

*SATLOC*  
**FALCON**

*SATLOC*  
**FALCON**  
**PRO**



# USER MANUAL

## WHAT'S INSIDE!

- Section One: Overview
- Section Two: General Setup

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.

### Copyright Notice

Satloc, a company of Texas Transland, LLC



Copyright Satloc © (2023). All rights reserved.

No part of this manual may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written permission of Satloc.

### Read and Follow Safety Messages



*Satloc GPS systems are intended for VFR (visual flight rules) use only. Information provided is intended solely for recording aerial application activities and enhancing application guidance. Satloc is not a replacement for best pilot practices. Follow required procedures, flight rules, and regulations during use.*

- In these instructions, you may see the heading  and/or the safety alert symbol . They indicate a hazardous situation that, if not avoided, could result in death or serious injury. The safety messages provide information to identify a hazard associated with potential injury.
- Read and understand this manual and all the warnings below before installing, operating, or performing maintenance or service. FAILURE TO DO SO MAY CAUSE IRREVERSIBLE DAMAGE TO YOUR SYSTEM.
- Keep this manual and all related safety information with the manuals for your aircraft.

### Latest Version of the Falcon Installation Guide

Satloc is dedicated to providing updated versions of installation guidebooks for its customers. For the latest version of the Falcon User Manual, visit [www.Satloc.com](http://www.Satloc.com).

### Notice to Customers

Contact your local dealer for technical assistance. To find an authorized dealer near you, visit [www.Satloc.com](http://www.Satloc.com).

### Transland

1206 Hatton Rd.  
Wichita Falls, TX 76302  
Phone: 940-687-1100  
Fax: 940-687-1941  
[www.TranslandLLC.com](http://www.TranslandLLC.com)

### Documentation Feedback

Satloc, a division of Transland, is committed to the quality and continuous improvement of our products and services. We encourage and appreciate any feedback regarding this guide and any of our products by writing to the following email address: [Sales@Translandllc.com](mailto:Sales@Translandllc.com).

# WARNINGS, CAUTIONS & NOTES



**Warning:** Satloc GPS systems are intended for VFR (visual flight rules) use only. Information provided is intended solely for recording aerial application activities and enhancing application guidance. Satloc is not a replacement for best pilot practices. Follow required procedures, flight rules, and regulations during use.



**Warning:** The altitude calculated by GPS receivers is a geometric height above Mean Sea Level and could vary significantly from the altitude displayed by pressure altimeters. Always use the pressure altitude displayed by the aircraft altimeter when determining or selecting aircraft altitude.



**Warning:** To reduce the risk of unsafe operation, carefully review and understand all aspects of the Falcon's User Guide and the Pilot's Operating Handbook of the aircraft. Thoroughly practice basic functions before actual use. During flight operations, carefully compare indications from the Falcon to all available navigation sources, including the information for other NAVAIDs, visual sightings, charts, etc. For safety purposes, always resolve any discrepancies before continuing navigation.



**Warning:** For safety reasons, Falcon operational procedures must be learned on the ground.



**Warning:** The United States government operates the Global Positioning System and is solely responsible for its accuracy and maintenance. The GPS system is subject to changes that could affect the accuracy and performance of all GPS equipment.



**Warning:** Do not use background maps for primary navigation. Basemap data is intended only to supplement other approved navigation data sources and should be considered as an aid to enhance situational awareness.



**Caution:** Avoid using any chemical or abrasive cleaners on the touchscreen and/or plastic casing. Clean the touchscreen with a soft, clean, lint-free cloth. Use water, isopropyl alcohol, or eyeglass cleaner if needed.



**Caution:** The Falcon GPS does not contain any user-serviceable parts. Repairs should only be made by an authorized Satloc Dealer. Unauthorized repairs or modifications could void the warranty and the pilot's authority to operate this device under FAA/FCC regulations.



**Note:** All visual depictions in this document, including screen images of the GPS panel and displays, are subject to change and may not reflect the most current GPS system and aviation databases. Depictions of equipment may differ slightly from the actual equipment.



**Note:** Interference from GPS repeaters operating inside nearby hangars can cause an intermittent loss of attitude and heading displays while the aircraft is on the ground. Moving the aircraft more than 100 yards away from the source of the interference should alleviate the condition.



**Note:** Polarized eyewear may cause the flight displays to appear dim or blank.

## SECTION 1: OVERVIEW

### WHAT'S INSIDE!

- 1.1 Overview of Models
- 1.2 A New Way of Doing 'Jobs'
- 1.3 Touchscreen Display Overview
- 1.4 Navigate the Falcon Models
- 1.5 Startup Screen for Falcon Models
- 1.6 Moving Map Screen Overview
- 1.7 Main Menu Overview
- 1.8 Navigating Submenus
- 1.9 System Diagnostics



Satloc offers two versions of the next generation GPS system — Satloc® Falcon™ and Satloc Falcon Pro™. These aerial guidance GPS systems provide precise and flexible guidance technology for today’s aerial spray market.



**BASIC MODEL**

Satloc Falcon GPS system will meet all your liquid application needs. Features include Wi-Fi connection capability, basic patterns, log files, guidance modes, real-time background maps, Satloc Cloud connection, and optional upgrade unlock codes for enhanced features.

**PRO MODEL**

Satloc Falcon Pro GPS system is equipped with all the right tools and ready for all liquid and dry jobs! The Falcon Pro includes all the basics and more. The additional features are enhanced patterns, enhanced guidance modes, top hat control, hopper fill meter, boom control, all the unlocks, auto dispersal, PMAPs and dry controller.

Technical Specifications

<b>Wireless Data Communications:</b> WiFi, 802.11 AC, 2.4 GHz or 5 GHz	<b>Memory (RAM):</b> 4 GB @ DDR4 SO DIMM	<b>Mount Style:</b> Horizontal or Rack
<b>Main CPU:</b> Intel Core i5-8365UE, 8th generation @ 1.60 GHz with Turbo up to 4.1 GHz	<b>Power Input:</b> 12-30 VDC, reverse input, fault output and surge protection	<b>Footprint:</b> Rack Mount - 6” x 3.9” (23.3 sq in) Horizontal Mount - 6” x 6” (36 sq in)
<b>Solid State Drive:</b> 256 GB for Falcon 512 GB for Falcon Pro (Western digital M.2 NVMe PCIe Gen3)	<b>Screen:</b> 7” or 9” Touchscreen with multi-function display	20Hz SBAS GPS with optional GLONASS enhanced by 100 Hz inertial measurement

Below is a quick comparison of the two models as of July 2023.

# SATLOC®

## Make a Choice for the System that Best Fits You



System Features	SATLOC FALCON	SATLOC FALCON PRO
CPU with 2 Mounting Options	✓	✓
Multi-Language (English, Spanish, Portuguese)	✓	✓
7" & 9" Screen Options	✓	✓
ADS-B In	✓	✓
Solid State Hard Drive	256 GB	512 GB
Built In WiFi Connection	✓	✓
Satloc Cloud Connection (With 3rd Party Options)	✓	✓
Real Time Background Maps	✓	✓
Offline Background Maps (Additional Charges Apply)	✓	✓
Shape File Support	✓	✓
Cockpit Encoder Knob (Option to Upgrade)	Single	Dual
Ag Laser Connection (Plug & Fly, No Additional Cabling)	✓	✓
Guidance Modes (Enhanced Features in the Falcon Pro)	✓	✓
PMAP's	Unlock Required -\$	✓
Auto Dispersal (Formerly Spray Off)	Unlock Required -\$	✓
Boom Control Input (With Enhanced Patterns)	Unlock Required -\$	✓
Controls & Monitors 4 Valves		✓
Dry Controller / Variable Rate		✓
Transland Meterate		✓
External CAN		✓
Flow Meter Input		✓
Inertial Measurement Unit (IMU)		✓
Top Hat Control Inputs (Additional Hardware Required)		✓
Integrated AIMMS Capability		Optional Upgrade

Both Falcon models are compatible with Satloc Cloud. Satloc Cloud is a Satloc software product that can be used in conjunction with Falcon and Falcon Pro to perform more advanced tasks. Satloc Cloud is a real-time web-based asset tracking tool that enables companies to track the position and position-related data of aircraft and other assets, such as spotter vehicles and loader trucks.



The Satloc Cloud symbol will appear in this user manual when there is a function that requires integration with the Falcon Models and Satloc Cloud.

Visit [www.Satloc.com](http://www.Satloc.com) for more information about Satloc Cloud, or contact your local Satloc dealer.

## 1.2 A NEW WAY OF DOING 'JOBS'

### Jobs Are Everything

In the Falcon system, all your data is contained in a Job. This means that all that data is contained in the Job no matter what day you applied, how many patterns you used during an application, or how many times or even days you returned to apply.

Jobs can be created in real-time. Additionally, Jobs can be made from a polygon(s) or prescription maps and then loaded into the Falcon through USB or the Cloud. They all behave the same.

A Job and all the related paint and swathing data are opened on the Falcon by 1) loading the Job (through the menu or a Hotkey) or 2) by returning to a Mark (created while that Job was previously open).

If the user creates a new job on the Falcon, a default job name is suggested with the Falcon's serial number, date of application, and daily job counter as the job name. The user could instead name the Job something meaningful: "Farmer Brown Field." The job name would be followed by the date and the log counter.

### BENEFITS OF ALL DATA CONTAINED IN JOBS

**01**

Pilots do not need to remember all the logs that make a whole application together.

**02**

All paint and swathing data is loaded each time a Job is loaded.

**03**

All Job data is exported as one log file from the Falcon. Within the Satloc Cloud, all Job data has a common log name for a group export. Any export can then be loaded in MapStar or other programs.

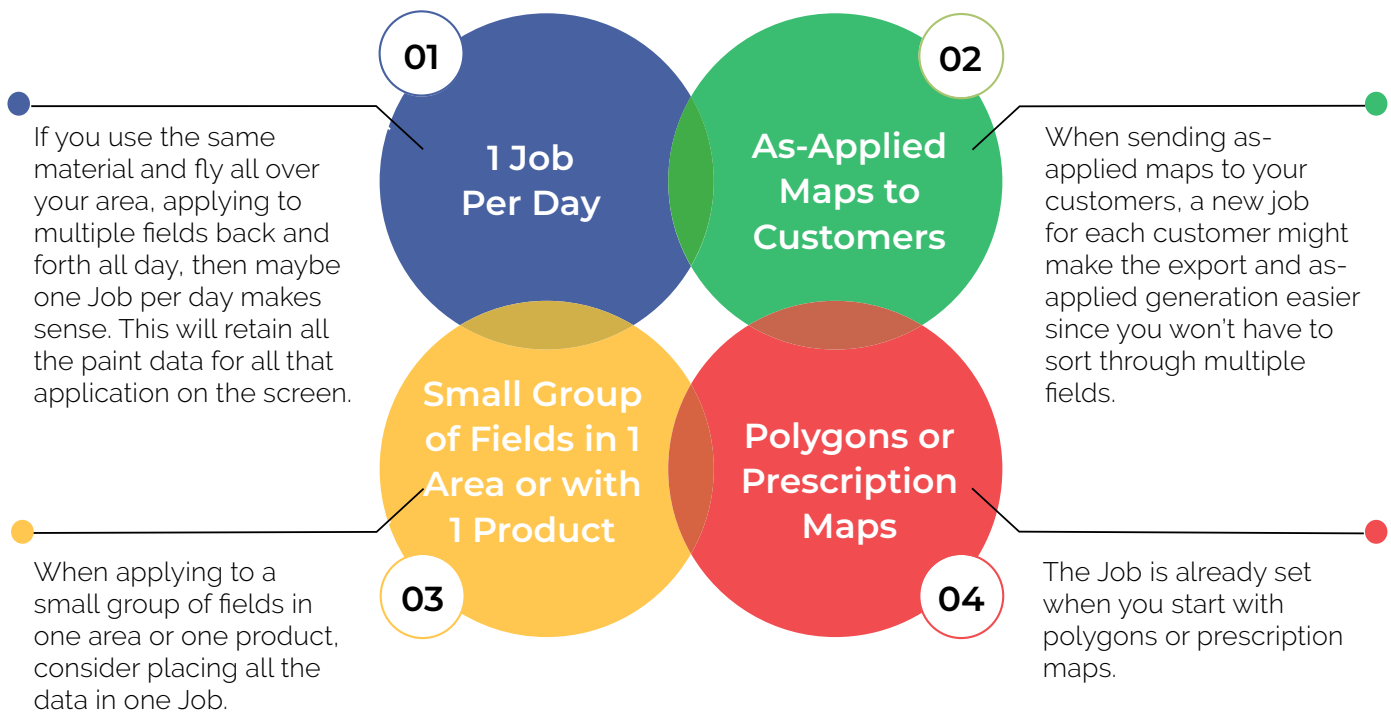
**04**


The Falcon contains all swathing data (pattern, swath number, A-B Line, etc.) within the Job even when a Mark is not set. So, any swathing can be restored as active to continue.

## When to start a new Job?

## Section One

The answer is based on how much data you want to be grouped.



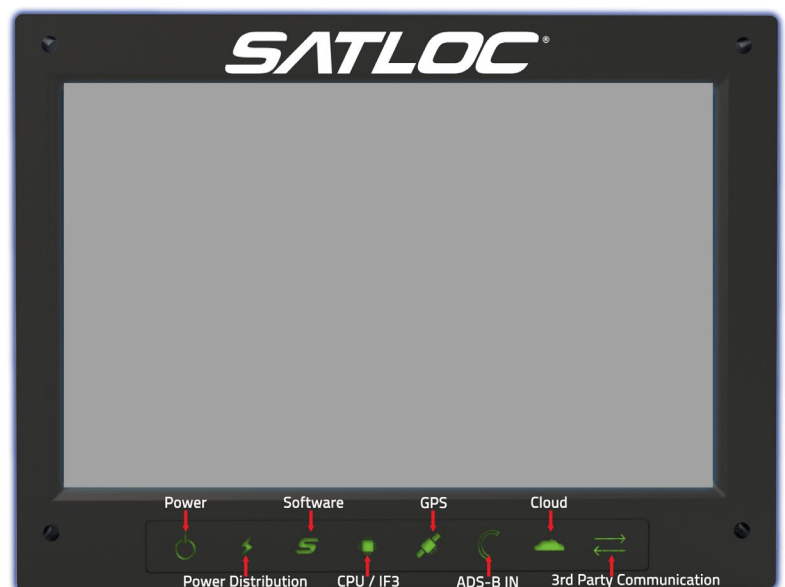
 Jobs are also how data is shared between Falcons. When released, this feature will allow two or more Falcons (within the same Cloud company) to open the same Job and apply synchronously, sharing all the paint and swathing data.

## 1.3 TOUCHSCREEN DISPLAY OVERVIEW

### LED Light Indicators

Every Satloc Falcon/Falcon Pro touchscreen display features LED light indicators to give the user information about the current state of the Falcon/Falcon Pro and the systems it communicates with. The LED lights represent power, power distribution, software, CPU / IF3, GPS, ADS-B In, Cloud, and 3rd party connections.

- Red LED indicates – system error
- Green LED indicates - no system error
- Orange LED indicates – system warning



### Using the Touchscreen

Use your finger(s) or a stylus to touch the screen and interact with all Falcon models.

Zooming refers to increasing or decreasing (zooming in or zooming out) the magnification of the screen. Use two fingers on the screen, and move them apart to move in, or together to zoom out.



ZOOM IN



ZOOM OUT

Scrolling refers to moving or shifting the screen in a specific direction (such as up or down) so you can see detail that may not be currently visible.



SWIPE UP



SWIPE DOWN

The Falcon/Falcon Pro software has on/off slider buttons. Single tap to turn the function on or off. If the button is green, the function is ON. When the button is greyed out, the function is OFF.



SINGLE TAP

### Using the Encoder Knob

The Falcon model has a single encoder knob that performs the basic functions of dimming, brightening, and zooming. A dual encoder knob comes with the Falco Pro model, which gives pilots more options to customize and use to their preferences. Quick profiles can be created for both encoder knobs to perform a selected function. Examples of the dual encoder knob are application rate, center map, swath width, open menu, open setup, etc. Click [here](#) to view a video on how-to use and customize the encoder knob. Also, how-to use and customize the encoder knob is explained later in this manual.



### Startup Screens

Every time a Falcon system initially starts, a warning is displayed. Select 'OK' to acknowledge the statement.



