Vision Aerial

Flight Deck Manual

Version 3.0.11

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Download and Install Flight Deck

System Requirements:

All Vision Aerial platforms Mark 2.1 or greater will come with *Flight Deck* as the standard operating software on the Herelink ground control station. *Flight Deck* can also be used for mission planning on mobile devices or as a desktop application. Any modern computer or mobile device should be able to run *Flight Deck*. The performance will depend on the system environment, 3rd party applications, and available system resources. More capable hardware will provide a better experience. For the best experience and compatibility, we recommend the newest version of your operating system. Please contact our service department for access to our installation software.

Windows:

Vision Aerial Flight Deck can be installed on 64-bit versions of Windows:

- Extract contents FlightDeck-installer.exe and the PDF instruction document.
- Double click the executable to launch the installer.
- If you run into errors, please review the PDF instructions in the zipped folder.

⚠️ **The Windows installer creates three shortcuts: Flight Deck, GPU compatibility Mode, GPU Safe Mode. Use the first shortcut unless you experience startup or video rendering issues.**

Android:

Vision Aerial Flight Deck is not yet available from the Google Play Store.

iOS:

Vision Aerial Flight Deck is not yet available from the Apple App Store.

Getting Started with Flight Deck

Starting Fall of 2021, all vehicles come with Flight Deck pre-installed on the ground control station. These instructions will help you get started with Vision Aerial Flight Deck. Older vehicles may be updated to use Flight Deck. Please contact Vision Aerial if you would like to update your vehicle. Flight Deck is based on the open source software QGroundControl. It has been customized to Vision Aerial vehicles and modified based on user feedback.

Getting started is easy:

- Turn on your ground control station
- Tap on the Flight Deck icon to launch it
- Plug in the flight battery on your vehicle
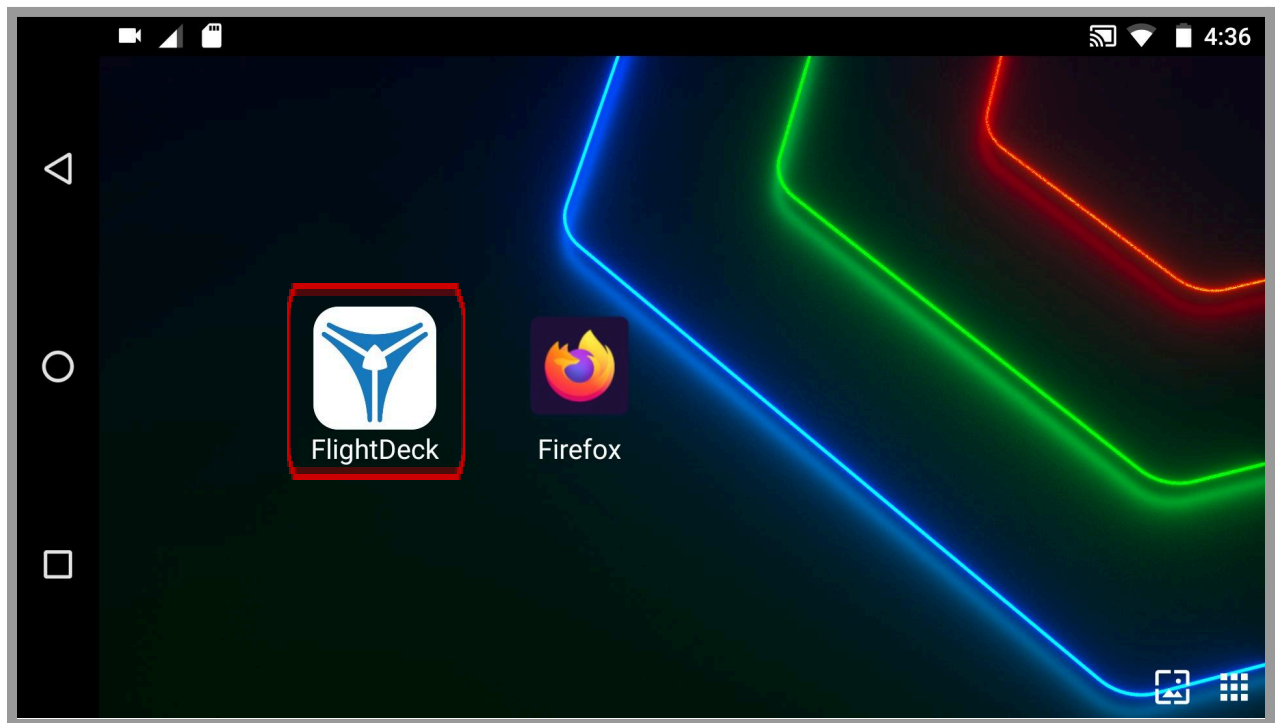
⚠️ **Error messages may populate during startup. These errors will be resolved once the aircraft finishes its initialization.**

Your vehicle will run through its normal setup and preflight process. Once the preflight is complete, *Flight Deck* will display the *Fly View* on the screen.

Fly View

The main controls you see on the screen are as follows:

● Use the *Menu Selection* to access more settings:

   ○ Vehicle Setup

   ○ Application Settings

   ○ Flight Deck Version

● Click the *Status Icons* on the toolbar to find out the status of the connected vehicle:

   ○ Flight Modes

   ○ Notifications Bar

   ○ GPS Status

   ○ Telemetry Status

   ○ Battery Status

   ○ RemoteID Status

   ○ Fence Information

● In *Mission Planning*, gain access to the mission setup page

● *Compass and Attitude* displays the following:

   ○ Heading in degrees

- ○ Pitch and roll angle in degrees
- ○ Virtual horizon relative to the aircraft
- Below, *Payload Selection* will display the currently selected payload
    - ○ Tap to display camera controls
    - ○ Long press to shortcut to payload selection menu
- *Landing Gear* allows the user to control the retracts:
    - ○ Slide up to retract
    - ○ Tap to deploy
- *Video Stream* streams the video feed in real time from supported payloads
    - ○ Tap to bring video stream to full screen
    - ○ Drag corner to alter the window size
    - ○ Tap arrow on bottom left to minimize window
    - ○ Long press to switch between Primary and Secondary stream
- The *Parameters* display relevant vehicle and mission information at a glance
    - ○ By default, altitude (relative from takeoff), flight time (arm to disarm), and distance to home are displayed

You may also download and install Flight Deck for Windows and Android. See instructions for download and installation.

⚠️ **This guide is a work in progress. Please contact us if you notice any errors or omissions.**

Video Stream Workflow

Flight Deck supports up to two video streams at once. Switching between both streams can be done by long pressing the video display as follows:
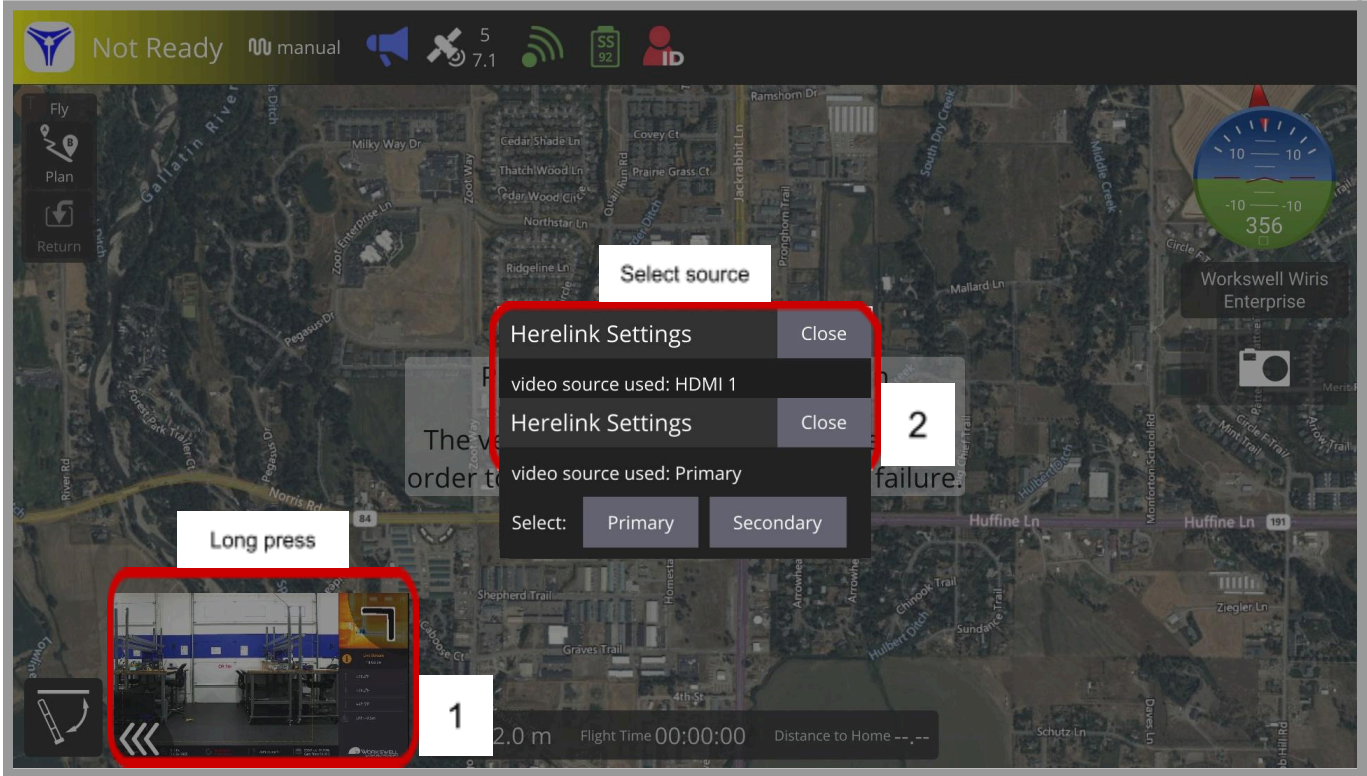

The long press can be performed when the video stream is minimized or maximized. In most configurations, the Primary video stream will display the belly-mounted payload while the Secondary video stream will display the FPV camera. The heads-up display can also be hidden from view to maximize the video stream real estate by tapping the upper right button:
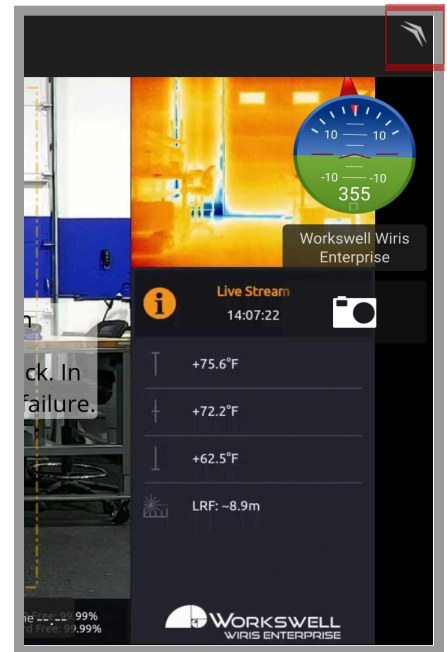
Vehicle Setup

