near people, vehicles, or structures unless required for mission objectives
- Do not operate the drone in hazardous weather conditions (e.g., high winds, heavy rain, lightning)
- Ensure all components are properly secured before flight
- Monitor battery levels throughout operation and plan for safe landing

7.1.2 Operational Awareness

- Continuously monitor telemetry, signal strength, and system warnings
- Be aware of surrounding obstacles, terrain, and environmental conditions
- Maintain control readiness at all times during flight

7.1.3 Emergency Procedures

- If control is lost, attempt to regain signal by adjusting antenna orientation or position
- If the drone behaves unexpectedly, reduce throttle and stabilize the aircraft
- Use Return-to-Land (RTL) or Emergency Stop only when necessary



Warning: Improper operation may result in damage to equipment, injury, or loss of control of the aircraft. Always operate within approved guidelines and training.

Guardian Care

Angel Guardian Care provides support for system setup, troubleshooting, and operational assistance.

7.2.1 Contact Support

If assistance is required, contact Angel Guardian Care:

- Name: Will Hastings, CEO
- Phone: (513) 628-8830
- Email: will@angelaerialsystems.com

7.2.2 When to Contact Support

- System will not power on or connect
- Persistent warnings or errors are displayed
- Streaming or recording issues
- Hardware damage or suspected malfunction
- Assistance with configuration or updates

7.2.3 Before Contacting Support

To help resolve issues quickly, have the following information available:

- Drone serial number
- Controller serial number
- Description of the issue
- Screenshots or photos (if applicable)



Note: For critical incidents during active operations, prioritize safety and secure the aircraft before contacting support.



Note: All pilots are responsible for adhering to FAA regulations and guidelines.