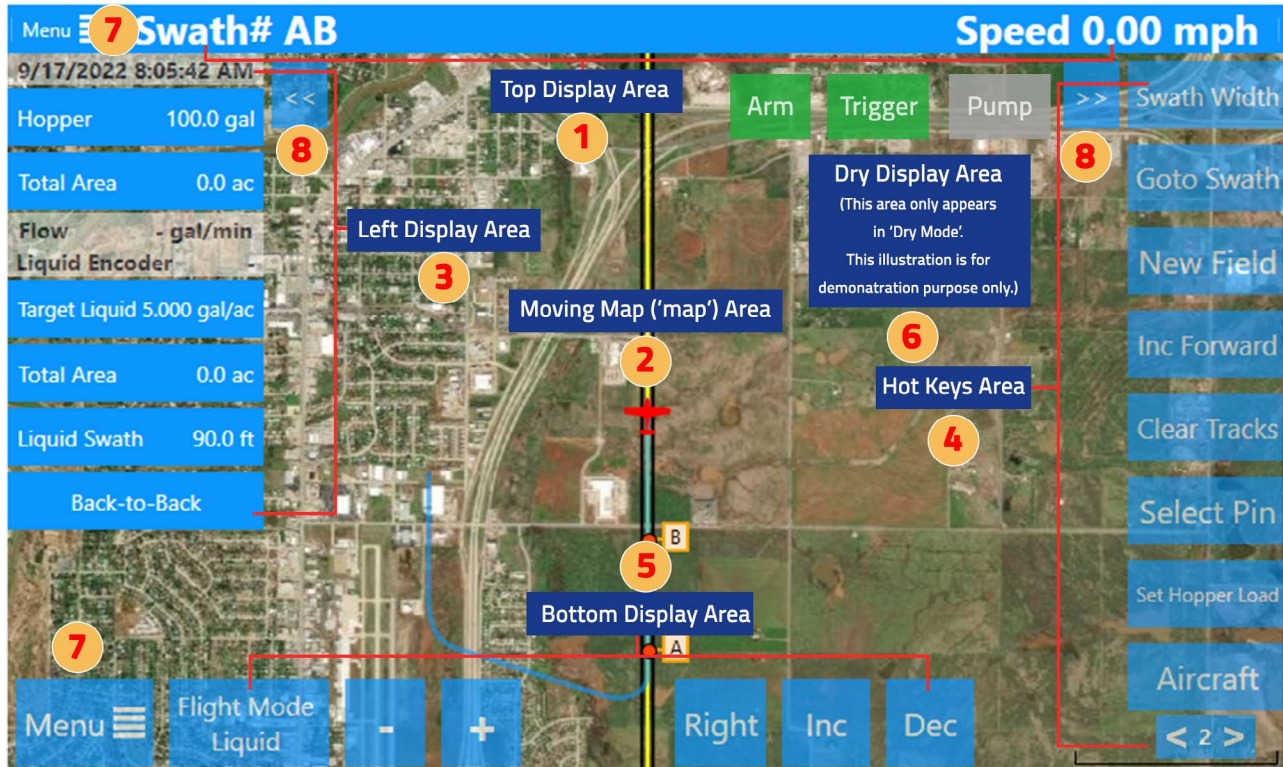
Upon launch or when changing flow modes, the Falcon needs direction on how to handle the new data. This startup menu displays for the pilot to have a quick pick of the next step.



- 1 Opens a menu to load an existing job.
- 2 Opens a menu to select a previous mark.
- 3 Returns to Mark Zero. (Mark Zero is the last time you stopped applying.)
- 4 Opens a menu to create a new Job and name it.
- 5 Automatically creates a new Job with a default name based on the serial number, date, and daily job counter.
- 6 Opens a menu to import a Job from a USB.
- 7 Opens up the main menu.

# 1.6 MOVING MAP SCREEN OVERVIEW

After startup or a Job is loaded or created, the touchscreen displays the moving map screen. The moving map screen is the main display in Falcon/Falcon Pro. Section 2 details setting up display areas on the moving map screen.



## 1 Top Display Area

In the Top Display Area, three fields contain user-selected information. This is editable from the screen display menu and is part of the areas automatically updated when Guidance Modes change. The information presented is as large of a font as possible and is usually visible, regardless of user interaction. This is the best location to put key information needed to be read quickly and easily. Appendix B shows options of what can be shown in the Top Display Area and Left Display Area.

## 2 Moving Map Area

The moving map area ('moving map') shows a GIS-generated map of the field showing the flight track, swathing lines, application areas "paint," any job polygons, Marks, and other relevant information. Satellite or street-map backgrounds are available when the Falcon is connected to the internet.

A distinct capability of the Falcon/Falcon Pro is the ability to upload offline background maps. Offline background maps are helpful for aircraft with slow or reduced internet capabilities. When there is a poor or limited internet connection, online background maps might not appear, which is why offline background maps are beneficial. They are easy to load and can provide peace of mind. Because of additional costs, additional fees apply for offline background maps.

### 3 Left Display Area

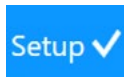
At the left is a collapsible panel that contains user-selected information and buttons. This is editable from the screen display and is part of the areas automatically updated when Guidance Modes change. Selections that are buttons have a blue background and typically allow the user to make quick edits to that information.

### 4 Hotkeys Area

Hotkeys are quick actions the user can take with a single click. The Falcon has multiple pages of Hotkeys (7 buttons per page). Think of this as pages of apps on a smartphone. The whole set of Hotkeys (all pages) is editable from the Hotkey menu and is part of the areas automatically updated when Guidance Modes change. Satloc recommends setting the most used Hotkeys on the first page and lesser used Hotkeys on subsequent pages. Appendix C shows options of what can be shown in the Hotkeys Area.

### 5 Bottom Display Area

Various buttons will appear in the Bottom Display Area, depending on the functions used.



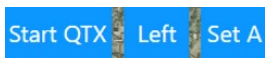
The Setup Button opens a concise page with common information and user settings.



These buttons zoom in and out. Also, a user can use his/her fingers to zoom in and out by pinching fingers in and out.



The plane will remain at the center of the map unless the user drags the map to see something off screen. The recenter button will restore the aircraft to the center.



This area shows multiple buttons with various functions at different times, depending on the Guidance Mode and the current swathing state. For example, what is shown on the Moving Map image on the previous page is different from what is displayed to the left of this paragraph.

### 6 Information Area

This area display various information, depending upon the mode selected. Dry display information only displays when Falcon Pro is in 'Dry Mode.' When in Liquid mode, auto dispersal will appear. This area is also for warnings and notifications. When a function is in use, its box will turn green. For example, when the arm is activated, the light will be green.

### 7 Menu Buttons

The menu button on the top left-hand side will take a user back to the moving map screen. The menu in the bottom will lead a user to the main menu screen.

### 8 Expand and Collapse Menus

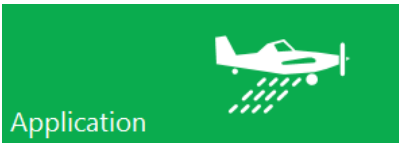
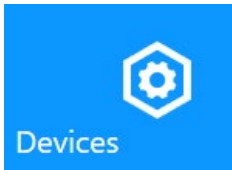
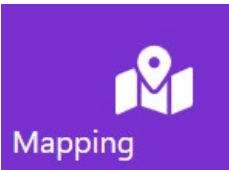


When these icons appear, the menu can expand and collapse.

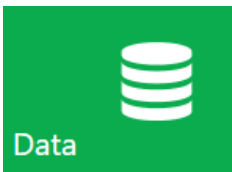




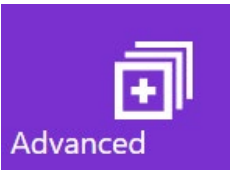

# 1.7 MAIN MENU OVERVIEW

From the Moving Map screen, touch the 'Menu' button to navigate to the Main Menu.








Menu Name	Menu Button Image	Associated Function
<div>1</div> <div>Application</div>		<p>The 'Application' button takes the user to settings for the particular application mode selected. This button will lead a user to the following functions.</p> <div>Liquid 2nd Level Menu      Dry 2nd Level Menu</div> <div><div>1. Flow Control</div><div>2. Boom Dispersal</div><div>3. Hopper</div></div> <div><div>1. Flow Control</div><div>2. Gate Dispersal</div><div>3. Hopper</div></div>
<div>2</div> <div>Devices</div>		<p>The 'Devices' menu is where the user can initially set up the Falcon system hardware. This menu sets the details of how hardware connects and functions. Additionally, this includes setting how the inputs function for various Guidance Modes. Information in this menu is not often changed once set. This button will lead a user to the following functions.</p> <div><div>1. Booms</div><div>2. Liquid Advanced</div><div>3. Liquid Accesories</div><div>4. Liquid Controller</div><div>5. Falcon Advanced</div><div>6. Aircraft Setup</div><div>7. Spreader Setup</div><div>8. Input</div><div>9. Output</div></div>
<div>3</div> <div>Mapping</div>		<p>The Mapping menu sets the Falcon's interaction with the world around it. This button will lead a user to the following functions.</p> <div><div>1. Map Setup</div><div>2. Guidance Modes</div><div>3. Waypoints</div><div>4. GPS/IMU Setup</div><div>5. ADS-B In Setup</div></div>



<b>4</b> <b>Data</b>		<p>The Data button provides the Cloud connection status and tools to export log files to USB. This button will lead a user to the following functions.</p> <ol style="list-style-type: none"> <li>1. Satloc Cloud</li> <li>2. External Data</li> <li>3. Log Export</li> </ol>
<b>5</b> <b>Diagnostics</b>		<p>The Diagnostics menu is one menu to check the status of every system. Also, there is a list of all software and firmware versions in the system and a quick way to check the status of every system input. This button will lead a user to the following diagnostic functions.</p> <ol style="list-style-type: none"> <li>1. Software</li> <li>2. CPU Diagnostics</li> <li>3. Display Diagnostics</li> <li>4. Communications</li> <li>5. Cloud</li> <li>6. GPS</li> <li>7. ADS-B In</li> <li>8. Flow Diagnostics</li> <li>9. Lightbar Diagnostics</li> <li>10. Software Versions</li> <li>11. IO Diagnostics</li> </ol>
<b>6</b> <b>Pattern Swath</b>		<p>Users can pick specific patterns, related settings, and the current swath width using the Pattern Swath menu. This button will lead a user to the following functions.</p> <ol style="list-style-type: none"> <li>1. Pattern</li> <li>2. Swath</li> </ol>
<b>7</b> <b>Display</b>		<p>The Display menu is where the user picks system-wide settings like unit system and language. Here also is the setup for HotKeys and the screen display information for various Guidance Modes. Finally, the user can set the colors and behavior for items on the map and overall display settings like dimming and night mode. This button will lead a user to the following functions.</p> <ol style="list-style-type: none"> <li>1. Units Setup</li> <li>2. Language Setup</li> <li>3. Hotkeys</li> <li>4. Screen Displays</li> <li>5. Screen Control</li> </ol>
<b>8</b> <b>Lightbar</b>		<p>The Lightbar menu is where the user sets the data to be displayed on the lightbar. Other overall settings, like dimming are set here too. This button will lead a user to the following functions.</p> <ol style="list-style-type: none"> <li>1. Lightbar Display</li> <li>2. Lightbar Setup</li> </ol>
<b>9</b> <b>Advanced</b>		<p>Advanced Menu contains some less often used settings and functions. One menu of note here is visibility. The Falcon attempts to show only information pertinent to each user. For instance, all Falcon Pros can operate a Transland Meterate, but turning off the visibility for Meterate will hide that setting everywhere, thereby reducing unnecessary information. Otherwise, a Satloc technician will help you pick options here as the need arises.</p> <ol style="list-style-type: none"> <li>1. Setup Profiles</li> <li>2. Software Settings</li> <li>3. Visibility</li> <li>4. Authorize Unlocks</li> <li>5. DB Maintenance</li> </ol>
<b>10</b> <b>Jobs</b>		<p>The Jobs menu allows loading of Jobs, selection of polygons and automatic pattern swathing selection through the Poly Pattern function. This is also the menu that imports job files from an external USB. This button will lead a user to the following functions.</p> <ol style="list-style-type: none"> <li>1. Job Selection</li> <li>2. Import Job(s)</li> </ol>



<b>11</b> <b>Return</b>		<p>The return button in any menu steps back to the higher-level menu or from the Main Menu to the map screen.</p>
<b>12</b> <b>Setup</b>		<p>This Setup button and a complementary “Menu” button on the Setup page swap back and forth for quick access.</p>
<b>13</b> <b>Shutdown</b>		<p>This shutdown button is the best way to power off the Falcon. After confirmation, it will shut down the software, Windows, and gently power off all Falcon components. Once the Lightbar and Display go dark, it is safe to turn off the main power to the Falcon.</p> <p><b>Note:</b> The left-most LED on the display will remain green as long as power is supplied to the Falcon; the rest will turn off during this power-down routine. Once shutdown has started, the only way to start the Falcon is through a complete power-off and power-on cycle.</p>
<b>14</b> <b>Exit to Windows</b>		<p>Occasionally, the user may need to interact with Windows. After confirmation, this will shut down the Falcon software. Falcon can be relaunched through an icon on the main Windows screen.</p>
<b>15</b> <b>Menu</b> (takes to Moving Map Screen)		<p>This menu button will take a user straight to the Moving Map Screen</p>

# 1.8 NAVIGATING SUBMENUS

From the Main Menu, submenus will appear when menu buttons are selected. The different submenus display a context-sensitive list of options for the function selected.

1

The left-hand side of the screen represents second level menu choices.

2

A gray bar will appear when there are more second level menu choices that need to be scrolled through to view.

3

The highlighted button (button that is a lighter blue), indicates which second level menu is currently selected.

4

Third level menu buttons appear based upon the second level menu button that is selected on the left-hand column.

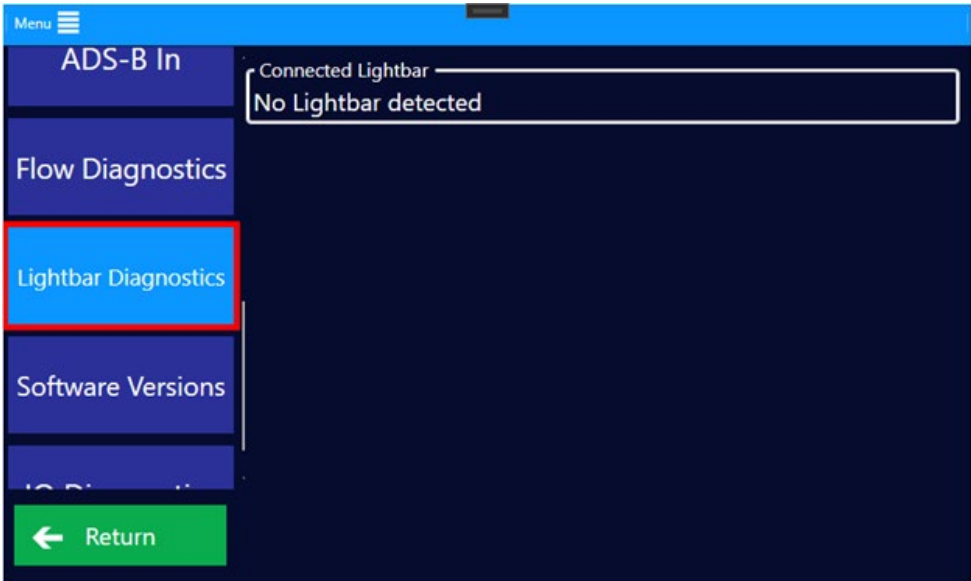
5

Small triangles at top and bottom indicate third level menu choices that need to be scrolled through to view.

# 1.9 SYSTEM DIAGNOSTICS



On the Main Menu, a red box will surround the Diagnostics Menu button when there is a system error. Inside the Diagnostics submenu, red boxes again indicate which system is experiencing a problem. Clicking on the button with the red box will reveal the error's details. This information will help troubleshoot and resolve the issue.