In the *Vehicle Setup* menu, you will find a summary of settings, safety settings, payload setup, and sensor information. *Vehicle Setup* can be accessed by tapping the *Menu Selection* and proceeding as follows:
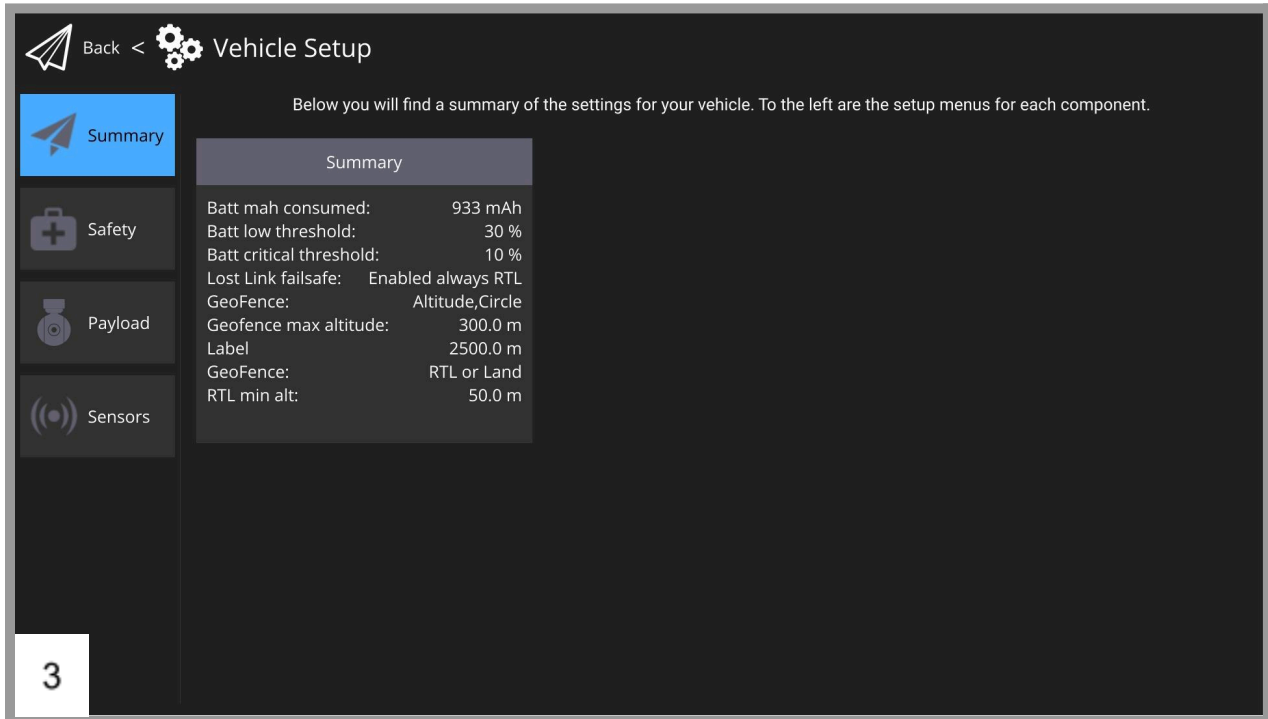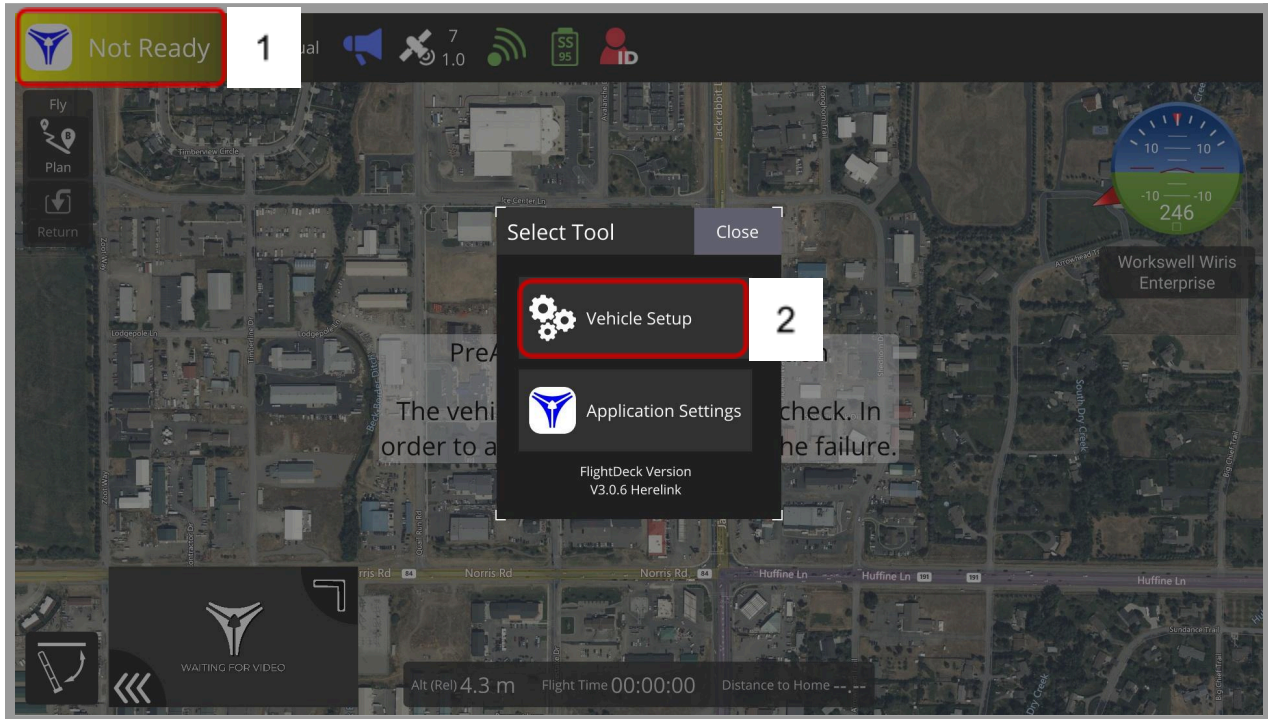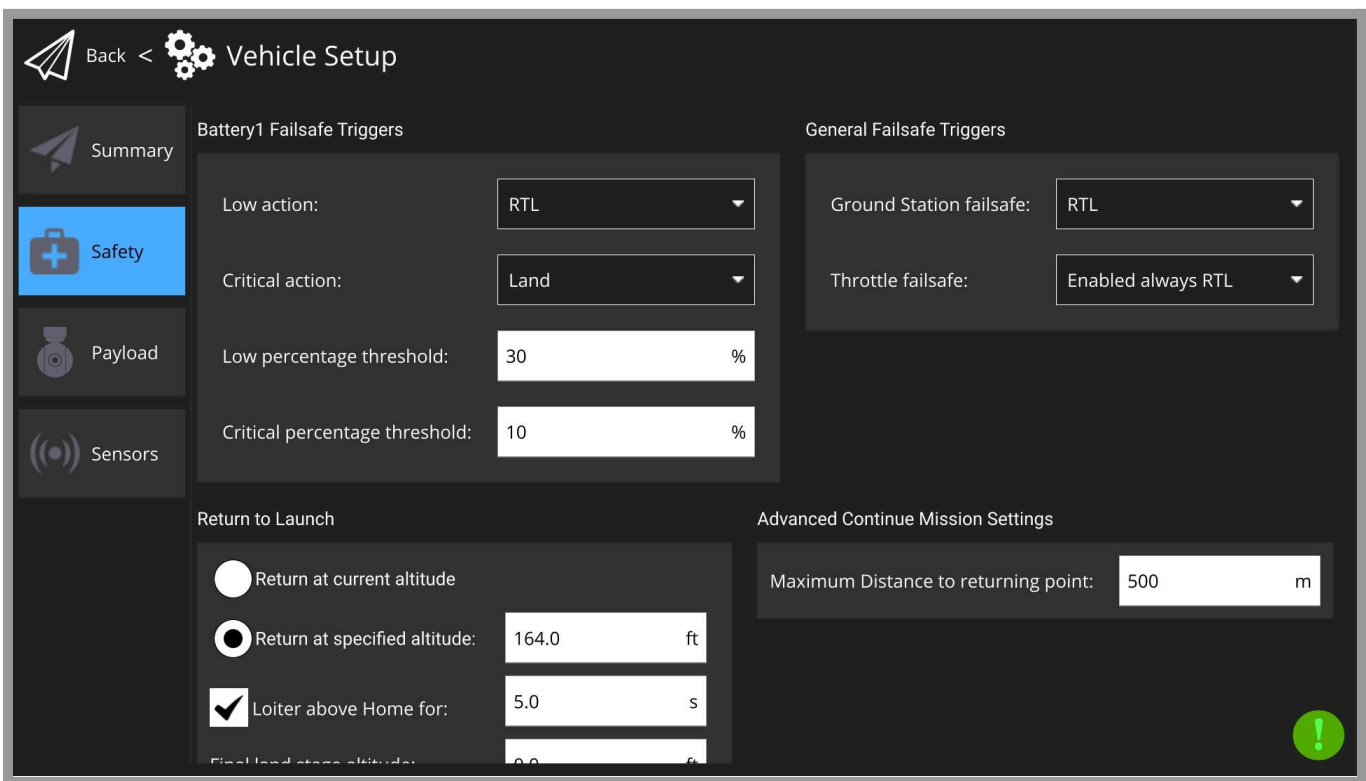
- *Summary*
  - The summary menu displays basic safety parameters for your vehicle
- *Safety*
  - View and change safety features and failsafe settings
- *Payload*
  - Configure payload and sensor options
- *Sensors*
  - Adjust sensor configuration and settings

Safety

The safety menu is where all the general safety settings are located. Please carefully consider the implications of each value before changing it. If you have questions, please contact Vision Aerial prior to changing any settings.

> **Warning: Changing the safety settings could cause your drone to crash and may void your warranty. Use extreme caution when changing these settings.**

Battery Failsafe Triggers:

The most basic and important failsafes are triggered by battery levels. The settings on this menu will determine how the vehicle responds to low battery and critically low battery thresholds.