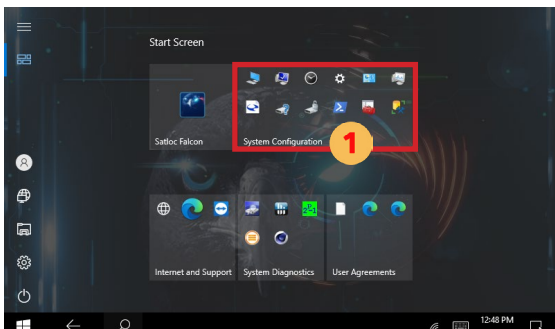
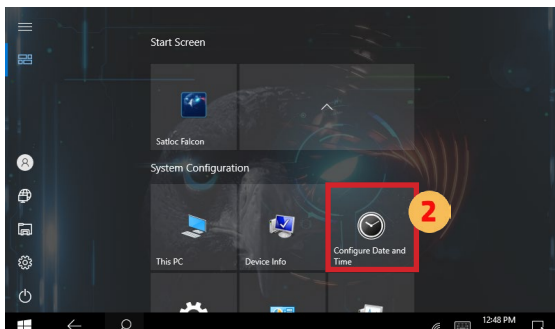
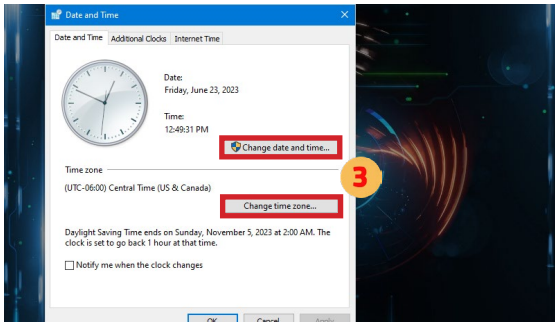
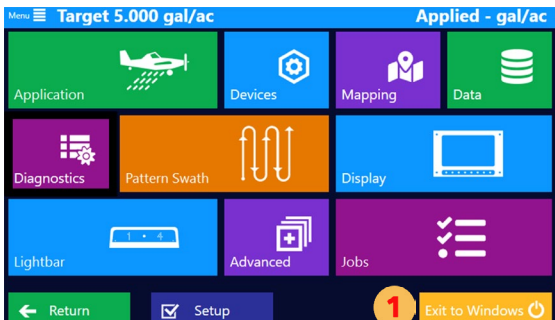
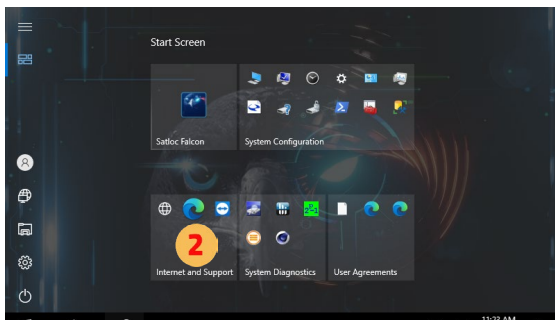
## SECTION 2: GENERAL SETUP

Complete these various tasks before you start working.

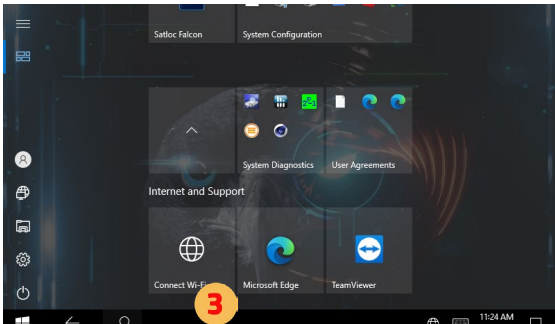
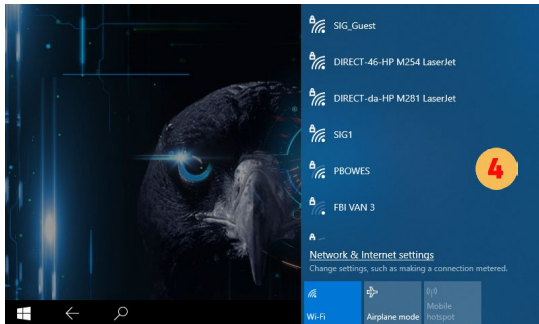



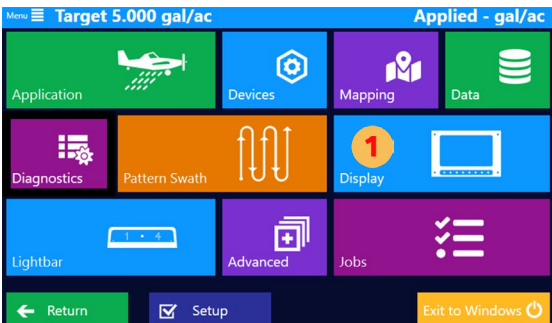


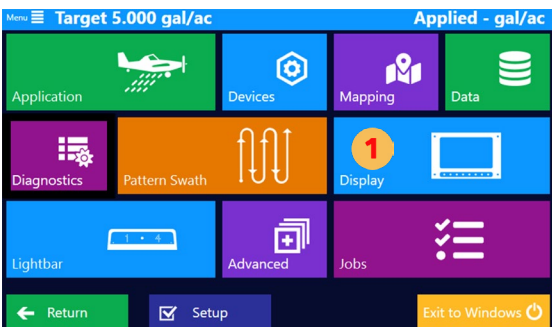
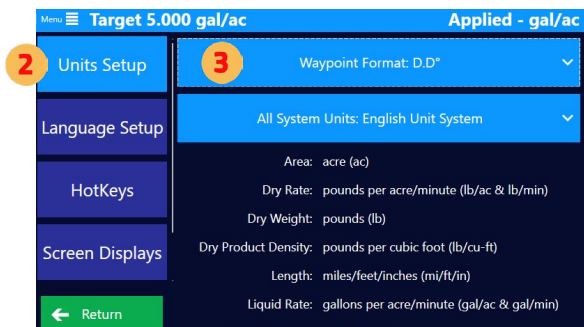
### WHAT'S IN THIS SECTION!

- 2.1 Adjusting Regional Settings & Preferences
- 2.2 Visibility
- 2.3 Aircraft Setup
- 2.4 Explanation of Guidance Modes
- 2.5 Display Screen Setup
- 2.6 Lightbar Setup
- 2.7 Input Setup
- 2.8 ADS-B In Setup & Testing
- 2.9 Flow Control Setup & Testing

## 2.1 ADJUSTING REGIONAL SETTINGS & PREFERENCES

Field	Description and Navigation Path
<b>Date, Time, &amp; Time Zone</b>  	<p>Falcon/Falcon Pro is set to the default date and time in the Windows operating software. <b>Setting the time is different than other systemwide settings. Please pay attention to the details.</b></p> <ol style="list-style-type: none"> <li>On the Windows screen (“Exit to Windows” if the Falcon software is up), tap on the “System Configuration” group. If the screen for Step 1 doesn’t appear, tap the display to make it appear.</li> <li>Tap “Configure Date and Time.”</li> <li>On the Date and Time window, press ‘Change date and time’ button and/or ‘Change time zone.’</li> <li>Make the changes to the date, time and time zone for user preferences.</li> </ol> <div style="display: flex; justify-content: space-around;">   </div> 
<b>Connecting WiFi</b>	<ol style="list-style-type: none"> <li>On the Main Menu of the Falcon software, select “Exit to Windows.” (In a future update, there will be a “Minimize” option in addition to selecting “Yes” to exit.)</li> <li>On the Windows menu, select “Internet and Support.”</li> <li>Scroll down and select “Connect Wi-Fi.” This will open Windows’s Wi-Fi menu.</li> <li>Select a WiFi network and connect.</li> </ol> <div style="display: flex; justify-content: space-around;">   </div>

## 2.1 ADJUSTING REGIONAL SETTINGS & PREFERENCES

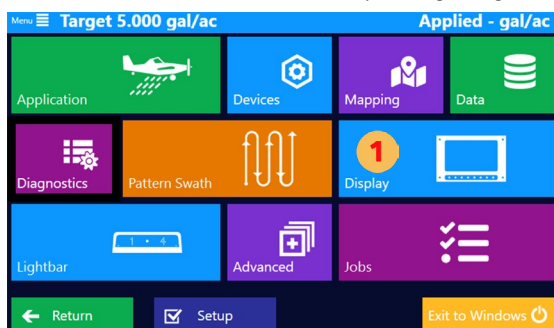
Field	Description and Navigation Path
	 
<b>Language</b>   	<p>There are three language options in the different Falcon models.</p> <ul style="list-style-type: none"> <li>English</li> <li>Portuguese</li> <li>Spanish</li> </ul> <p>Set the desired language format by navigating this path: <i>Main Menu &gt; Display &gt; Language Setup</i></p>   <p><b>NOTE:</b> If changing to a language other than English, it is recommended to restart the Falcon so that the text will format within the different spaces. After the initial restart, the wording will properly fit.</p>
<b>Coordinate</b> 	<p>You can display GPS coordinates as one of the following:</p> <ul style="list-style-type: none"> <li>D.D° - decimal degrees (default)</li> <li>D° M.M - decimal minutes</li> <li>D° M' S.S - decimal seconds</li> </ul> <p>Set the desired coordinate format by navigating this path: <i>Main Menu &gt; Display &gt; Units Setup</i></p>  



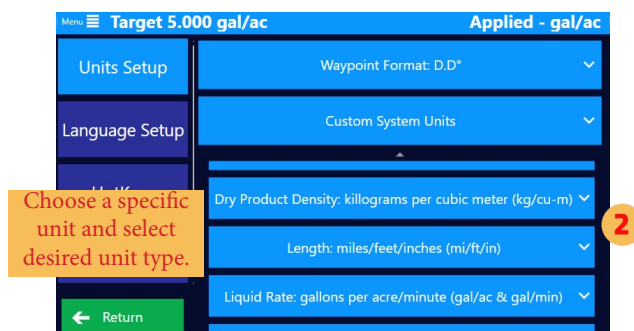
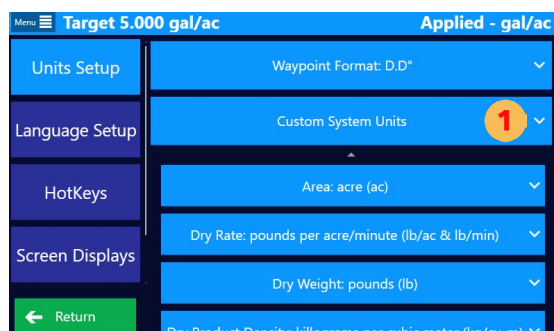
## Global Unit

Falcon/Falcon Pro uses U.S. standard units (such as feet and pounds) as the default. Use the Global Units field to change this setting to Metric or Nautical. You can also assign units to individual data types (such as speed and area) in the Units Advanced Setup window.

Set the desired coordinate format by navigating this path: *Main Menu > Display > Units Setup*

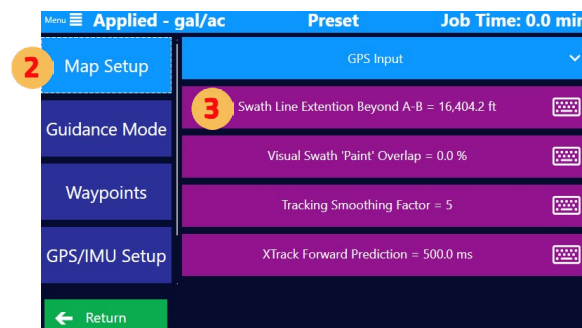
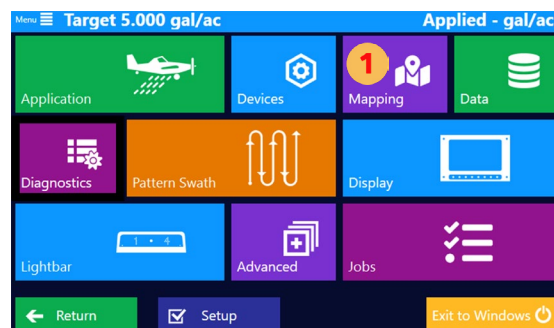


If 'Custom System Units' is selected, press the drop down for a specific unit and choose desired unit type.



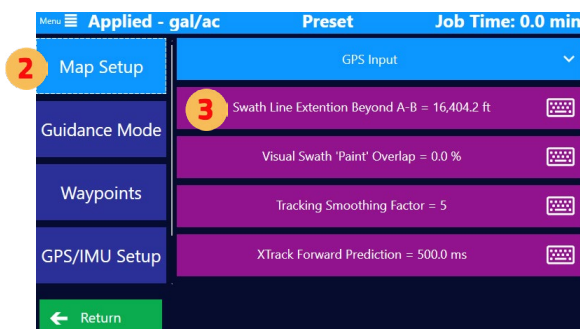
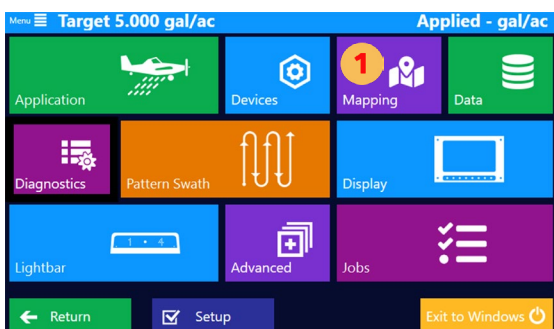
## Swath Line Extension Beyond A|B

For rectangular fields where every pass is the same length as the A|B line, an extension of 0 is perfect. However, for odd-shaped fields and wind conditions where subsequent passes need to be longer than the A|B line, the Falcon can extend the drawn swath lines on both sides by this length. Set this by navigating this path: *Main Menu > Mapping > Map Setup > Swath Line Extension Beyond A|B*



## Visual Swath 'Paint' Overlap

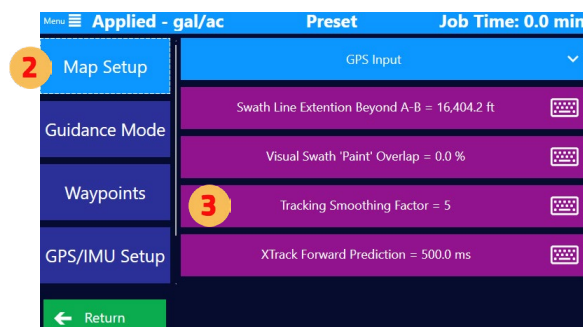
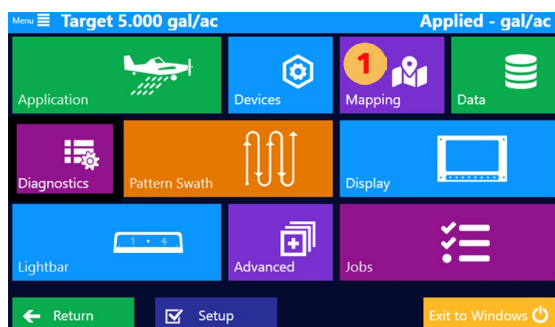
The Visual Swath 'Paint' Overlap is only a visual increase in width of swath paint on the screen. Users may increase this to remove the normal narrow swath gaps and only expose larger unintentional gaps. The logged data is not impacted by this setting. Only the paint on the Falcon display is altered. Set this by navigating this path: *Main Menu > Mapping > Map Setup > Visual Swath 'Paint' Overlap*



### Tracking Smoothing Factor

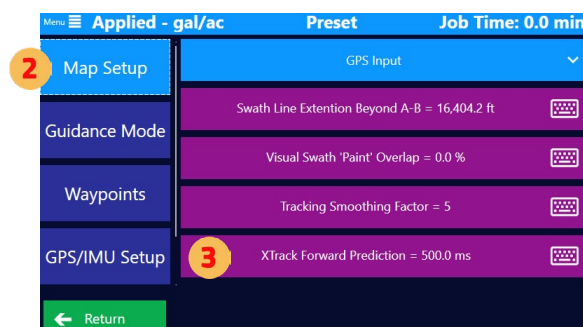
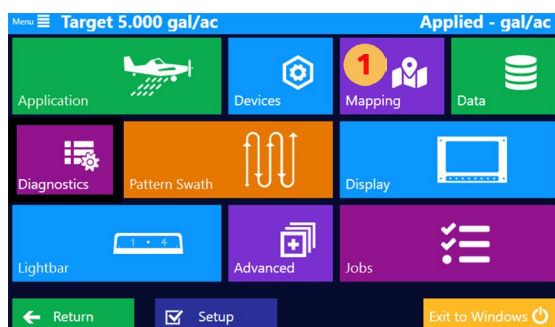
(1 to 10, which is smooth to aggressive)

The Tracking Smoothing Factor is the quantity of points in a moving average of Tracking points to identify heading and ground speed. The balance should be taken here. Too few, and the Crosstrack and AOI indicators will be volatile due to natural variances in the GPS data. Too many, and the Crosstrack and AOI will be very smooth but will lag and not be as responsive to pilot correction. This impacts the “feel” of the GPS guidance. Set this by navigating this path: *Main Menu > Mapping > Map Setup > Tracking Smoothing Factor*



### XTrack Forward Prediction

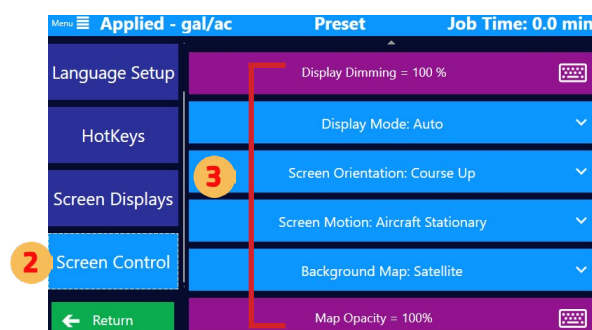
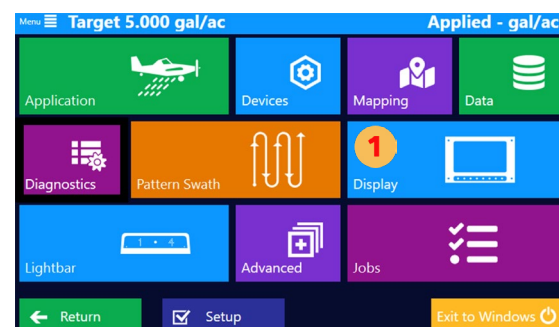
The XTrack Forward Prediction is a distance directly ahead of the current heading based on the Crosstrack indication. This means the XTrack indicator leads the actual plane by this value. This allows the pilot to respond timely. This impacts the “feel” of the GPS guidance also. Set this by navigating this path: *Main Menu > Mapping > Map Setup > XTrack Forward Prediction*



### Screen Controls & Colors

In the Screen Control submenu, set the following. Set this by navigating this path: *Main Menu > Display > Screen Control*

- Display Dimming
- Display Mode
- Screen Orientation
- Screen Motion
- Background Map
- Map Opacity
- Button Opacity
- My Plane Color
- Paint Color
- Partner Plane Color
- Guidance Line Color
- ADS-B Planes Color
- ADS-B Text Color
- Show Nearest Swath Line
- Clear Plane Track



The Falcon is designed to present to the user just what is needed therefore hiding options and settings the user never expects to need. Some of this visibility is through the distinction between Falcon and Falcon Pro and some of the extra unlocks. But the user should check the visibility menu to verify only what is important to them is enabled to be visible. These settings can be changed at any time.