By default, Low battery triggers RTL (Return to Launch). When a vehicle goes into RTL, it will notify the user, climb in altitude, return to the launch location, and then gently descend to the ground.
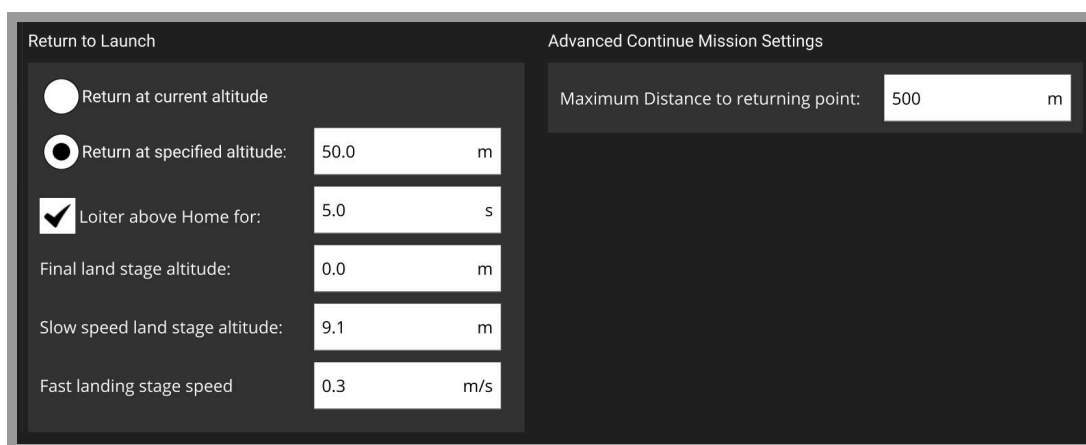
When the battery becomes critically low, the aircraft will land in its current position.

By default, the low percentage threshold set to trigger RTL is 30%. Critically low battery is set to 10%.

General Failsafe Triggers:

The general failsafes include actions to take when there is a problem with the ground control station. The Ground Station failsafe is for a problem with the telemetry. By default, it is set to Always RTL.

If the connection between the ground control station and the drone is compromised, this triggers a lost link failsafe. By default, the failsafe for Loss of Link with the controller is set to Always RTL.

| Return to Launch		Advanced Continue Mission Settings	
○ Return at current altitude		Maximum Distance to returning point:	500 m
● Return at specified altitude:	50.0 m		
✔ Loiter above Home for:	5.0 s		
Final land stage altitude:	0.0 m		
Slow speed land stage altitude:	9.1 m		
Fast landing stage speed	0.3 m/s		

Return to Launch:

The Return to Launch settings specify how the drone will respond when RTL is triggered.

Advanced Continue Mission Settings:

This value determines the maximum distance allowable to trigger the continue mission function. More details can be found in the Mission Planning portion of this document.

Payloads

The Payloads screen allows you to add and configure cameras and sensors. A list of known cameras is available, and you can also configure your own.
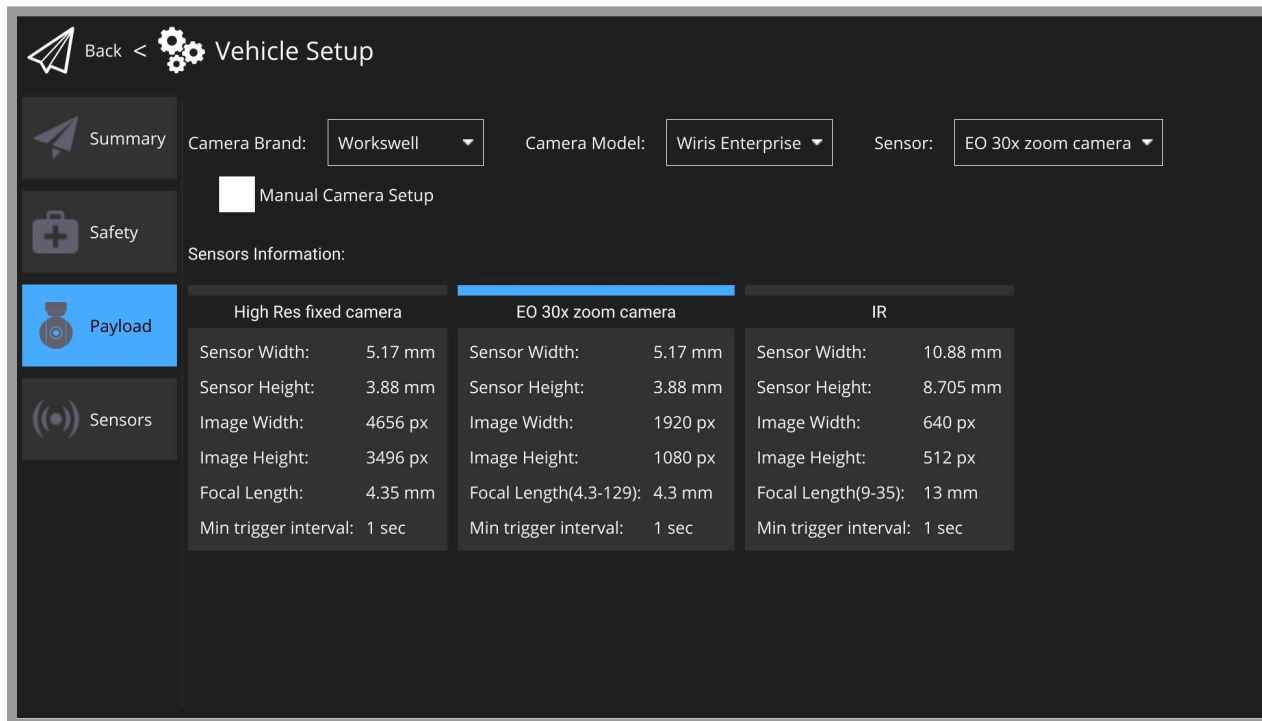
Selecting Known Payloads:

Payloads that are preconfigured in the system include: Sony RX0, Sony RX1R II, Sony α6000, Sony α6400, Sony α7R IV, Sony ILX-LR1, MicaSense RedEdge-MX, MicaSense RedEdge-P, MicaSense Altum-PT, Workswell Wiris Enterprise, Workswell Wiris Security, Workswell Wiris Pro, and Workswell GIS-320.

As new cameras and sensors are integrated they will be added to this list in subsequent releases of Flight Deck.

Select the desired payload from each of the dropdown menus for its settings to be available in Mission Planning.

Once a payload has been selected, a Payload information box will appear with the specifications for that camera or sensor. Lens options are available as well for cameras with multiple setups.

Manual Camera Setup:

With this option selected, custom sensor information can be input into the *Mission Planning* section of Flight Deck. For more information, refer to the *Mission Planning* section of this document.

Payload Control:

Some payloads contain more features than others. These features can be accessed by tapping the selected payload on the *Fly View* screen. As an example, the Wiris Enterprise has been pre-selected as shown to the right. The icons, from top to bottom, are as follows:

- **Workswell Wiris Enterprise**
    - Tap to display or hide payload controls
    - Long press for shortcut to payload selection screen
- **Camera Trigger**
    - Tap to trigger the payload to take a picture
- **Video Trigger**
    - Tap to trigger the payload to record a video
- **Zoom Icon**
    - Tap to display or hide the zoom tool
- **Settings Menu**
    - Tap to display options for payload programming and other features

Sensors

The Sensors Setup screen allows you to calibrate the sensors within your vehicle. Items that can be calibrated include the compass and pressure. More advanced calibrations can be performed remotely with Vision Aerial's assistance as needed.
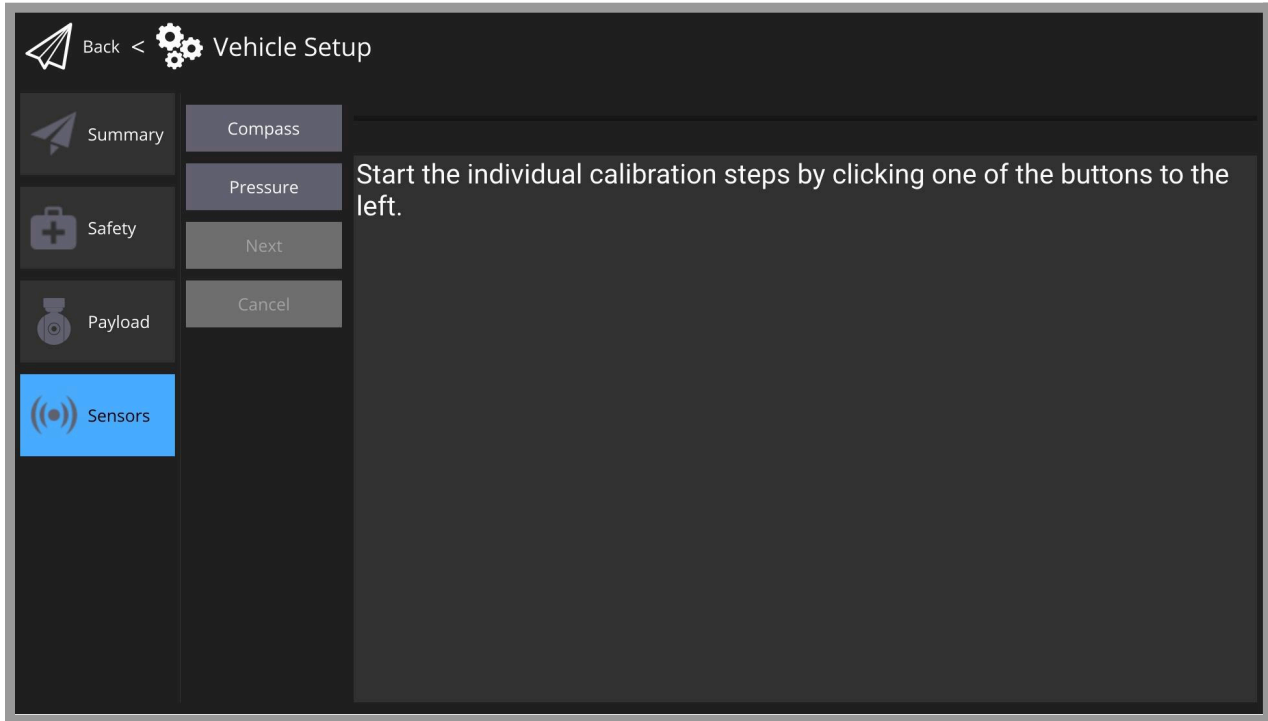