From the Main Menu, navigate to *Advanced > Visibility* and check the boxes for features and devices you want to make visible in other menus.

## 2.3 AIRCRAFT SETUP

### Hopper Size

From the Main Menu, navigate to *Devices > Aircraft Setup* to specify the hopper size for this aircraft. These values can be used for hopper calculations.

### Falcon Pro IMU Setup

Falcon Pros have an internal Inertial Measurement Unit (IMU) that “feels” the flight dynamics and helps smooth tracking when GPS is spotty. To perform, the IMU must know its orientation relative to the aircraft.

From the Main Menu, navigate to *Mapping > GPS IMU Setup*. Select the IMU orientation wizard and answer the questions. After the required power cycle to initialize the IMU with the new orientation information, the proper orientation can be verified. Below is an image of verifying the proper orientation.

For a tail-dragger on level ground, if the IMU is oriented correctly, the measured vertical G and Pitch and Roll angles should be as follows.

Vertical (G)	Actual: 0.99	Nominal: 1
Pitch (degrees)	Actual: 3.27	Nominal: Just above 0
Roll (degrees)	Actual: 0.64	Nominal: 0



#### WARNING

Failure to set the orientation or failure to answer the questions correctly will result in incorrect flight tracking information.

## 2.4 EXPLANATION OF GUIDANCE MODES

The Falcon allows the user to specify what information is displayed on the screen and lightbar, what buttons are available on the screen, and how to handle systems inputs specific to the immediate mode of flying. These modes are called Guidance Modes.

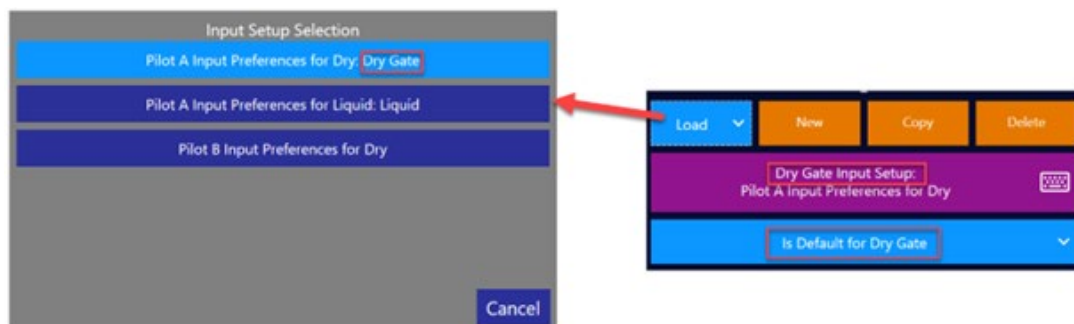
1. Liquid
2. Dry Gate
3. Dry Metered
4. Ferrying

When guiding to a polygon or waypoint, the system automatically switches to Ferrying Guidance Mode, updating the display, buttons, lightbar, and inputs accordingly. As the plane approaches the destination or upon pilot action, the Guidance Mode is switched to the current application mode: Liquid, Dry Gate, etc.

Specifically, there are four user setup areas that the Guidance Mode impacts. These are discussed in more detail later, but understanding the Guidance Mode concept is important initially.

- Screen Display (Information and Buttons at top and left)
- Lightbar Display
- Hotkeys
- Inputs (Encoder, Extra GPIO, TopHat, etc.)

In each area, the user can create any number of setups naming them whatever they want. From these, one setup can be designated as the “default” for each possible guidance mode.



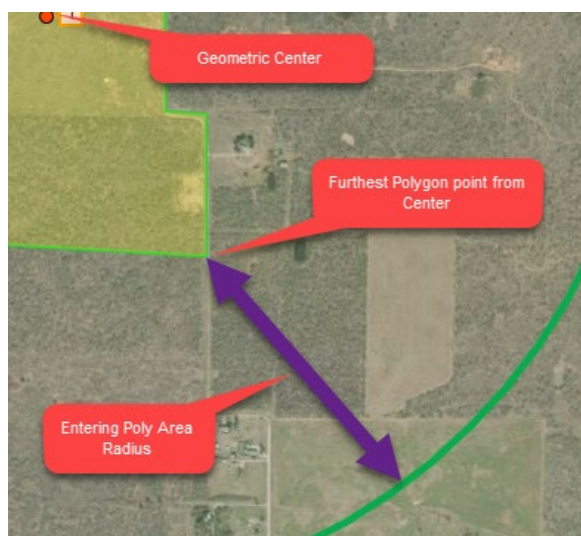
In this example, the pilots have created three setups for the Input. The names below are extra-long to explain this example better:

- Pilot A Input Preferences for Dry
- Pilot B Input Preferences for Dry
- Pilot A Input Preferences for Liquid

Here the two pilots have different preferences on how the inputs should be treated in Dry Gate mode, so they have saved unique Input setups. Currently the Pilot A version is set to the Dry Gate default. When the Falcon’s Guidance Mode switches to Dry Gate, the Pilot A Input Preferences for Dry will be loaded automatically.

Pilot B could load his dry setup manually, or set his to default instead. **Note:** there is no default selected for Ferrying. When switching to Ferrying Guidance Mode, the Input settings will remain unchanged from their current state.

Satloc recommends setting up a default for Ferrying and each likely application mode.



When the Falcon guides the pilot to a waypoint or polygon, the user can manually switch the Lightbar, Display, Hotkeys, and Inputs to the proper application mode, screen button or increment. The Falcon will also make this switch automatically at a specific radius from the waypoint or polygon.

From the Main Menu, navigate to *Mapping > Guidance Mode*. Inside the Automatic Guidance Settings box, set the two Radii.



## NOTE

For the Polygon radius, this is a radial distance beyond the furthest poly point from the geometric poly center.



Custom Displays for All Application Types



TIP

Satloc recommends setting up custom Display Settings for all likely application types (Liquid, Dry Gate, etc.) and a Display Setting for Ferrying.

Navigate to custom displays: *Main Menu > Display > Screen Displays*.

A pilot can enter and save multiple setups, so your name could be specific. For example, “Bob’s Liquid” or “Liquid for Forestry.”



NOTE

It is ideal for each Guidance Mode to have its own Display Setup. To have a particular setup loaded upon a specific Guidance Mode, select it to be that mode’s default.

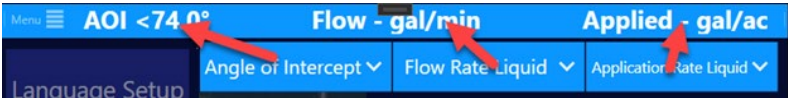
Is Default for Liquid

Detailed instructions are located later in this section.

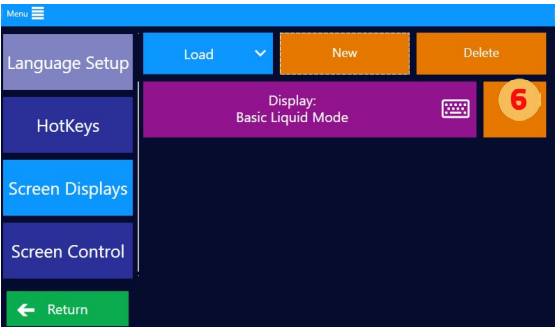
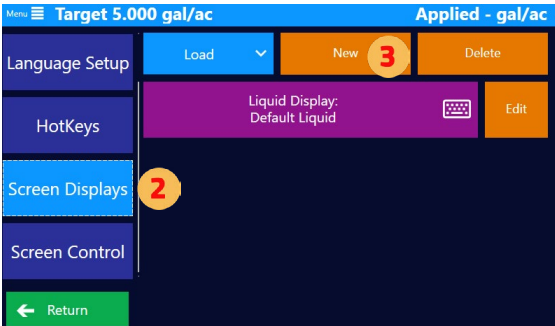
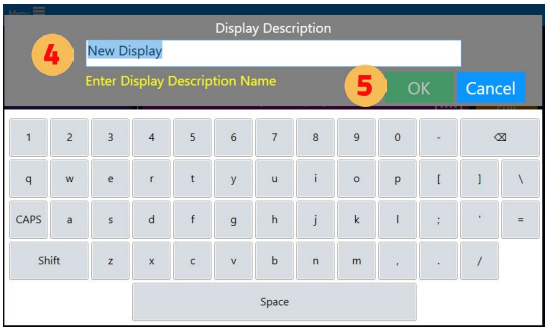
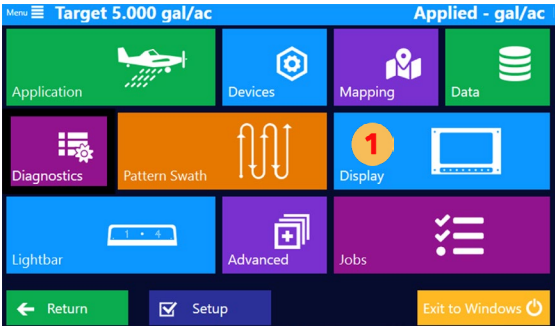
Top Display Customization

In the Top Display Area, three fields contain user-selected information. This is editable from the screen display menu and is part of the areas automatically updated when Guidance Modes change. See right-hand image to view an example of what the three fields in the Top Display area might look like.

**Note:** Once in ‘Edit’ mode, navigation back to the menus is disabled until clicking ‘Done Editing.’

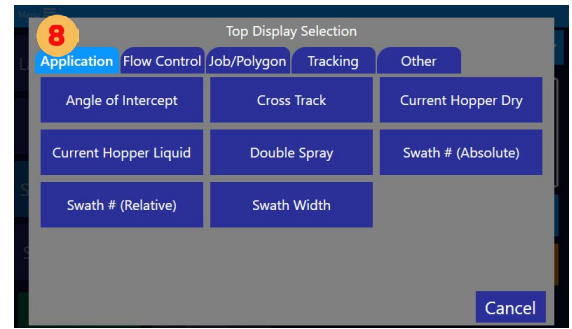


- 1 Tap ‘Display’
- 2 Tap ‘Screen Displays’
- 3 Tap ‘New’
- 4 Enter a display description name.
- 5 Press ‘Ok.’
- 6 Tap ‘Edit’





- 7** There are three buttons across the top labeled 'Blank' and have dropdown menus. Select one of the dropdown buttons to select a setting/function that you want displayed. These settings/functions will appear across the top of map screen (left, center, right).
- 8** Choose the desired function/setting that you want to appear on the top display.



## Left Display Customization

As explained earlier, at the left of the Moving Map Screen is a collapsible panel that contains user-selected information and buttons. This is editable from the screen display and is part of the areas automatically updated when Guidance Modes change.

The image below shows what will appear on the Moving Map Screen based upon what Left Display functions/settings were chosen. Notice how the image on the left shows some functions as simple text while others are have a blue button. Selections that are buttons typically allow the user to make quick edits to that information.

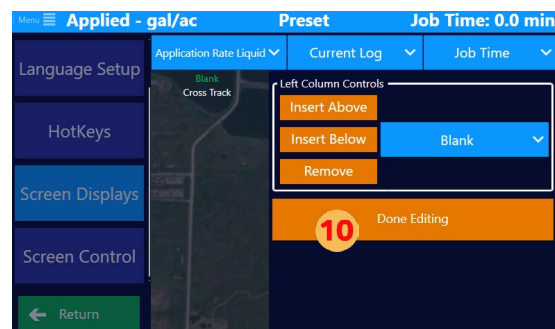
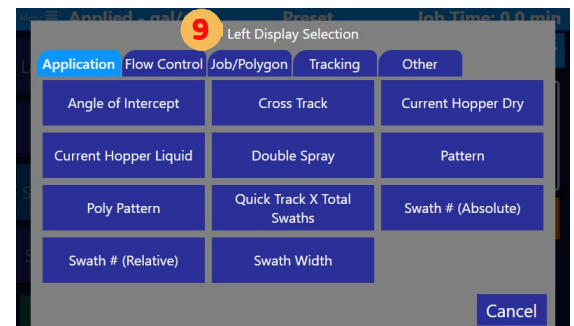
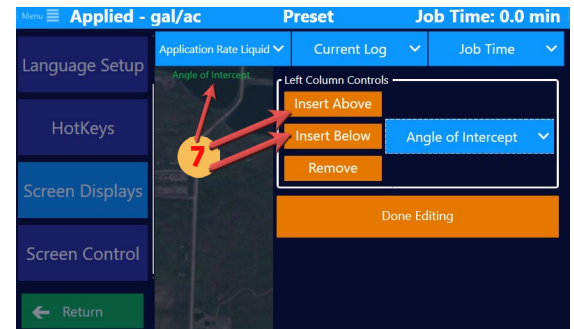
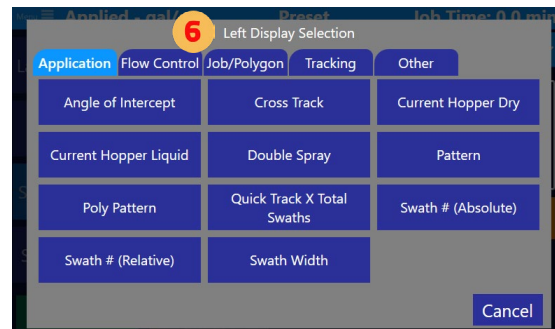
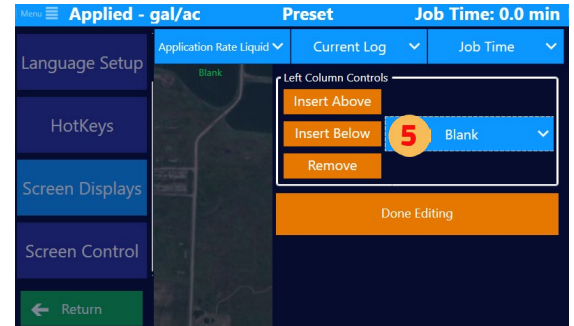
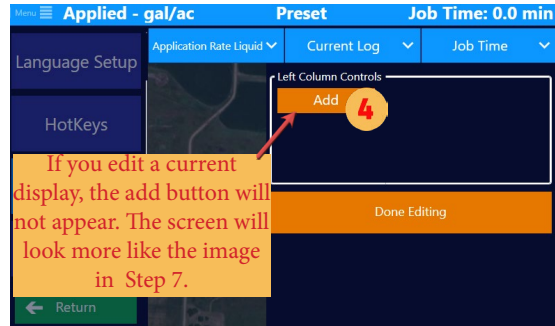
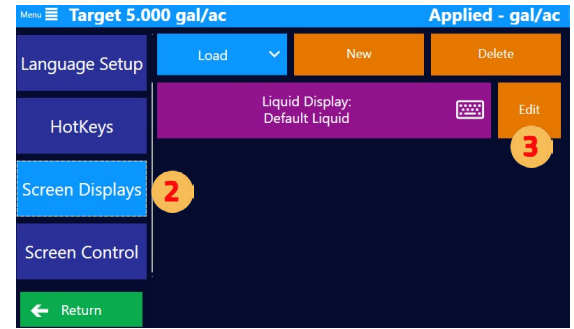
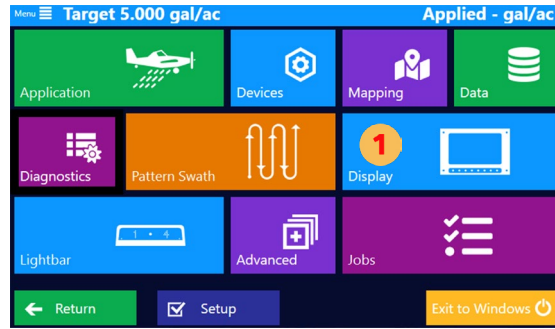


### NOTE

Appendix B lists the functions and the definitions of what can be displayed on the top and left displays.