To calibrate a sensor, tap on the button and follow the steps that are presented. For compass calibrations, ensure that the default settings are represented as shown on the right.
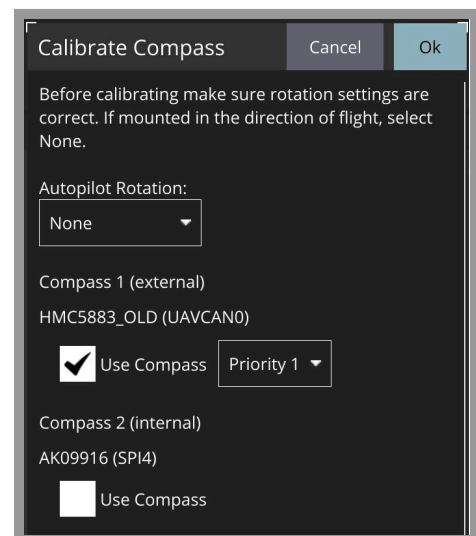
Application Settings

This menu is used to configure the settings for the Flight Deck application (rather than a specific vehicle). You do not have to have a vehicle connected to change these values.
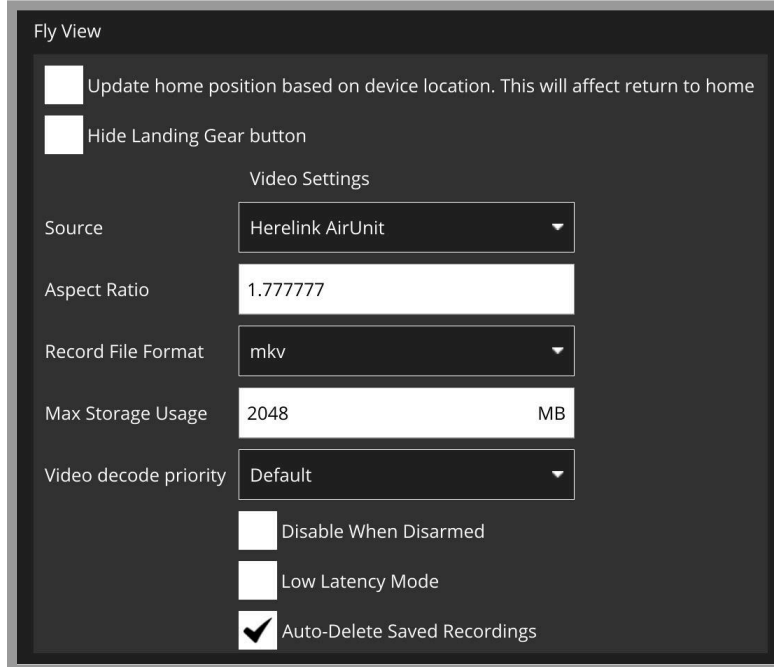
You can switch between the various settings options by clicking the buttons in the left sidebar.
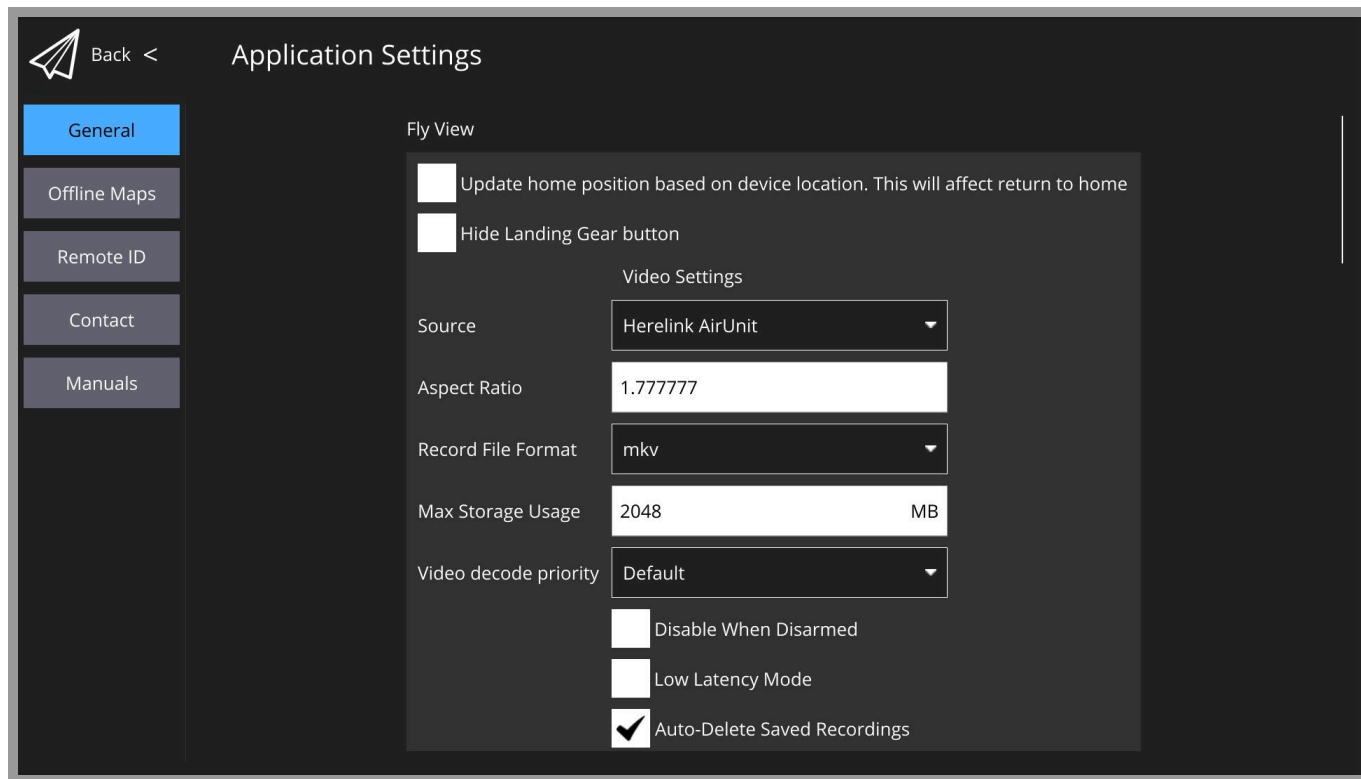
- *General*
  - ○ The main application configuration settings. These are used to specify display units, video display and storage, RTK GPS, etc
- Offline Maps
  - ○ Allows you to cache maps for use while you have no internet connection
- *Contact*
  - ○ Vision Aerial contact information
- *Manuals*
  - ○ Provides access to the Flight Deck and aircraft manuals on-device.

Fly View:

This sub-menu provides Fly View specific settings that can be changed by the user.

The settings are:

- ● **Update home position based on device location**: This box, when checked, will cause the RTL home position to be based upon the GCS's position
- ● **Hide Landing Gear button**: Disables the landing gear button in the Fly View
- ● **Source:** Source of the video stream
- ● **Aspect Ratio:** Aspect ratio of the menus in the Fly View
- ● **Record File Format:** Change the file format for video recordings
- ● **Max Storage Usage:** Maximum allowable storage for video recordings
- ● **Video decode priority:** Default or force videos to be encoded
- ● **Disable When Disarmed:** Disables Fly View access if vehicle is disarmed
- ● **Low Latency Mode:** Reduces the video stream latency, but may cause frame loss and choppy video
- ● **Auto-Delete Saved Recordings**: If checked, files are auto deleted when the specified amount of storage is used

Plan View:

This sub-menu allows the user to set the default mission altitude that populates in the Mission Planning section of Flight Deck.

Units:

This section defines the display units used in the application.
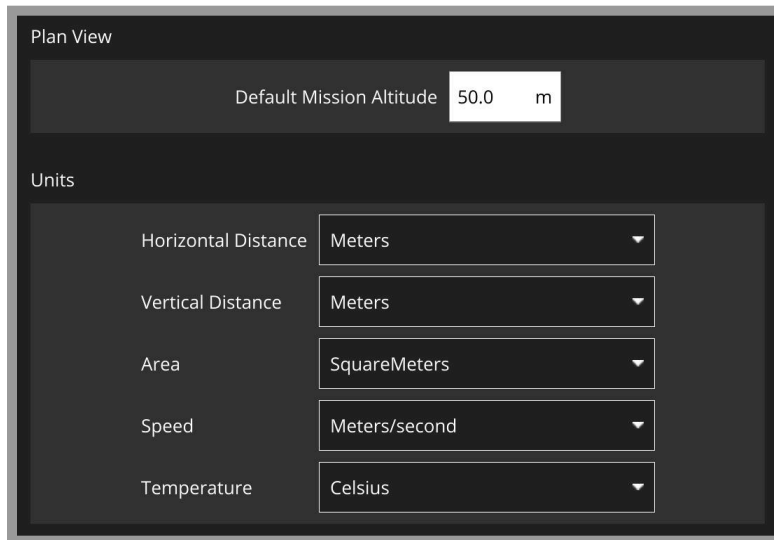
The settings are:

- **Distance**: Meters | Feet
- **Area**: SquareMetres | SquareFeet | SquareKilometers | Hectares | Acres |SquareMiles
- **Speed**: Meters/second | Feet/second | Miles/hour | Kilometers/hour | Knots
- **Temperature**: Celsius | Fahrenheit

Miscellaneous:

This section defines a number of miscellaneous settings, related to font sizes, color schemes, map providers, map types, telemetry logging, audio output, low battery announcement levels, default mission altitude, mission autoloading, default application file load/save path, and more.
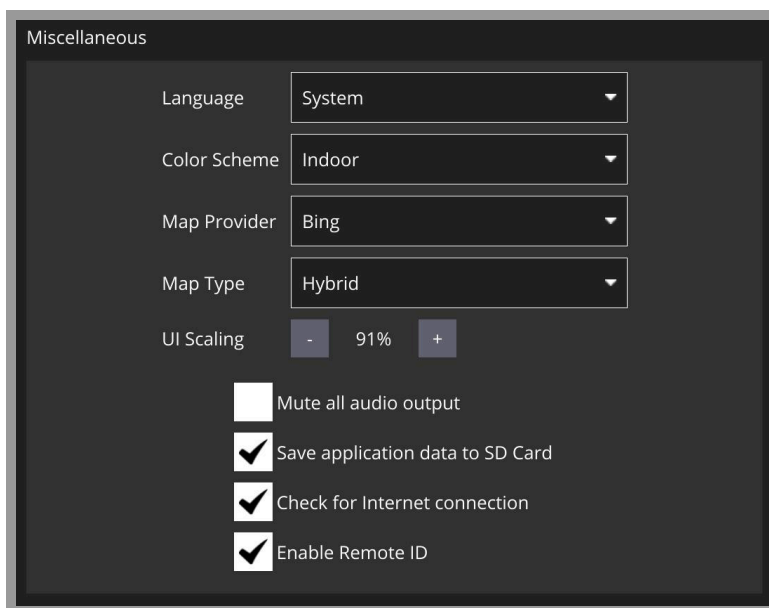
The settings are:

- **Language:** A variety of languages are provided with system being the default
- **Color Scheme**: Indoor (Dark) | Outdoor (Light)
- **Map Provider**: Google | Mapbox | Bing | Airmap | VWorld | Eniro | Statkart
- **Map Type**: Road | Hybrid | Satellite
- **UI scaling**: Scales font sizes
- **Mute all audio output**: Turns off all audio output.
- **Save application data to SD card**: Saves Flight Deck data to the SD card for ease of transfer between controllers or for troubleshooting purposes
- **Check for Internet Connection**: Uncheck to allow maps to be used in places where map tile downloads are likely to fail (stops the map-tile engine continually rechecking for an Internet connection).
- **Enable Remote ID**: Enables the Remote ID menus and status icons in the Fly View

Telemetry Logs from Vehicle:

Telemetry Logs from Vehicle
- ✔ Save log after each flight
- ✔ Save logs even if vehicle was not armed
- ✔ Save CSV log of telemetry data
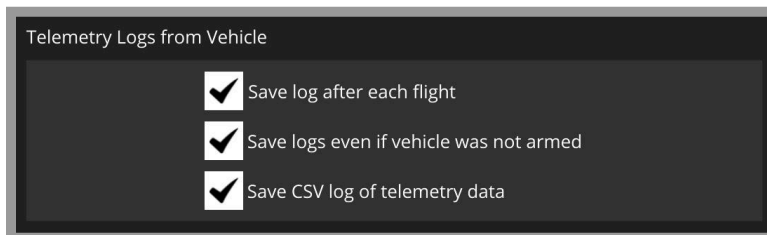
This sub-menu will provide the option to execute the following if the box is checked:

- Save log after each flight
- Save logs even if vehicle was not armed
- Save CSV log of telemetry data

RTK GPS:

This section allows you to specify the RTK GPS "Survey-in" settings, to save and reuse the result of a Survey-In operation, or to directly enter any other known position for the base station.

RTK GPS

⦿ Perform Survey-In

Survey in accuracy (U-blox only)   2.00   m

Minimum observation time   180   secs

◯ Use Specified Base Position

Base Position Latitude   0.000000000

Base Position Longitude   0.000000000

Base Position Alt (WGS84)   0.00   m

Base Position Accuracy   0.00   m

Save Current Base Position
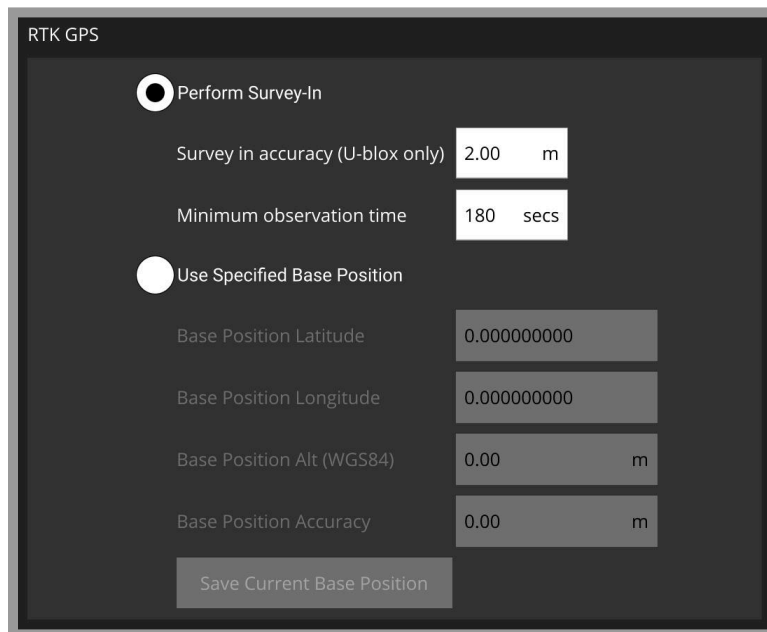
The Survey-In process is a startup procedure required by RTK GPS systems to get an accurate estimate of the base station position. The process takes measurements over time, leading to increasing position accuracy. Both of the setting conditions must be met for the Survey-in process to complete. For more information see GPS - How it works (ArduPilot docs).

In order to save and reuse a base position (because Survey-In is time consuming!) perform Survey-In once, select Use Specified Base Position and press Save Current Base Position to copy in the values for the last survey. The values will then persist across Flight Deck reboots until they are changed.

The settings are:

- Perform Survey-In
    - **Survey-in accuracy (U-blox only)**: The minimum position accuracy for the RTK Survey-In process to complete.
    - **Minimum observation duration**: The minimum time that will be taken for the RTK Survey-in process.
- Use Specified Base Position
    - **Base Position Latitude**: Latitude of fixed RTK base station.
    - **Base Position Longitude**: Longitude of fixed RTK base station.
    - **Base Position Alt (WGS94)**: Altitude of fixed RTK base station.
    - **Base Position Accuracy**: Accuracy of base station position information.
    - **Save Current Base Position (button)**: Press to copy settings from the last Survey-In operation to the Use Specified Base Position fields above.

Offline Maps

Offline Maps allows you to cache map tiles for use when not connected to the internet. You can create multiple offline sets, each for a different location. To create a new offline map set, click "Add new set".
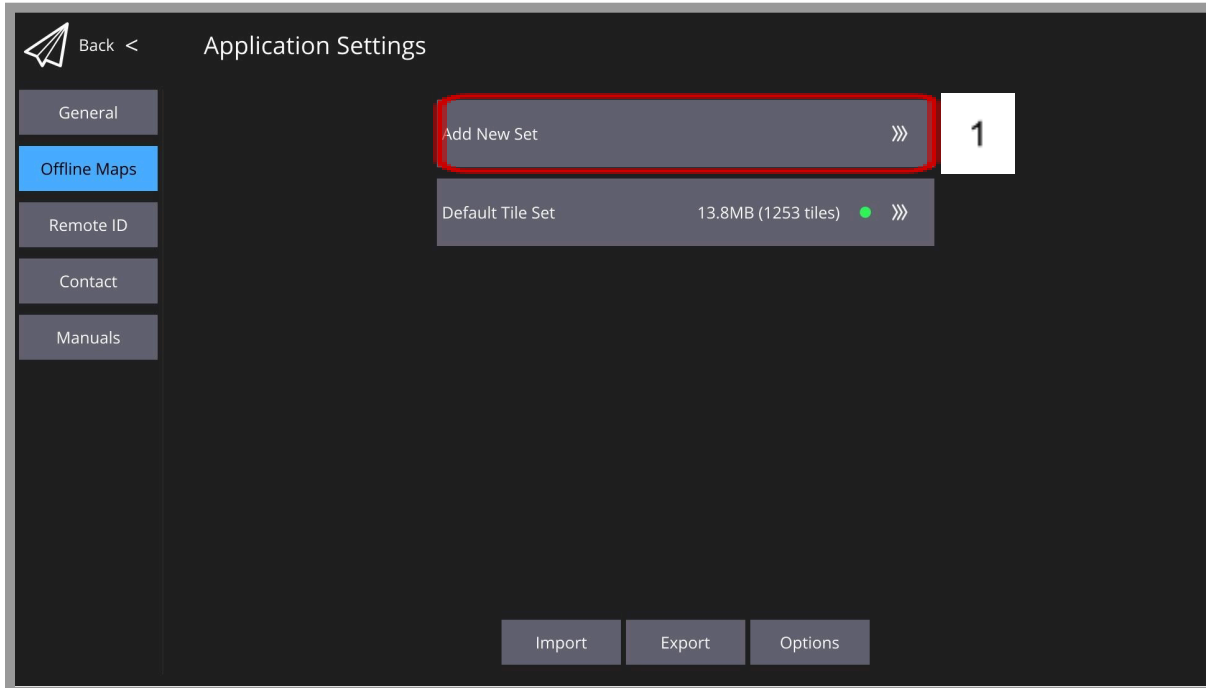
From here you can name your set as well as specify the zoom levels you want to cache.
Move the map to the position you can to cache and then set the zoom levels and click **Download** to cache the tiles.

To the left, you can see previews of the min and max zoom levels you have chosen.

Tile sets can be modified as follows:

- **Name:** Allows the user to name the tileset for reference
- **Map Source:** Adjust which map provider the tiles are sourced from
- **Fetch elevation data:** Map data will be tagged with elevation data
- **Min/Max Zoom Levels:** Adjusting these values will determine the resolution and coverage of tileset
- **Download:** Download the tileset with the chosen settings to Flight Deck
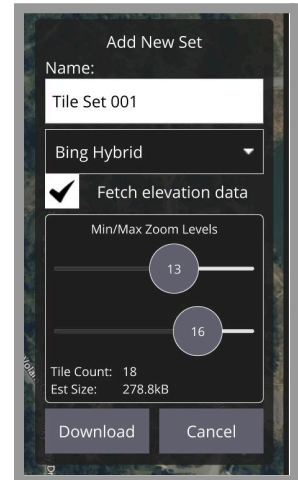
Remote ID

Before each flight (or if the GCS is powered off and on), Remote ID must be activated via the Radio Status on the Herelink controller. Pull the drop-down menu from the top of the screen and select "Radio Status" as shown below:
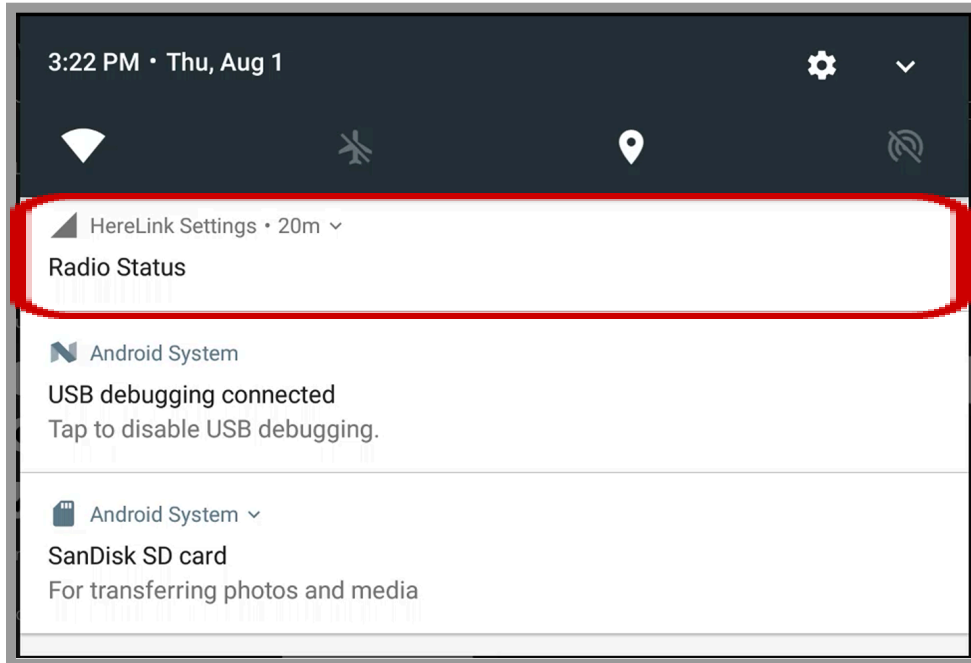
From here, select "REMOTEID" as shown below:

The Remote ID page contains the following information:

- **Enable RID:** This toggles Remote ID on or off. It must be on for the vehicle to arm.
- **UAS ID:** This ID contains Vision Aerial's manufacturer number (17885) and the serial number of the aircraft.
- **Operator:** The RPIC's Remote Pilot Certificate Number is contained here.
- **Flight:** The description of the flight is contained here.
- **Area:** These values will indicate the planned area of interest:
  - Floor: Positive or negative integers are acceptable (meters)
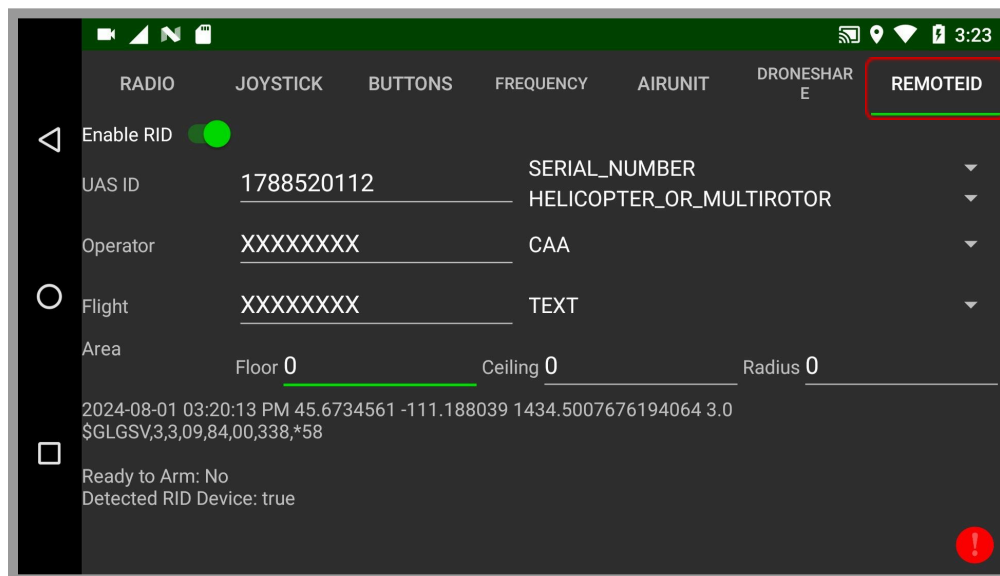 - Ceiling: Acceptable ceiling values are between -1000 meters and 31767.5 meters
  - Radius: Acceptable radius values are between 0 meters and 2550 meters
- **Date, Time and Location:** This displays the date, time, and location.
- **Pre-arm Status:** This indicates if the aircraft is ready to arm or not.
- **RID Device:** This indicates if an RID device is detected or not.

For Flight Deck releases 3.0.6 and greater, Remote ID has been integrated directly into the Flight Deck application. Remote ID status at a glance can be obtained by tapping the following status icon:
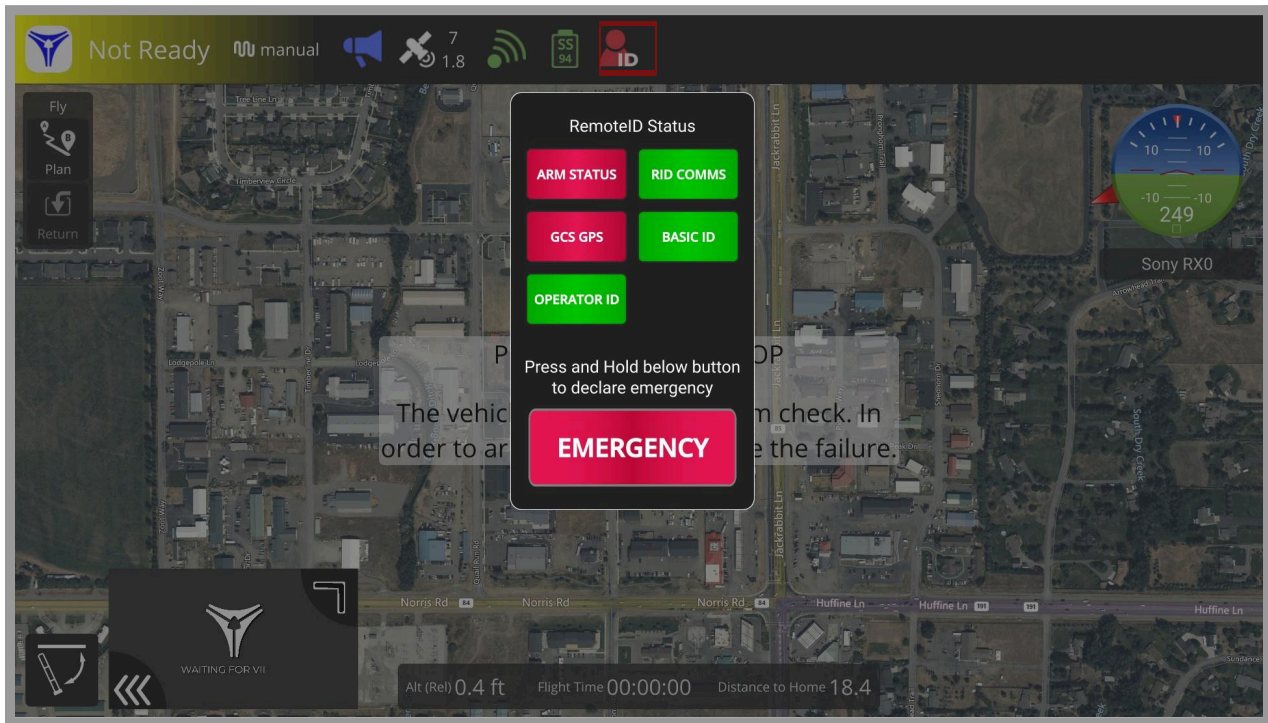
The status bar displays the following information:

- *ARM STATUS*
  - Indicates whether the bird is ready to be armed or not

- ● *RID COMMS*
  - ○ Indicates the status of the communication link between Flight Deck and the Remote ID module installed on the aircraft
- ● *GCS GPS*
  - ○ Indicates if the GCS has a nominal GPS link
- ● *BASIC ID*
  - ○ This displays whether or not the aircraft and GCS contain the required information to be displayed via Remote ID as deemed necessary by the FAA
- ● *EMERGENCY*
  - ○ If this icon is pressed for three seconds, emergency information will be communicated via Remote ID
  - ○ If an emergency is declared, the same icon can be pressed for one second to disable the emergency broadcast
- ● *OPERATOR ID*
  - ○ This displays whether or not an operator identification (Remote Pilot Certification Number) has been entered into the settings

Remote ID settings can be altered under *Menu Settings* with *Application Settings* selected. The user will be greeted with the following display:
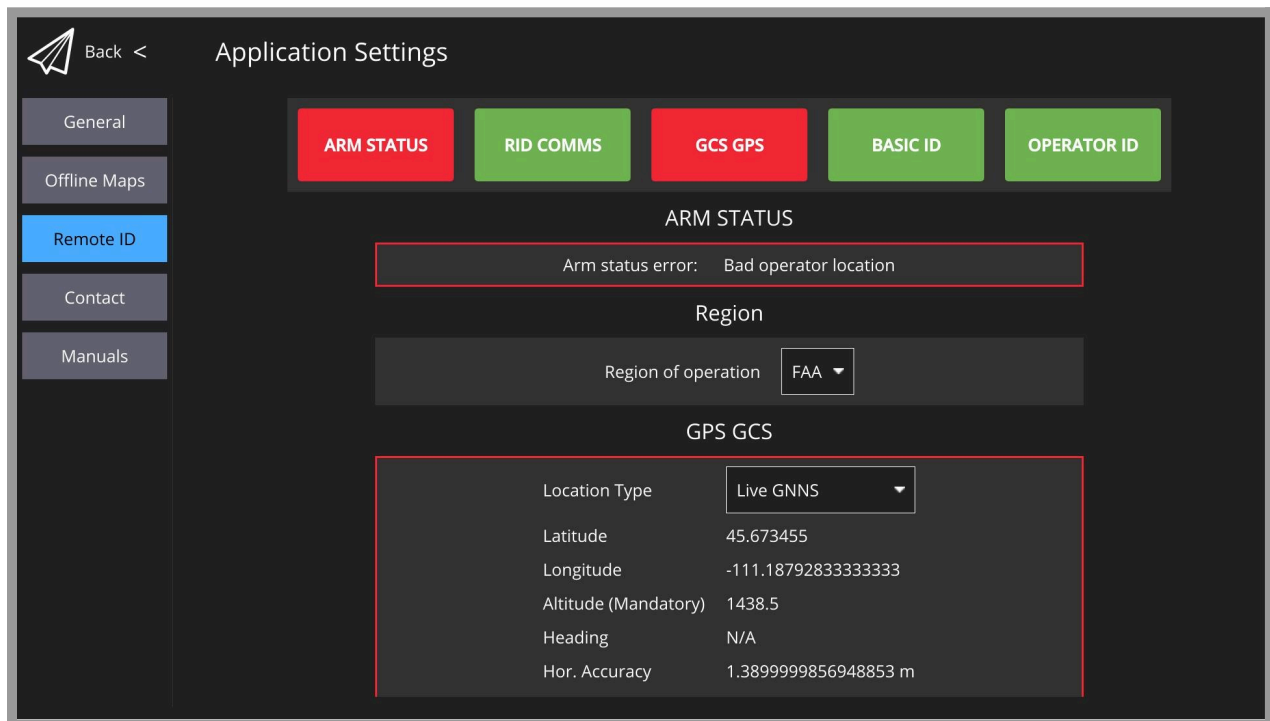
The same status icons will be displayed as seen before in the *Fly Screen*. Scrolling down will give additional information and options for entries to be broadcast.

Basic ID: All Vision Aerial aircraft will ship from our facility with the manufacturer and aircraft serial number pre-configured. Ensure that the settings replicate the configuration to the right. Basic ID begins with Vision Aerial's manufacturer ID (17885) and is followed by the aircraft's serial number (e.g., 20123) as follows:
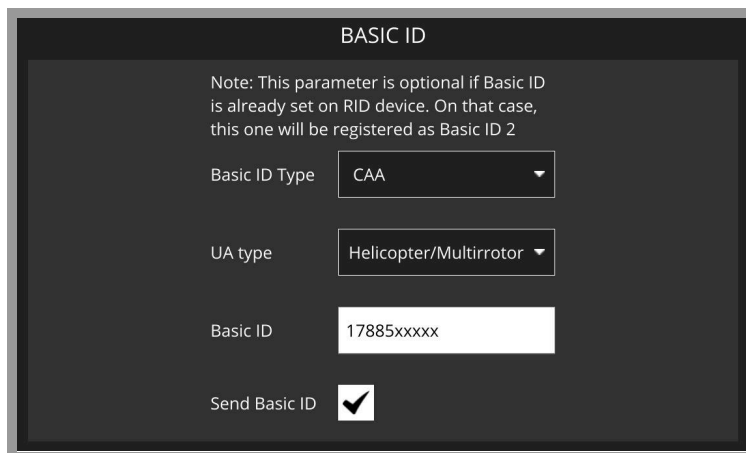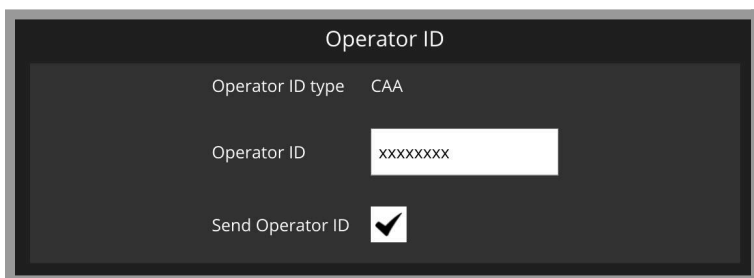
1788520123

BASIC ID

Note: This parameter is optional if Basic ID is already set on RID device. On that case, this one will be registered as Basic ID 2

Basic ID Type   CAA ▼

UA type   Helicopter/Multirrotor ▼

Basic ID   17885xxxxx

Send Basic ID ✔
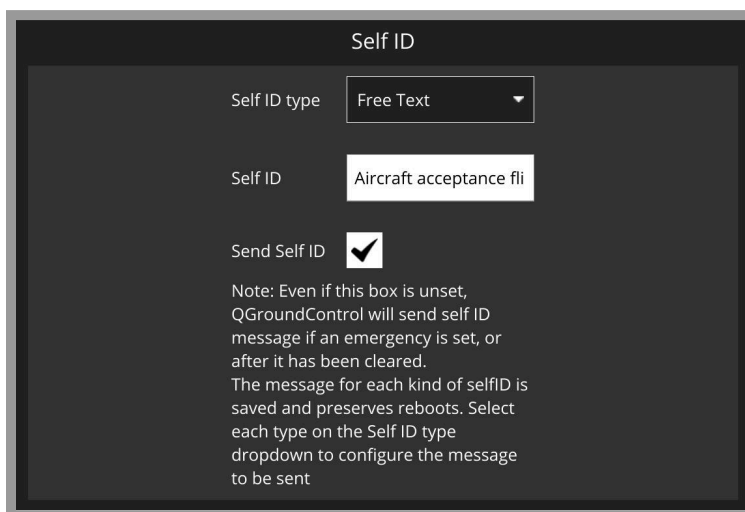
If these numbers do not align, the aircraft will not be permitted to arm.

Operator ID

Operator ID type   CAA

Operator ID   xxxxxxxx

Send Operator ID ✔

Operator ID: The Pilot in Command is required by the FAA to provide their Remote Pilot Certification Number upon completion of the aeronautical knowledge exam under 14 CFR Part 107.

Self ID: This is an optional description of the flight plan. It can also contain emergency information or display an extended flight status description. The description can be specific to the current mission and may be updated for each flight by the operator or it may be generic so that it can be utilized for multiple mission profiles. As described earlier in this section, emergency information will be broadcast if declared in the *Fly Screen*.

Self ID

Self ID type   Free Text ▼

Self ID   Aircraft acceptance fli

Send Self ID ✔

Note: Even if this box is unset, QGroundControl will send self ID message if an emergency is set, or after it has been cleared.
The message for each kind of selfID is saved and preserves reboots. Select each type on the Self ID type dropdown to configure the message to be sent

⚠️ **The FAA has the final say in regards to rules and regulations of the remote identification of drones. While Vision Aerial provides the necessary tools to maintain compliance, it is ultimately up to the remote pilot in command to ensure 14 CFR Part 89 is adhered to. For more information please reference the FAA's website.**
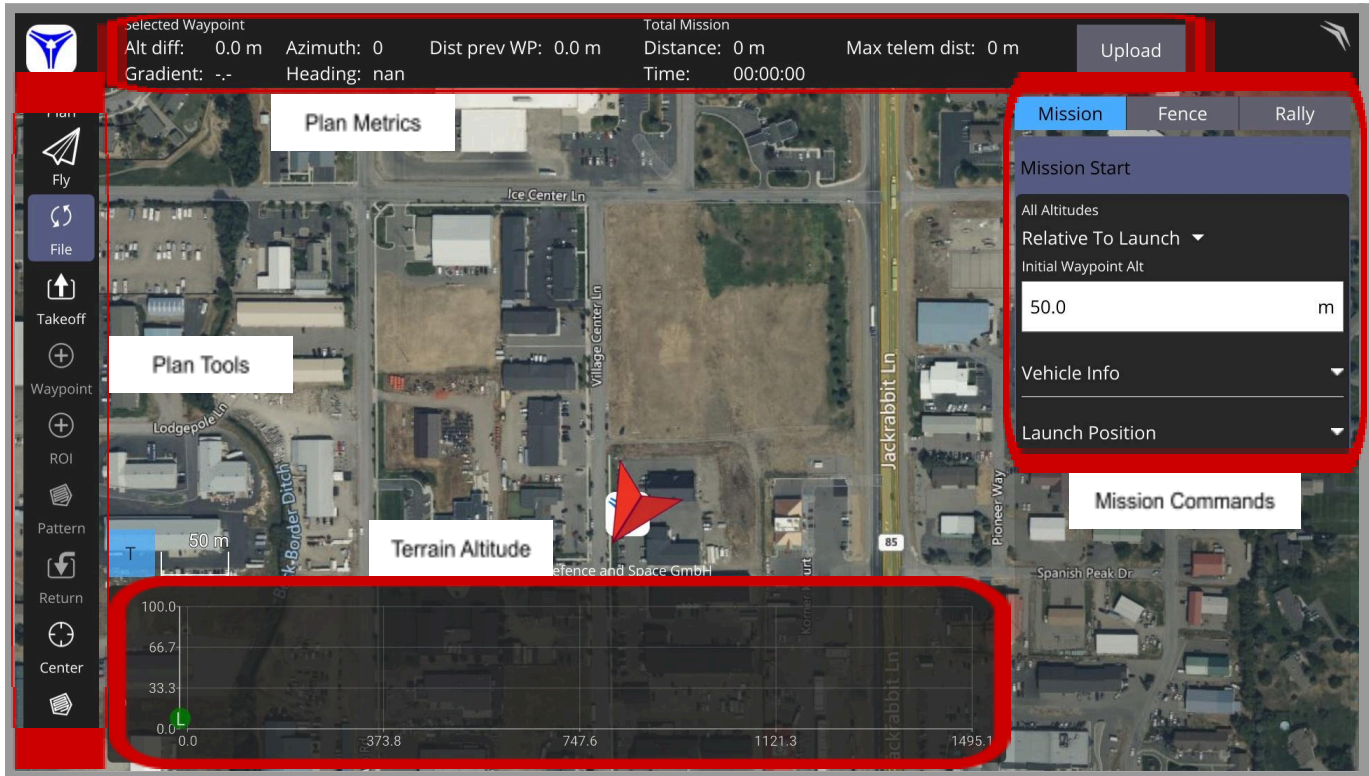
Mission Planning

Mission Planning is used to plan autonomous missions for your vehicle. They can either be programmed on the ground control station or programmed on a desktop and uploaded to the GCS. Once the mission is planned and sent to the vehicle, you switch to the Fly View to fly the mission.

Overview:

The main elements of the UI are:

- **Map**: Displays the numbered indicators for the current mission, including the Planned Home. Click on the indicators to select them (for editing) or drag them around to reposition them
- **Plan Metrics**: Status information for the currently selected waypoint relative to the previous waypoint, as well as statistics for the entire mission (e.g. horizontal distance and time for mission)
  - Max telemetry distance is the distance between the Planned Home and the furthest waypoint
  - When connected to a vehicle the upload button will populate which can be used to upload the plan to the vehicle
- **Plan Tools**: Used to create and manage missions

- **Mission Commands**: Displays the current list of mission items (select items to edit)

Planning a Mission:

The basic steps to create a mission are:

1. Change to *Mission View*.
2. Select Blank, Survey, or Corridor Scan
3. Add waypoints or commands to the mission and edit as needed.
4. Upload the mission to the vehicle.
5. Change to *Fly View* and fly the mission.

The following sections explain some of the details in the view.

Takeoff:

The Takeoff shown in *Mission View* is used to set the approximate start point when planning a mission. It is used to estimate mission times and to draw waypoint lines. You should move/drag the planned home position to roughly the location where you plan to take off. The default altitude for the planned home position is set in the *Mission Settings* panel. The *Fly View* displays the actual home position set by the vehicle firmware when it arms (this is where the vehicle will return in Return/RTL mode).
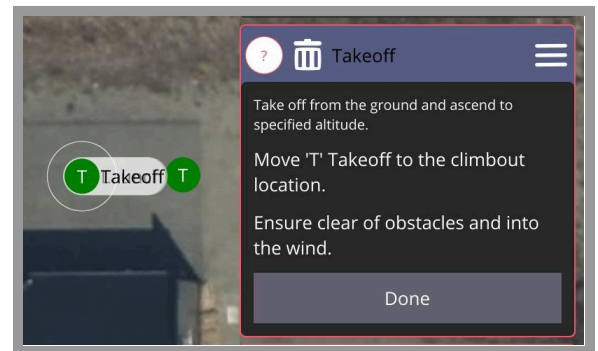
Plan Tools:

The plan tools are used for adding individual waypoints, easing mission creation for complicated geometries, uploading/downloading/saving/restoring missions, and navigating the map. The main tools are described below.