- 1 Tap 'Display'
- 2 Tap 'Screen Displays'
- 3 Tap 'Edit'
- 4 Tap 'Add'
- 5 Select 'Blank'
- 6 Choose Setting/Function
- 7 Select 'Insert Above' or 'Insert Below' to add a new setting/function. (The green list is the order of what will appear on the moving map screen.)
- 8 Select 'Blank'
- 9 Choose Setting/Function
- 10 Tap 'Done Editing' when finished (Once in edit mode, navigation back to the menus is disabled until selecting 'Done Editing')



## NOTE

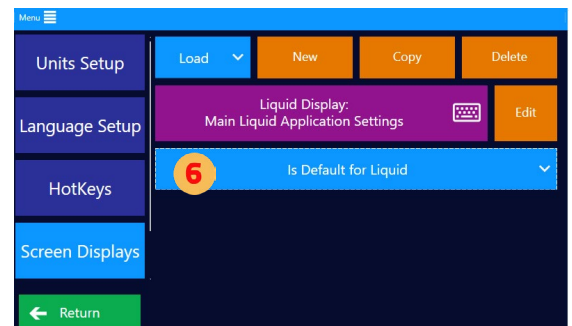
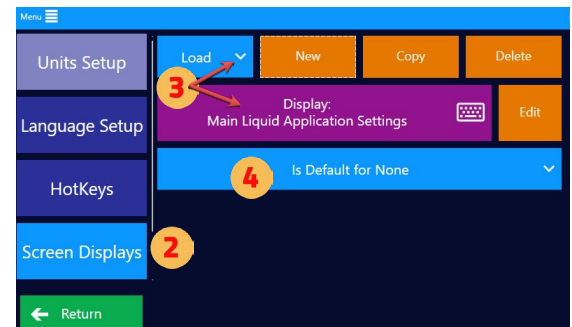
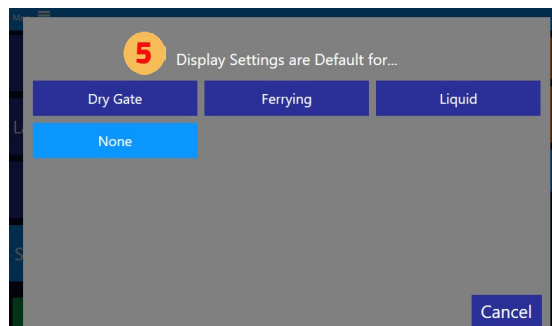
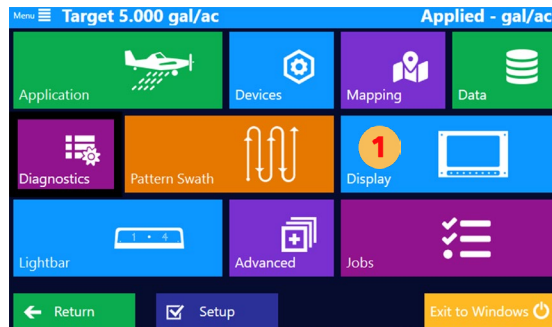
If the quantity of settings/functions for the Left Display extends beyond the available space on the Moving Map Screen, that area can scroll with a finger swipe.

As explained earlier in Section 2.4, all Falcon models allow the user to specify what information is displayed on the screen and lightbar, what buttons are available on the screen, and how to handle systems inputs specific to the immediate mode of flying. These modes are called Guidance Modes.

The beauty of this is whatever Guidance Mode is set for a particular application, those display settings will load when selected. For example, if a default is set for liquid application, whenever the Falcon is in Liquid Application Guidance Mode, this specific Screen Display will load.

Follow the steps below to set a particular setup to be loaded with a specific Guidance Mode.

- 1 Tap 'Display'
- 2 Tap 'Screen Displays'
- 3 Load the preferred display for a particular guidance mode
- 4 Select "Is Default for ..." button
- 5 Tap the desired application for the default display
- 6 Verify that the correct default is set to the loaded display



Satloc recommends setting up custom Hotkeys for all likely application types (Liquid, Dry Gate, etc.) and a Display Setting for Ferrying. These should be common actions required while in this particular mode.

From the Main Menu, navigate to *Display > Hotkeys*.

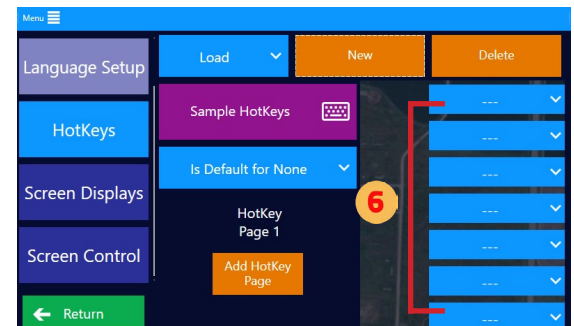
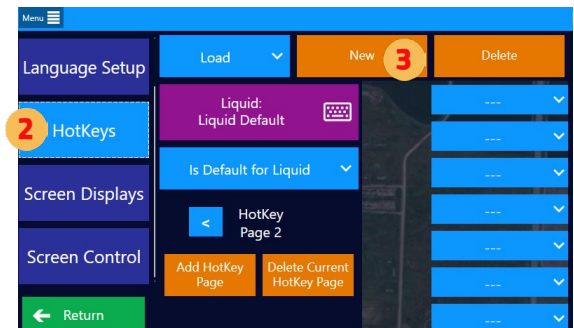
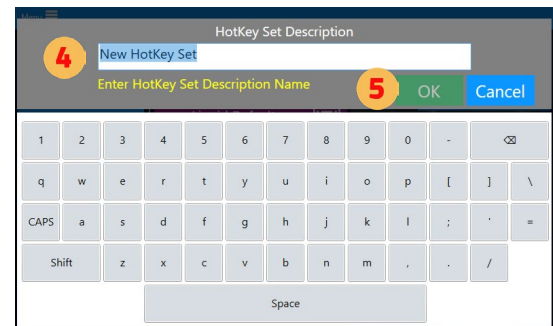
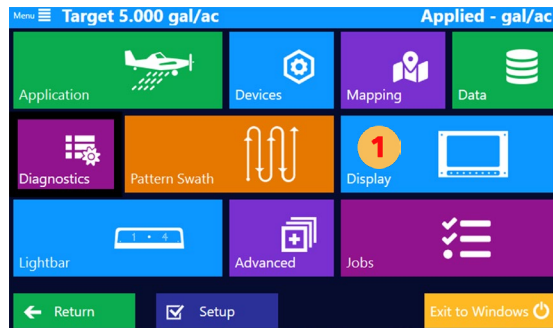
Tap 'New' and enter a name for this hotkey setup. A pilot can enter and save multiple setups, so your name could be specific: Bob's Liquid or Liquid for Forestry.

**Note:** To have a particular setup loaded upon a specific Guidance Mode, select it to be that mode's default.

Is Default for Liquid

If the default is set for liquid applications, whenever the Falcon is in Liquid Application Guidance Mode, this specific Hotkey Setup will load. Creating a Hotkey Setup for each likely Guidance Mode is ideal.

- 1 Tap 'Display'
- 2 Tap 'Hotkeys'
- 3 Tap 'New'
- 4 Enter a hotkey set description name.
- 5 Press 'Ok.'
- 6 Select a hotkey slot dropdown menu.
- 7 Select one of the four main tabs at the top of the HotKey Selection screen and then choose an option for the slot.



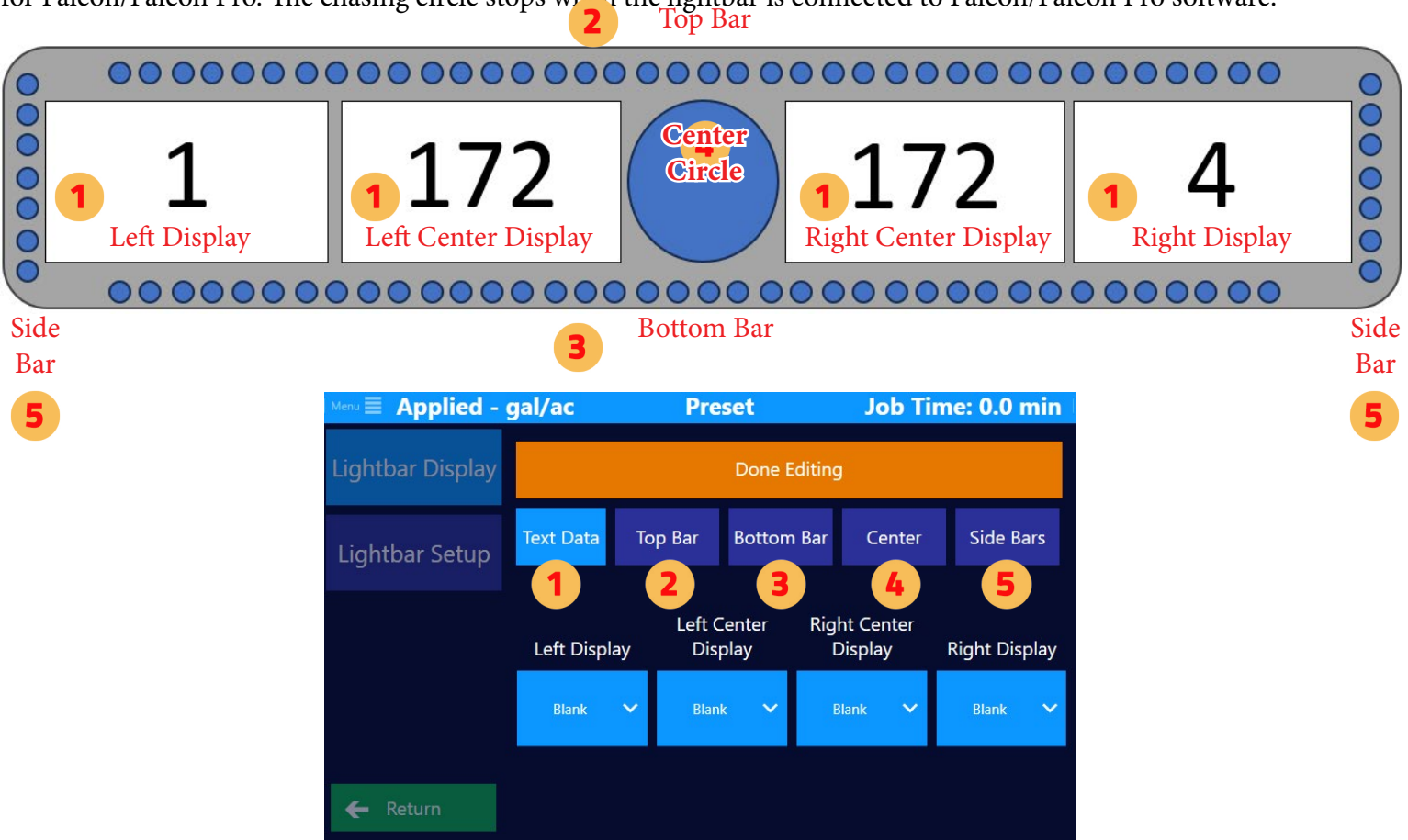
### NOTE

Up to seven HotKeys can be displayed at a time; however, any number of HotKey pages can be created. Like smart devices, users can set up multiple pages of hotkeys and navigate between them as needed. Typically, the most commonly used buttons are grouped on page one of the HotKeys area, and less common buttons are on subsequent pages.



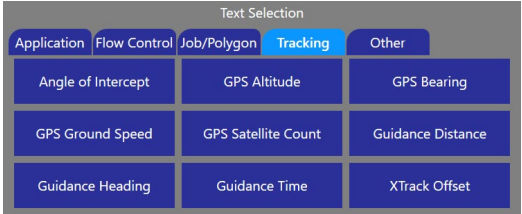
Lightbar Display Fields Overview

The lightbar is composed of five (5) sets of lights, which are called display fields. These lights are highly customizable. When the lightbar starts, a blue chasing circle will appear in the middle of the lightbar screen, indicating it is searching for Falcon/Falcon Pro. The chasing circle stops when the lightbar is connected to Falcon/Falcon Pro software.



1 Display Fields & Text Data

The ‘Text Data’ area allows a user to customize the following display fields: 1) Left Display, 2) Left Center Display, 3) Right Center Display and 4) Right Display on the L8 Lightbar. The selection menu has tabs that help group the selection options. To the right is an image of what the screen looks like when choosing ‘Text Selection.’



2 Top Bar

The ‘Top Bar’ consists of 45 colorful LEDs across the top of the Lightbar. Typically for application, this is set to XTrack Offset. For guidance, it is set to Guidance Offset. Users can specify what offset for each LED. **Note:** The Offset must be increasing in value from the center out. Click on a green or red box to edit the complementary pair of distances or angles.

On the right are images of what the screen looks like when editing the ‘Top Bar’ in a Falcon unit.





Also in the 'Top Bar' editing menu:

1. Whether offset is displayed as a solid bar extending from center or a single LED
2. Behavior of the vertical three LEDs at center, this in conjunction with the 'Bottom Bar'

There is also an option for Xtrack Offset in cases where the user has picked a C pattern, set an A-B, and is traversing over multiple swaths to set a C. This setting will prevent the XTrack Offset from swiping back and forth when it is not needed until the plane turns into a possible C swath. The default is 45 degrees meaning the XTrack will remain off until the AOI is within 45 degrees of parallel. At that point, the Xtrack LEDs will resume guiding the pilot into the nearest C Swath.

## 3 Bottom Bar

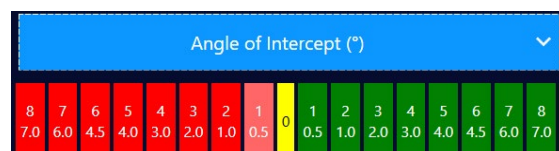
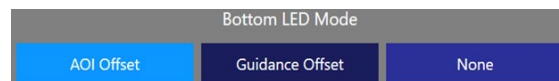
The 'Bottom Bar' is typically for application, set to the Angle of Intercept (AOI). During Guidance, it can be used in addition to or in place of the Top Bar Guidance Offset. Thirty-seven (37) colorful LEDs run across the bottom bar.

Users can specify what degree/offset for each LED. The LEDs are measured in degrees for AOI and Guidance. **Note:** the degrees must increase value from the center out. Click on a green or red box to edit the complementary pair of angles.

Also, in this location, set whether the AOI or Guidance Offset is displayed as a solid bar extending from the center or a single LED. The behavior of the three vertical LEDs at the center is also controlled here. This is in conjunction with the Top Bar.



When setting C, show XTrack LEDs when AOI is within 45.0°

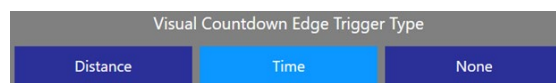


4

## Center Circle

The Center Circle of colorful LEDs displays two kinds of information: trigger and obstacles. Here in the Lightbar settings, only the Trigger information is set. A user can set the type of visual trigger to 'Distance,' 'Time,' or 'None.'

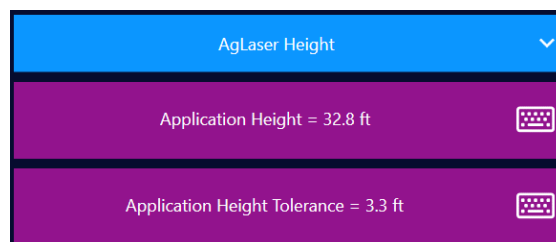
Distance and Time triggers cause a half-circle "smile" to visibly change, allowing the pilot to anticipate events. For the smile to work, it must be on Constant Rate Poly or Variable Rate Polygon. The smile starts with the side-most LEDs and continue to light LEDs to the middle so that the very Center LED lights at the precise trigger moment. For Distance, the Start and Stop triggers are set in length. For Time, the Start and Stop triggers are set in seconds.



5

## Side Bars

The vertical blue LEDs at the extreme right and left can be used as visual guidance for vertical offset from an AgLaser Input. If AgLaser is selected, the user should enter the ideal application height and a smaller acceptable tolerance above or below that height. Within that tolerance, the blue LEDs will track similarly to a bubble level (only vertical). Outside that tolerance, the LEDs will scroll at increasing rates as the actual AgLaser height moves further from the ideal application height.



## Lightbar Display



## TIP

Satloc recommends setting up custom Lightbar Settings for all likely application types (Liquid, Dry Gate, etc.) and a Display Setting for Ferrying.

Navigate to custom displays: *Main Menu > Lightbar > Lightbar Display.*

**A pilot can enter and save multiple setups, so your name could be specific. For example, "Bob's Liquid" or "Liquid for Forestry."**



## NOTE

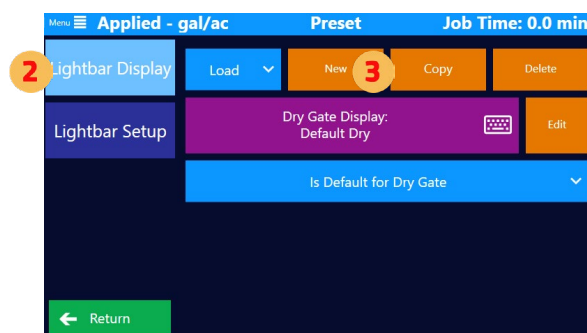
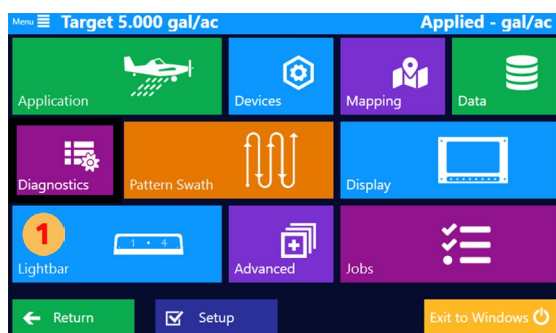
**Creating a Lightbar Display Setup for each Guidance Mode is ideal.**

To have a particular setup loaded upon a specific Guidance Mode, select it to be that mode's default.

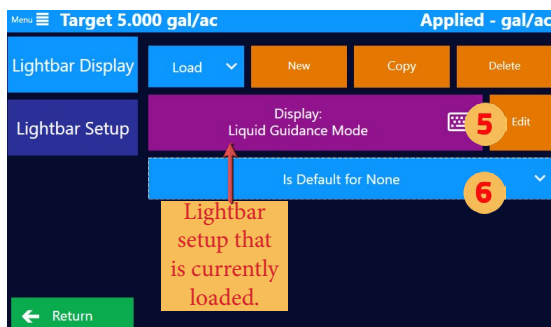
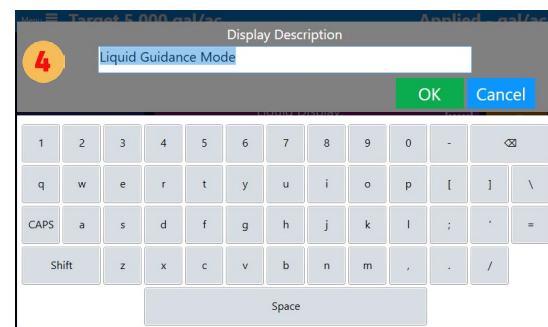
**Is Default for Liquid**

Detailed instructions are located later in this section.

- 1 Tap the 'Lightbar'
- 2 Tap 'Lightbar Display'
- 3 Tap 'New'
- 4 Type a name for the lightbar setup. Then, tap 'OK.'



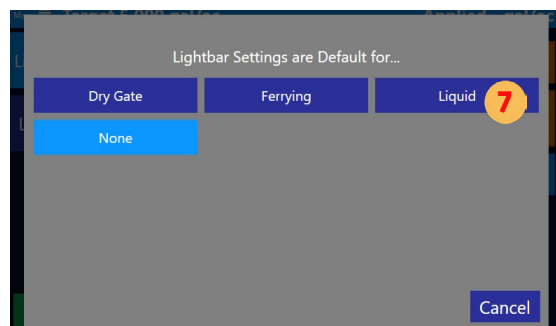
- 5 Verify that the Lightbar Display Setup is loaded for editing
- 6 When loaded, Tap 'Is Default for Liquid None'



- 7 Tap 'Liquid'

### TEXT DATA FIELDS

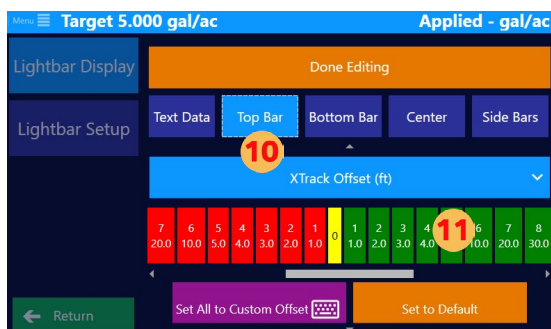
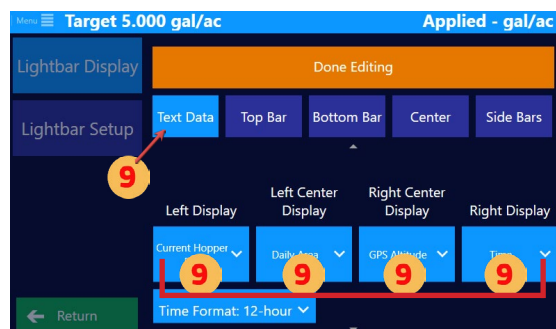
- 8 Tap 'Edit'



- 9 Tap 'Text Data.' Then, tap to edit displays.

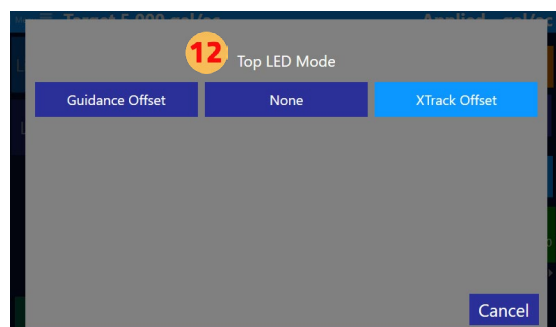
### TOP BAR

- 10 Tap 'Top Bar'

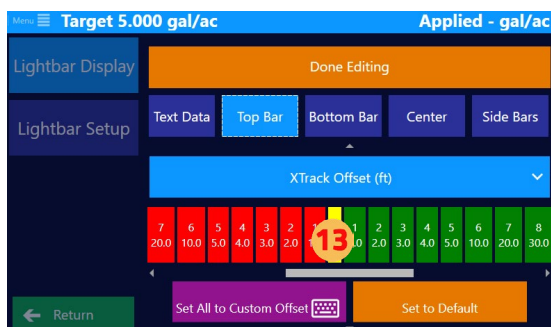


- 11 Tap the long blue bar

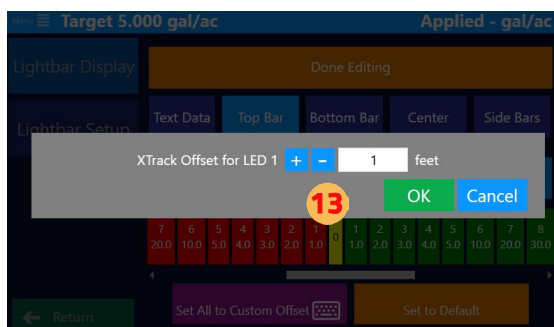
- 12 Select a Top LED Mode



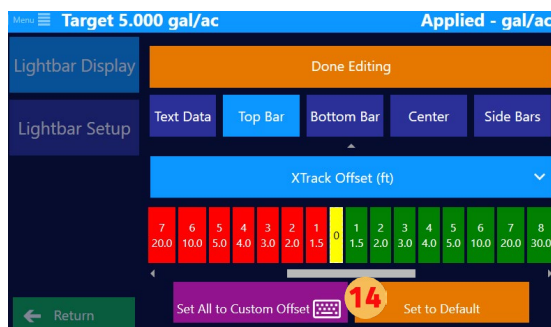
- 13 Tap on the colored bar to change distance



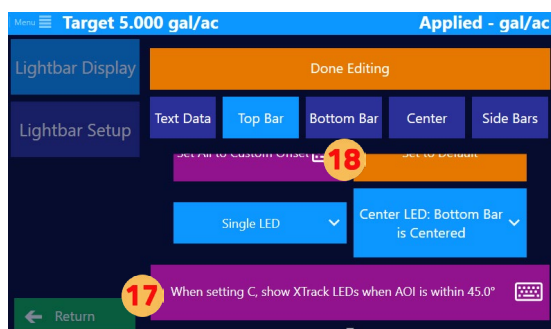
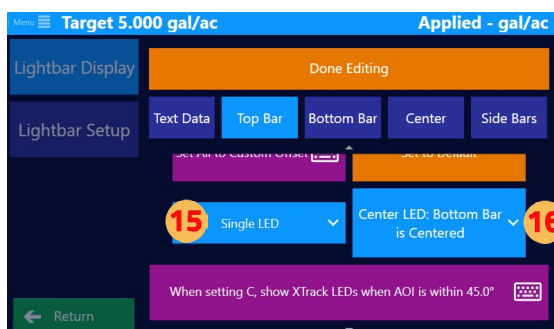
- 13** Set the distance from the center for LED. This automatically sets both sides. Then, tap 'OK.'



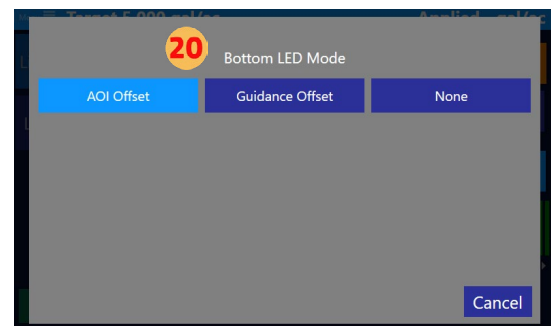
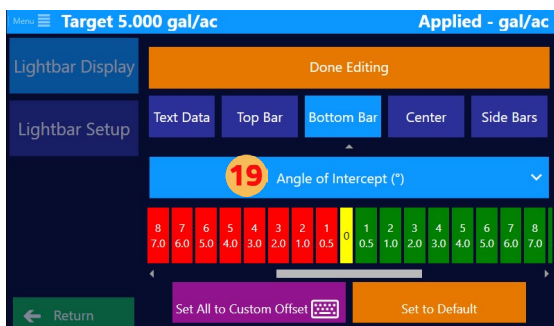
- 14** Tap 'Set All to Custom Offset' to set a distance between each LED. This distance will be applied to all LEDs.



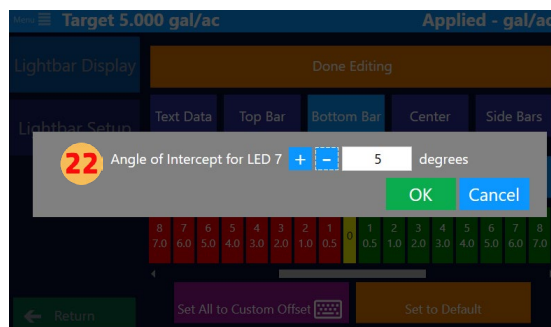
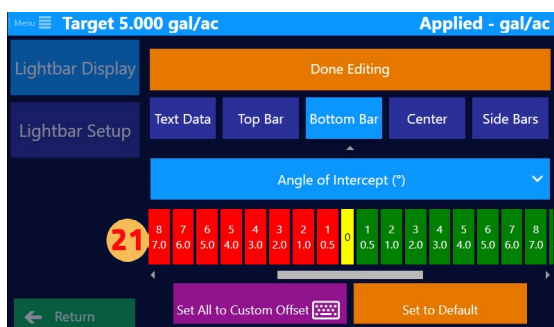
Tap 'Set All to Custom Offset' to set a distance between each LED. This distance will be applied to all LEDs.



- 15** Tap 'Single LED' or 'Solid Bar' to choose a bar style



- 16** Tap 'Center LED' to choose the middle LED operation



- 17** Tap 'When setting C, Show XTrack LEDs when AOI' to set degrees

## BOTTOM BAR

- 18** Tap 'Bottom Bar'
- 19** Tap blue selection button, often seen as the default 'Angle of Intercept'
- 20** Choose Bottom LED Mode
- 21** Tap on the colored bar to set specific offsets for certain areas.
- 22** Set the distance from the center for LED. This automatically sets both sides. Then, tap 'OK.'



**23** Tap 'Set All to Custom Offset' for all lights to be set to the same distance from each other

**24** Tap 'Single LED' or 'Solid Bar' to choose a bar style

**25** Tap 'Center LED' to choose the Bottom Bar LED operation

## CENTER

**26** Tap 'Center'

**27** Tap 'Edge Trigger: None'

**28** Choose 'Distance' or 'Time' for the visual edge countdown

The next steps/ settings will depend upon which type was chosen for the visual edge.

## SIDE BARS

**29** Tap 'Side Bars'

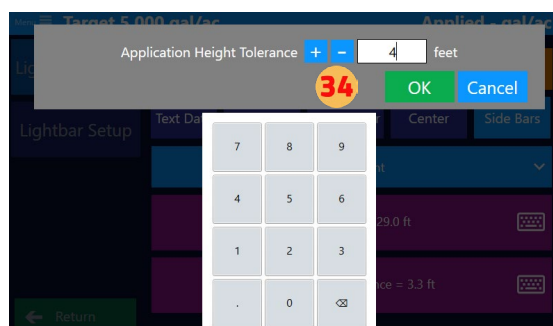
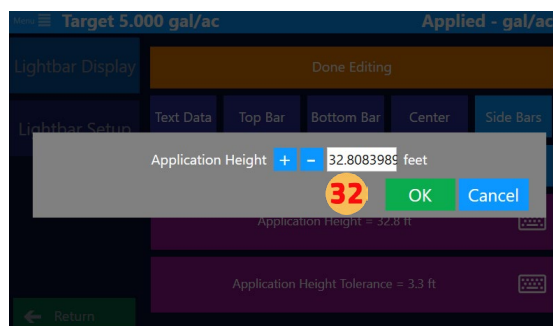
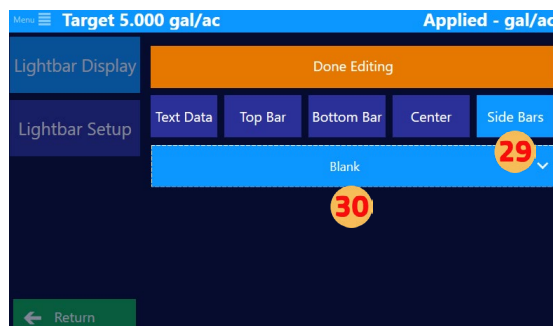
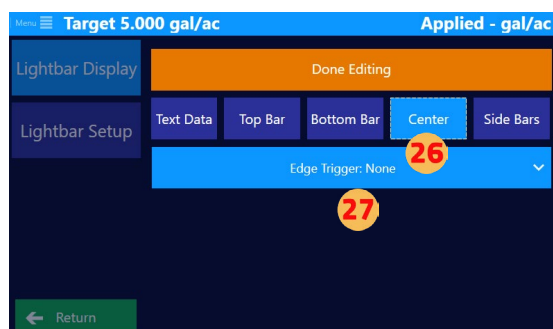
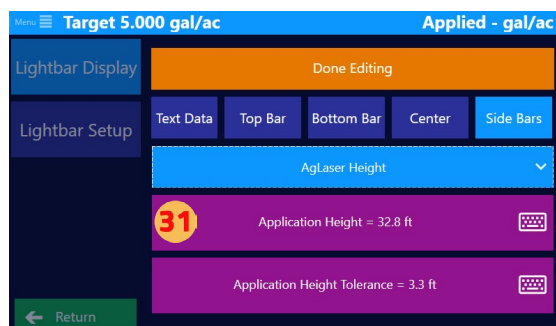
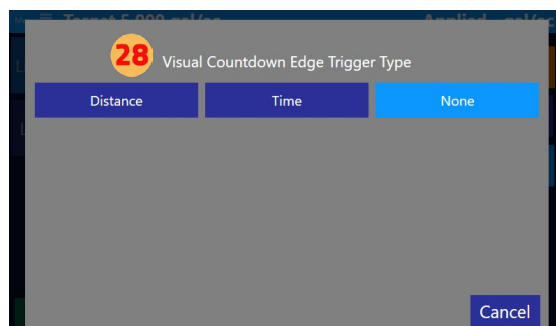
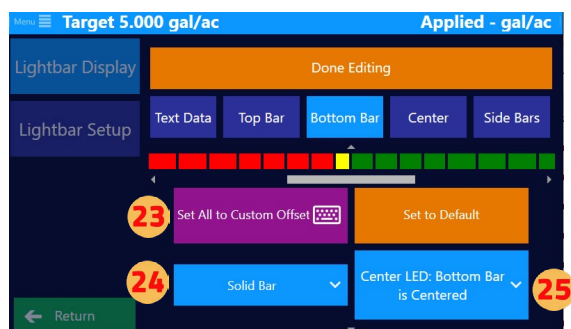
**30** Tap the long blue button to set left/right edge for AgLaser Height