- **Fly**: helps users better view and navigate the Plan view map (they don't affect the mission commands sent to the vehicle)
- **File**: The File tools are used to move missions between the ground station and vehicle, and to save/restore them from files. The tool displays an ! to indicate that there are mission changes that you have not sent to the vehicle.
  - Before you fly a mission you must upload it to the vehicle.
  - The File tools provide the following functionality:
    - Create Plan (Blank, survey, corridor scan)

- Upload (Send to vehicle)
- Download (Load from vehicle)
- Clear (Remove from vehicle and Flight Deck)
- Save/Save as to File, including as KML file. This will store the file onboard the Herelink controller.
- Load from File
- **Takeoff**: Generate a takeoff point
- **Waypoint**: Generate a waypoint
- **Region of Interest**: Generate a region of interest point in which the aircraft will maintain a heading towards this point throughout the mission
- **Pattern**: The Pattern tool simplifies the creation of missions for flying complex geometries, including surveys and structure scans.
- **Return**: Return to previous selection
- **Center**: Center the view on either the mission, all items, launch, vehicle, current location, or specified location
- **Geo Photo**: Overlay a geotagged image onto the screen

Importing Missions Using Load from File:

To import mission plans from other programs:

1. Export the mission as a .plan file
2. Transfer the file from another device to the Herelink Ground Control Station by saving it onto the Herelink's microSD card in the following directory: Flight Deck > Mission Plans
3. Go to Plan > File > Load from File and select the mission

Terrain Altitude:

This tool is intended to provide a visual indicator of the distance between the vehicle and terrain variations.

Once a mission is uploaded to the vehicle, select the file tab and then select download. This will download and convert the survey mission to a waypoint mission, allowing the pilot better terrain awareness during automated flights.

Terrain following is using the SRTM 30-meter terrain data set. It is recommended to fly no less than 50 meters above ground level when using this feature.

Mission Commands:

Mission commands for the current mission are listed on the right side of the view. At the top are a set of options to switch between editing the mission. Within the list, you can select individual mission items to edit their values.

The mission commands are split into the following sections:

1. General Mission Settings:

Altitude: Desired mission altitude
Trigger distance: Camera trigger interval
Spacing: Transect spacing
Mission Yaw angle: Set desired heading for mission
Survey speed: Desired survey speed
Transect Angle: Set transect angle between 0-360º
Turnaround distance: Distance to travel beyond specified survey area
Rotate entry point: Rotate the entry point for the desired survey area
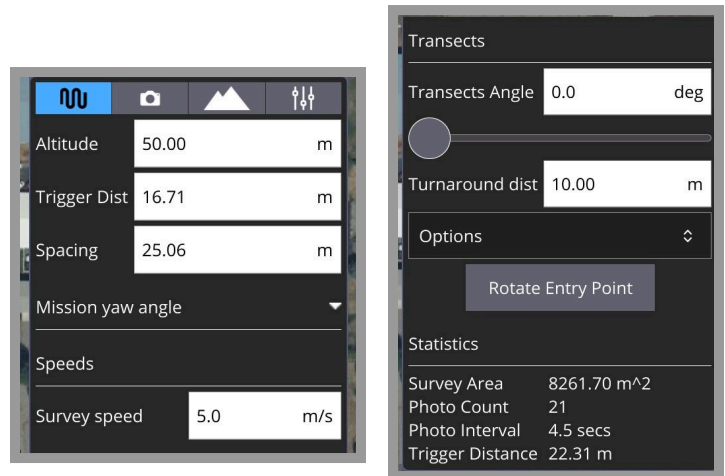
2. Payload Settings:

Payload specific settings will allow for focal length adjustments for a specific lens. Selections are also available for landscape and portrait camera orientations.

Sony a7R IV

Focal Length(16-500):   16.0   mm

○ Landscape   ○ Portrait

	Width	Height
Sensor	35.70 mm	23.80 mm
Image	9504 px	6336 px
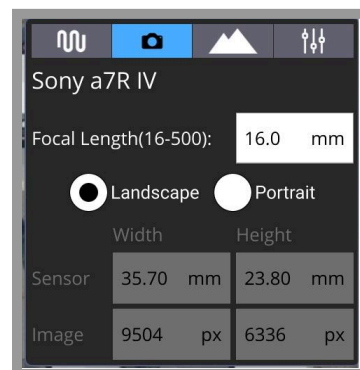
3. Altitude Mode:

There are three different altitude modes:

- **Relative to Launch**: This will maintain the desired altitude relative to the launch position height.
- **Calculated Above Terrain**: This will take into account terrain data and attempt to maintain a constant altitude above the terrain. The tolerance is the accepted deviation in altitude from the target altitude.
- **Terrain Frame**: Altitude above terrain is controlled from either external data sources or distance sensors.
  Note: Terrain Frame is not currently supported by Vision Aerial

Relative To Launch ▼

Tolerance	10.00	m
Max Climb Rate	0.00	m/s
Max Descent Rate	0.00	m/s

4. Mission Presets:

Mission presets allow users to save specific mission planning parameters for future missions. Once specific parameters have been set, press "Save Settings As New Preset" and enter a filename. These settings will be accessible in the future by pressing the presets drop down menu. Select the preset you would like and press "Apply Preset".

Presets

Apply Preset	Delete Preset

Save Settings As New Preset

Transects

Transects Angle   0.0   deg
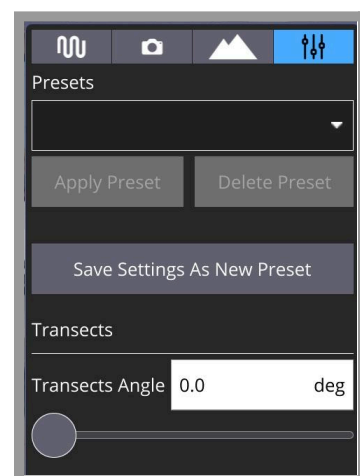
Fence:

Setting a fence will allow users to define specific areas on the map that can either be inclusion or exclusion zones depending on circumstances.

● **Polygon Fence**: Users will start with a square and can add additional vertices as necessary to create the desired geometry.
● **Circular Fence**: Users will start with a circle and vary the diameter as necessary.

Multiple fences can be made and they can individually be defined as inclusion or exclusion zones. If multiple fences are active, users can select the edit option for the desired fence to make adjustments to geometry.
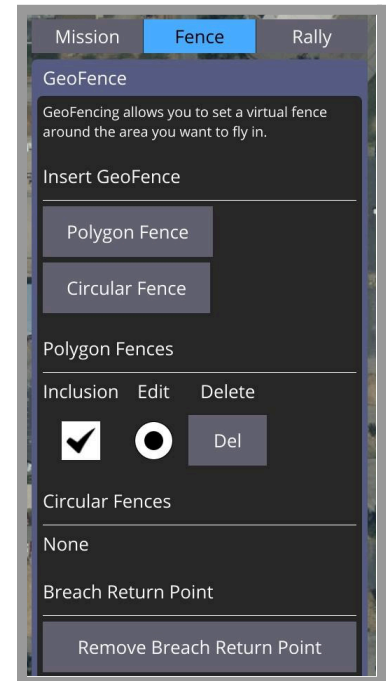
In the Fly Screen, the status icon contains fence information at a glance. Tap the following icon to display more information:
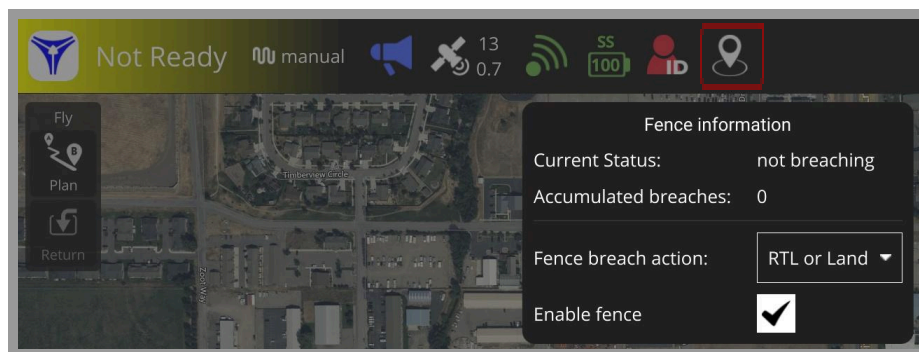
Fence Information:

● **Current Status:** Indicates if the aircraft is breaching or not breaching the inclusion and exclusion zones.
● **Accumulated Breaches:** Amount of times the aircraft breached the zones.

- **Fence Breach Action:** Drop-down menu to determine aircraft behavior when a zone is breached. These options include Report, RTL, or Brake flight modes.
- **Enable Fence:** Enables or disables the fence functionality. If the fence is enabled but no fence was created, the aircraft will not arm. Either generate a fence or disable the fence to arm.

Troubleshooting:

Plan uploading and downloading can fail over a noisy communication link. If a failure occurs you should see a status message in the user interface similar to: Mission transfer failed. Retry transfer. Error: Mission write mission count failed, maximum retries exceeded. If you experience a failure, retry uploading the mission.

GeoPDF and GeoTIFF Workflow

These instructions will help you overlay geoPDF files to the map display of your GCS. This feature is useful because it expands the capabilities of live tracking to specialized or custom maps. This conversion process is made simple in Flight Deck Desktop, which can be downloaded here.

We recommend making a folder titled "geoPDF" on your desktop or somewhere easily accessible. Place all files you wish to upload to your Ground Control Station (GCS) here.

> ⚠️ **Note:** Your GCS automatically creates the proper file tree for your Micro SD but you must power cycle the GCS first. You must complete this step before moving on.

Remove the Micro SD card from your GCS and insert it into your computer.

Open the desktop version of Flight Deck, then click the Vision Aerial logo in the top left corner, followed by Application Settings. Click on Geo Photo to access the options.

After navigating to the Geo Photo menu:

1. Specify the folder to convert. This is the same geoPDF folder from your desktop.
2. Specify the output location to your Micro SD card. The file path should be:
   USB Drive > FlightDeck > GeoPhoto
1. Start Conversion. This process allows for multiple file conversions. Depending on size, some files may take several minutes to complete.
2. Once your files have been converted, close out of FlightDeck Desktop.

Insert the Micro SD card into your GCS and power cycle it, because Flight Deck will not see the new files until the device has been restarted. Reopen Flight Deck on your Ground Control Station and navigate to the mapping tab.

1. Select Geo Photo
2. Select Load New Geo Photo
3. Select the file you want to overlay.

Your Geo Photo will overlay the map based upon the GPS data.

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