**31** Tap 'Application Height'

**32** Input application height and then tap 'OK'

**33** Tap 'Application Height Tolerance'

**34** Input application height tolerance and then tap 'OK'

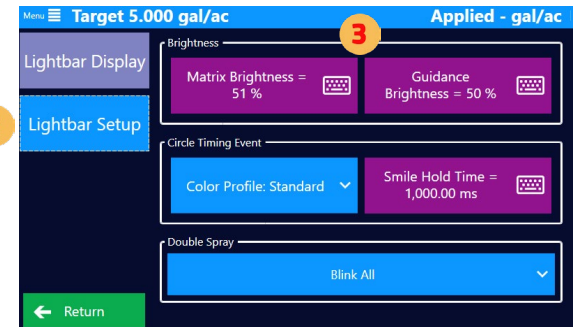
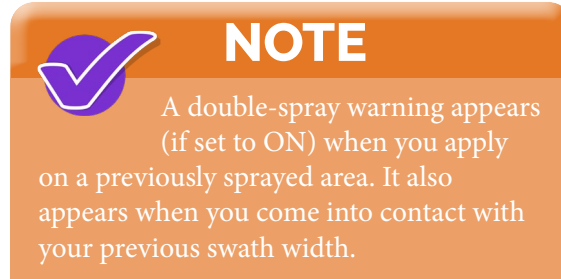
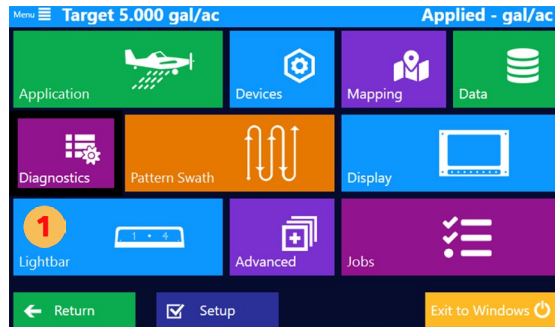




# Lightbar Dimming & Warning Settings Setup

## Section Two

- 1 Tap the 'Lightbar'
- 2 Tap 'Lightbar Setup'
- 3 Tap on the following buttons to edit settings:
  - Text
  - Brightness
  - Guidance
  - Brightness
  - Color Profile for Center Circle
  - "Smile" Hold Time
  - Double Spray
  - Blink Style



Input Overview

Difference Between the Falcon & Falcon Pro

*Falcon models* only come with an outer encoder knob, which is often referred to as a single or basic encoder. Falcon models do not have the inner knob (no smaller knob) with a button. Thus, in the Falcon Basic Software there is only one (1) option to set the encoder.

*Falcon Pro models* come with a dual encoder knob, also referred to as a multi-function, encoder knob.



TIP

The various inputs on the Falcon are programmable and settable per Guidance Mode (like the Lightbar, Display, and Hotkeys.)



NOTE

A user can choose to upgrade the Falcon Encoder Knob to the Falcon Pro Encoder Knob.

First, contact your dealer to purchase the hardware upgrade equipment (cable, inner knob, button). Second, connect the software by following this path: *Main Menu > Advanced > Visibility*. Then, click on the ‘Dual Encoder Cable’ box.



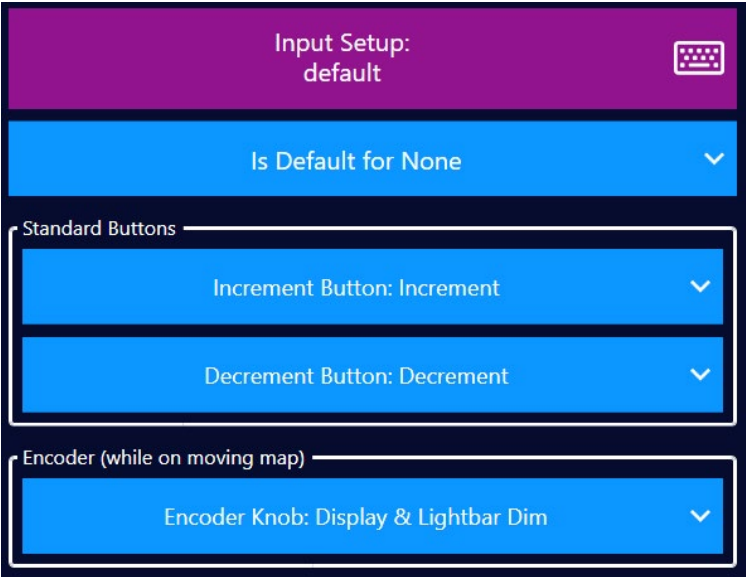
NOTE

Section Four of this manual explains basic functions of the single and dual encoder knobs.

Single Encoder Knob Setup

The Falcon models, which come with a single encoder knob, have three default input signals: Increment, Decrement, and Encoder Knob. With only these three inputs, a Falcon user will most likely not have different settings for different Guidance modes. Due to the limited capabilities, the increment Button is set to Increment and Decrement Button to Decrement. The single Encoder knob should probably be set to dim both the display and Lightbar.

Follow this path to setup the single encoder knob: *Main Menu > Devices > Input*. Then, scroll to the ‘Standard Buttons’ and ‘Encoder (while on moving map)’ section. Below is an image of the recommended setup.



## Dual Encoder Knob Setup

The Falcon Pro models have Increment, Decrement, and a multi-purpose Encoder Knob. The dual encoder knob allows five (5) different selections. The dual encoder has a button attached to the smaller inner knob. Spinning either knob while this button is pressed down (depressed) or simply clicking this button has unique actions in addition to simply spinning the outer and inner knobs. All of these settings only apply while on the moving map screen.

Follow this path to setup the dual encoder knob: Main Menu > Devices > Input. Below is an image of the five (5) programmable selections for the dual encoder knob.



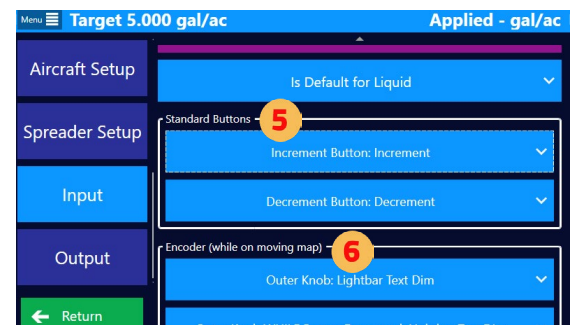
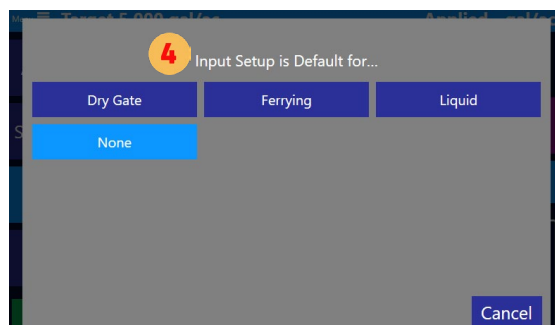
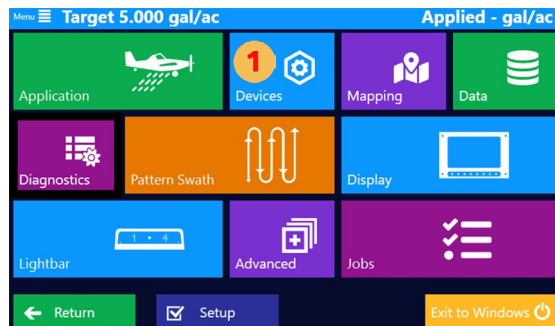
### TIP

For a visual of how-to use and customize the Falcon Dual Encoder knob, visit Satloc's YouTube channel or click this [link](#) to take you directly to the video.



## Setup Encoder Knob as a Default for Different Guidance Modes

- 1 Tap 'Devices'
- 2 Tap 'Input'
- 3 Select 'Is Default for None'
- 4 Choose a Guidance Mode for the Input
- 5 Choose settings for 'Standard Buttons'
- 6 Choose settings for 'Encoder'



The Falcon models are equipped to give on-screen and Lightbar indications of nearby contacts.



Not every nearby aircraft is equipped with ADS-B Out. ADS-B In provides information to pilots that help prevent accidents. HOWEVER, ADS-B In does not replace pilot best practices, pilot situational awareness, and properly functioning equipment.

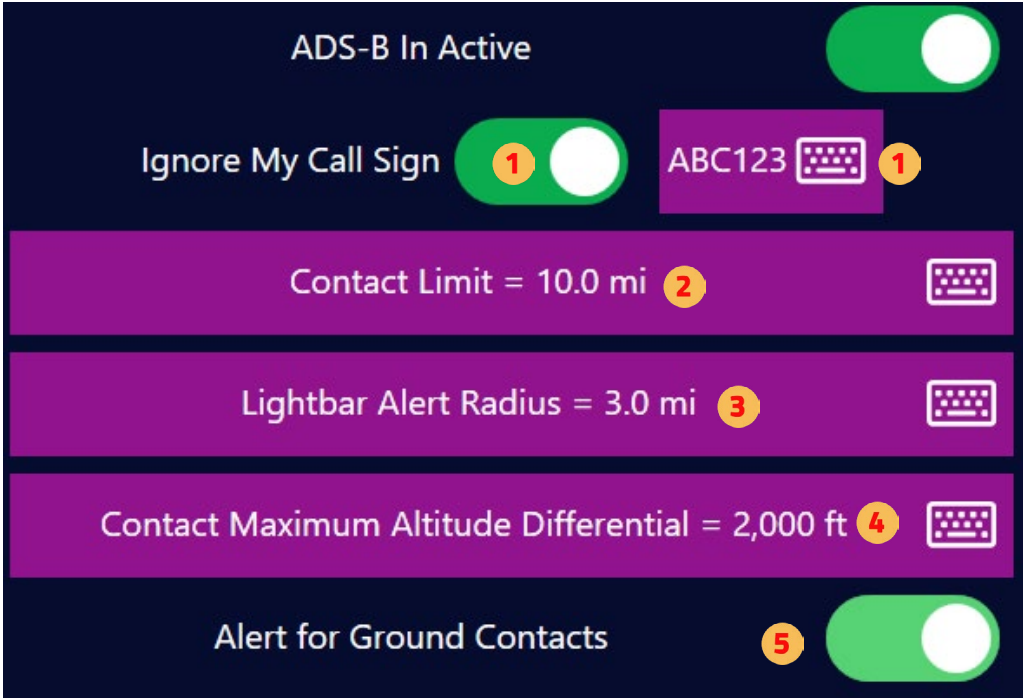
ADS-B In Setup

Navigate to ADS-B In settings by following this path: *Main Menu > ADS-B In Setup*

- 1 If your plane is equipped with ADS-B Out, select 'Ignore My Call Sign' and enter your transmitted call sign in the text field.
- 2 Tap 'Contact Limit' to set contact distance limit. The ADS-B device will receive air-to-air contacts in your immediate area and rebroadcast contacts from nearby ground stations for an extensive area. The Contact Limit input limits the On-Screen contacts to a square extending this distance from your location.
- 3 Tap 'Lightbar Alert Radius' to set distance alert on lightbar.
- 4 Tap 'Contact Maximum Altitude Differential' to set distance alert on lightbar.

**Note:** Alerts on the Lightbar are even further restricted. The Falcon creates a cylinder with your aircraft in the center. Any contact within the Lightbar Alert Radius and the Contact Maximum Altitude Differential (above and below your current altitude) will show on the Lightbar circle.

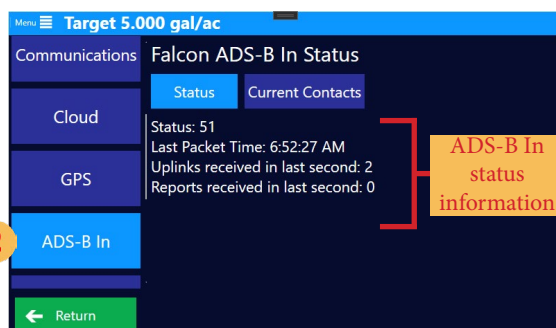
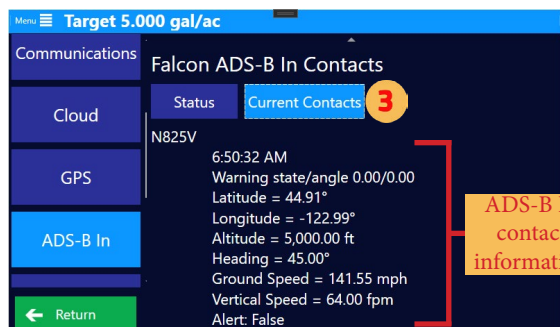
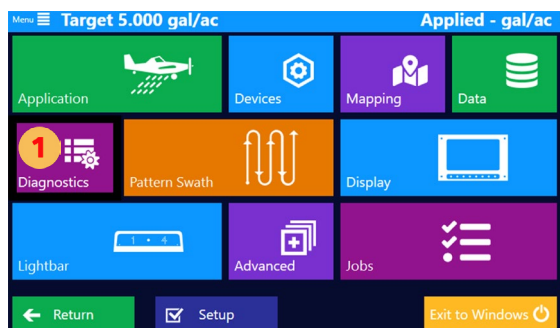
- 5 Toggle On or Off the 'Alert for Ground Contacts.' In the ADS-B data, this indicates contact is on the ground (not airborne). Turning this off would then ignore such contacts.



NOTE

On the Lightbar, a contact is identified with a single white LED in the relative direction to your heading. There are 18 such LEDs, so each represents 20 degrees. The chasing LEDs surrounding the contact LED indicate the urgency of the perceived threat based on the rate of change in distance. Contacts that are getting further away are slow blue-chasing LEDs. A contact whose distance is converging quickly results in fast red-chasing LEDs. The urgency colors change from Blue, Purple, Orange, and then to Red.

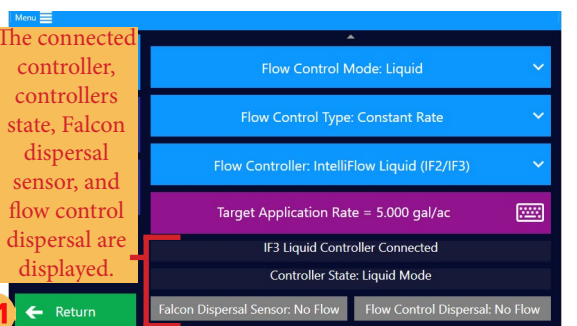
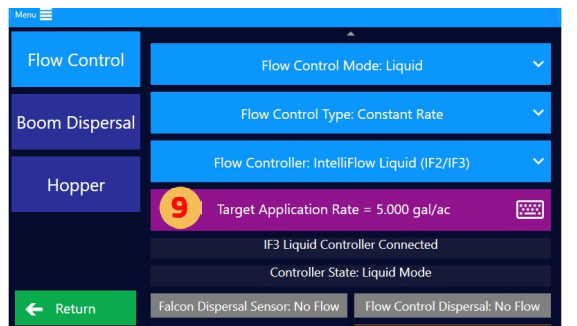
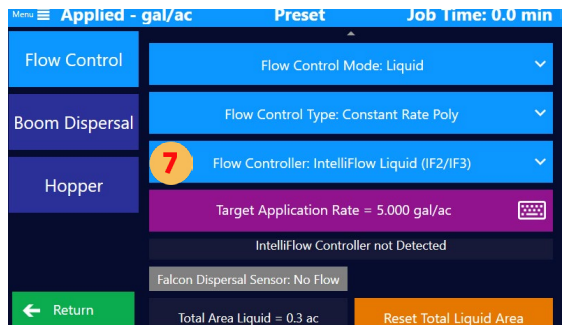
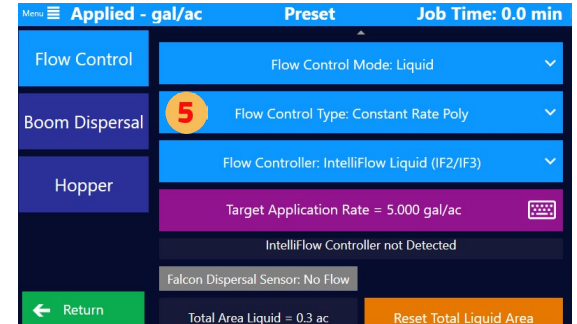
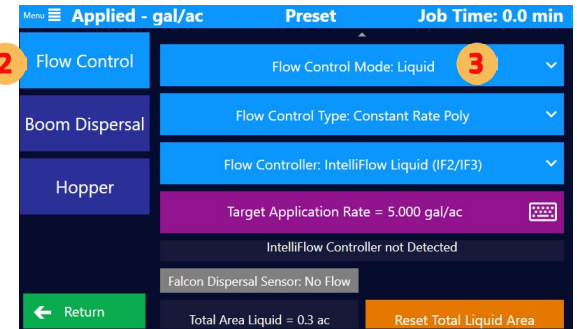
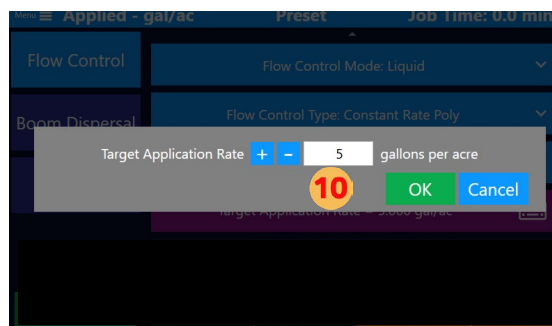
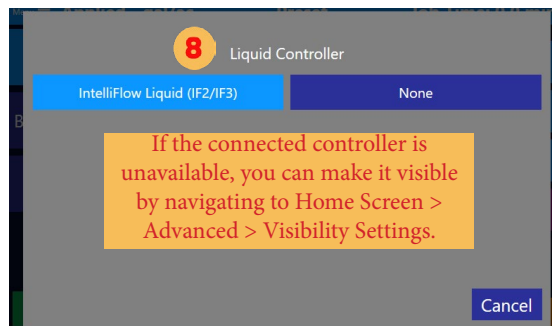
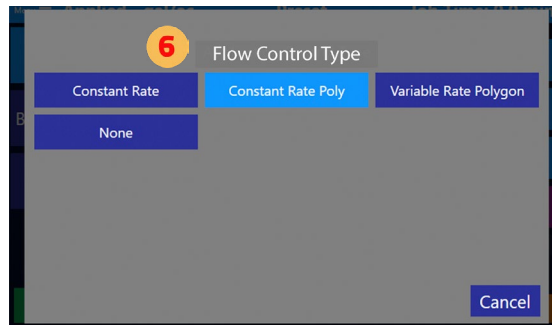
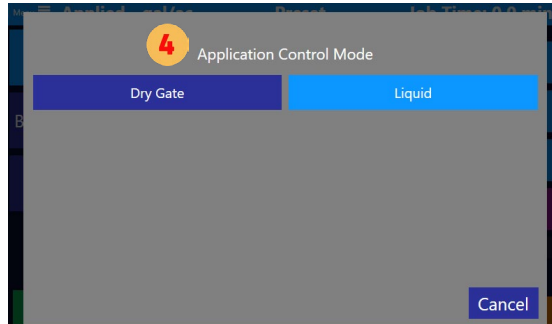
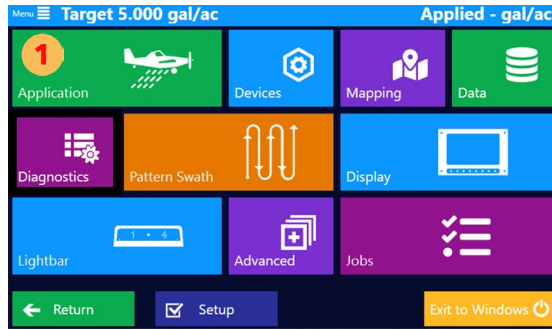
- 1 Tap 'Diagnostics'
- 2 Tap 'ADS-B In'
- 3 Tap 'Current Contacts'
- 4 Tap 'Return' twice to go to Moving Map
- 5 ADS-B contacts should appear on the screen. Zoom in and out of the screen to see more or less.





### Setting Up Flow Control for Liquid

- 1 Tap 'Application'
- 2 Tap 'Flow Control'
- 3 Tap the 'Flow Control Mode' (This might have the words "None", "Liquid", or "Dry Gate" after the colon in the button name.)
- 4 Select Application Mode
- 5 Tap 'Flow Control Type'
- 6 Select Application Type
- 7 Tap 'Flow Controller'
- 8 Select a Controller
- 9 Tap 'Target Application Rate'
- 10 Set a Target Rate. Then, tap 'Ok.'
- 11 Tap 'Return'

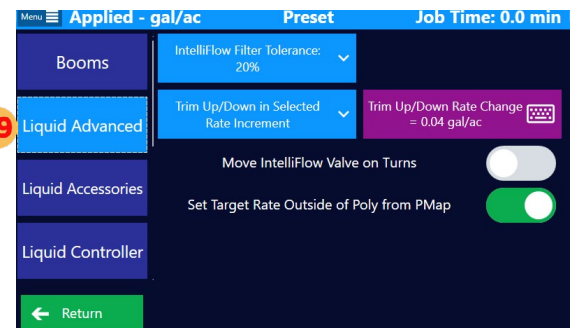
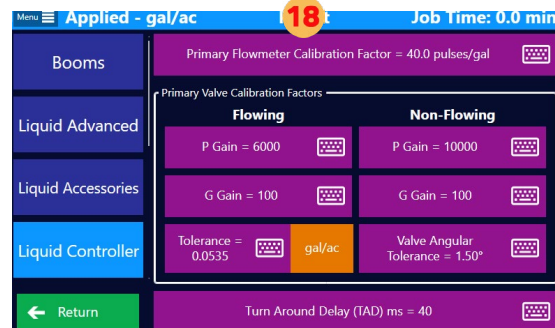
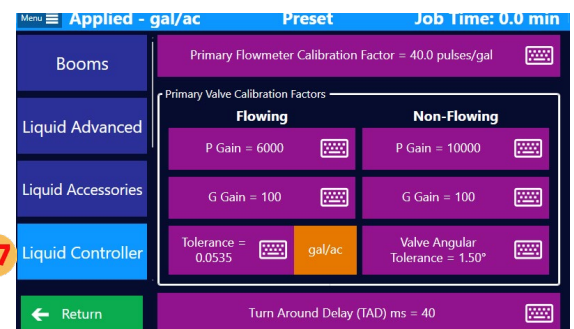
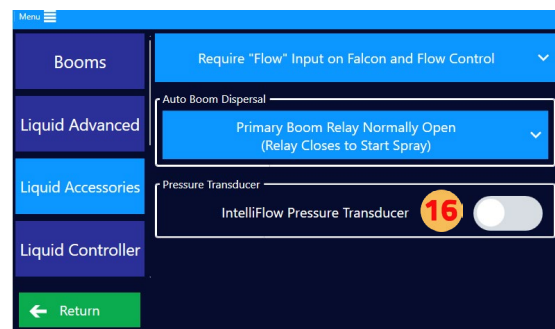
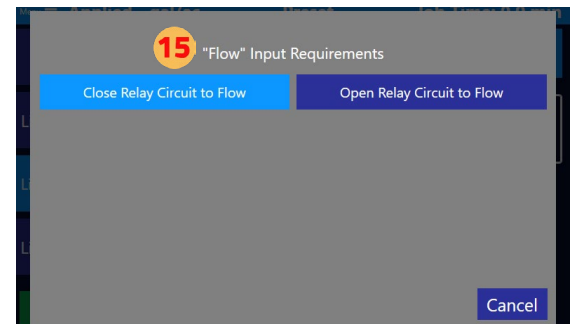
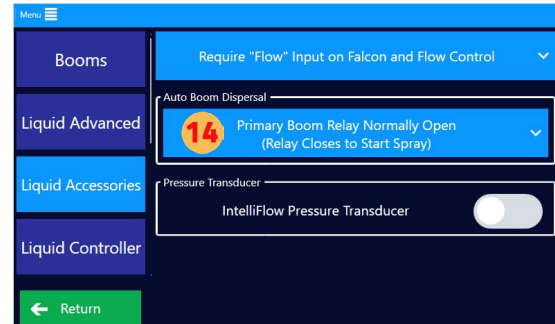
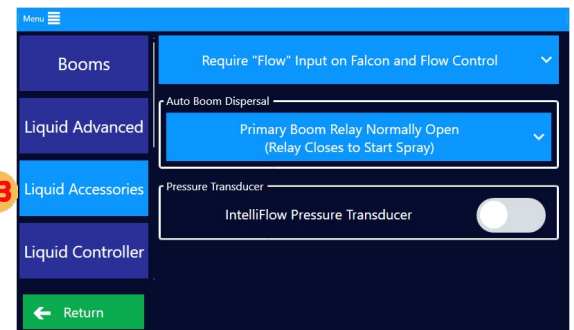
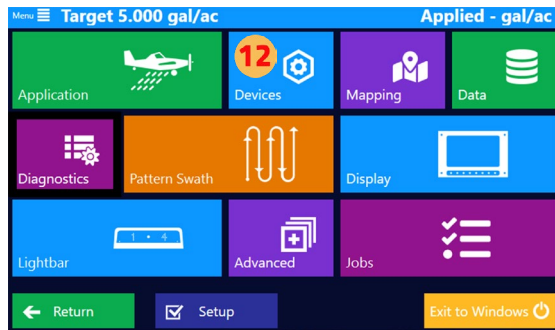


**NOTE**

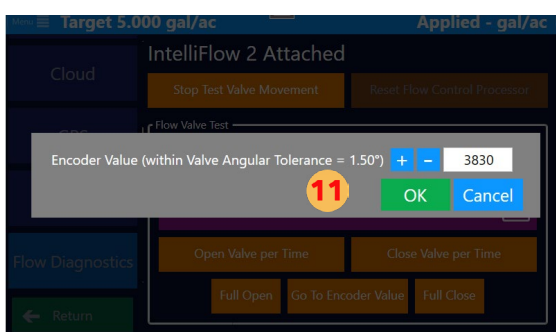
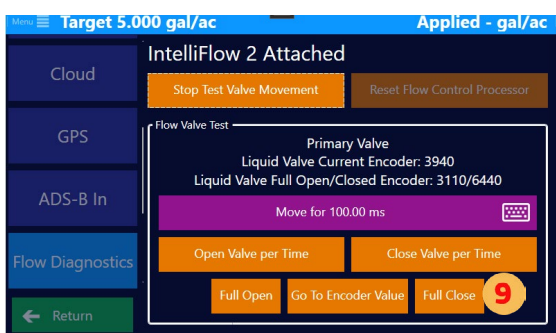
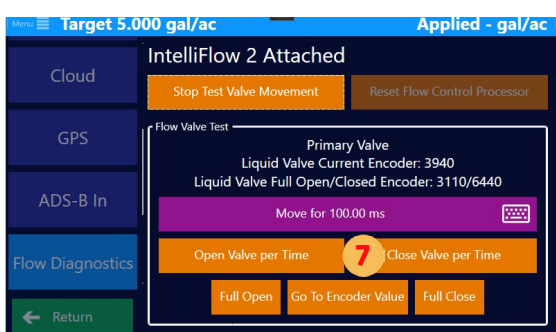
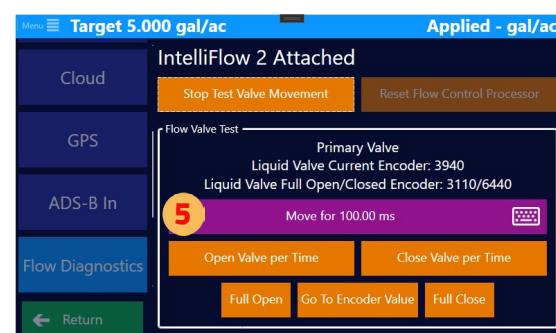
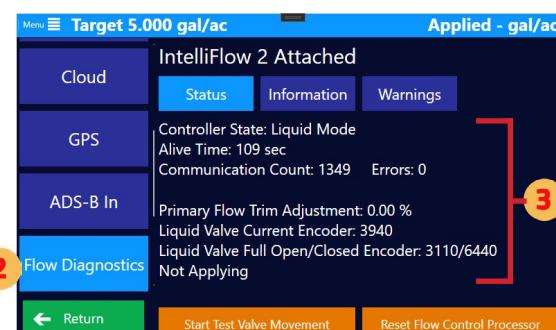
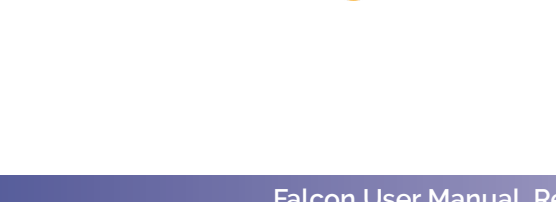
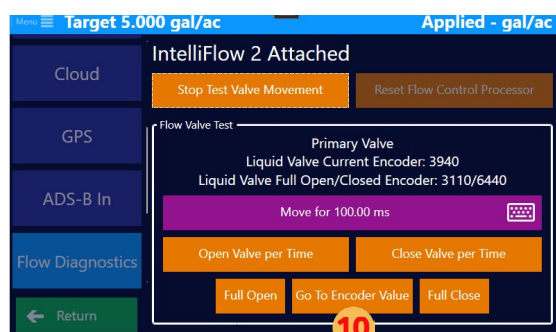
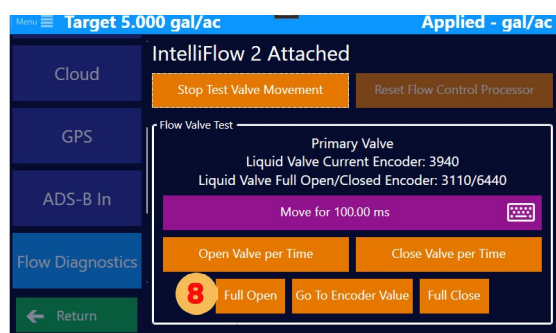
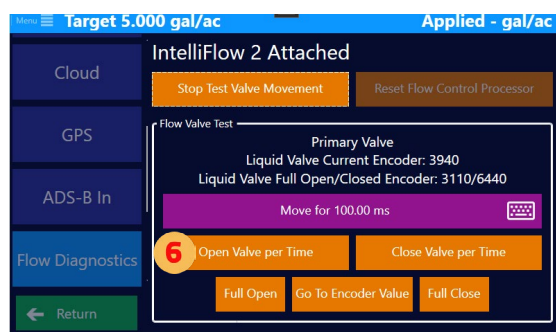
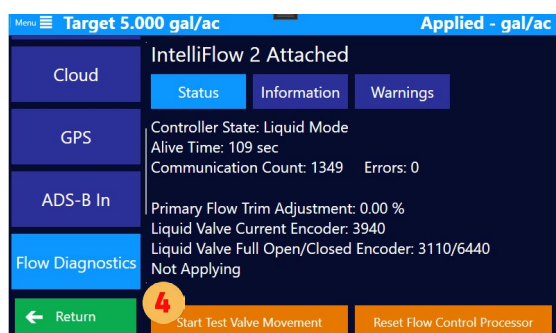
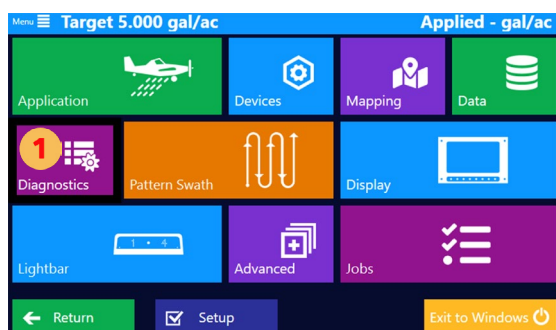
The buttons to reset 'Total Liquid Area', 'Total Liquid Volume', and 'Total Liquid Time' are located in the lower part of the moving map screen.

The connected controller, controllers state, Falcon dispersal sensor, and flow control dispersal are displayed.

- 12 Tap 'Devices'
- 13 Tap 'Liquid Accessories'
- 14 If auto dispersal, tap 'Primary Boom Relay'
- 15 Select flow input requirements
- 16 Tap toggle button to set pressure transducer on or off
- 17 Tap 'Liquid Controller'
- 18 Tap buttons on the screen to set desired preferences
- 19 Tap 'Liquid Advanced'
- 20 Tap the buttons on the screen to set desired preferences.

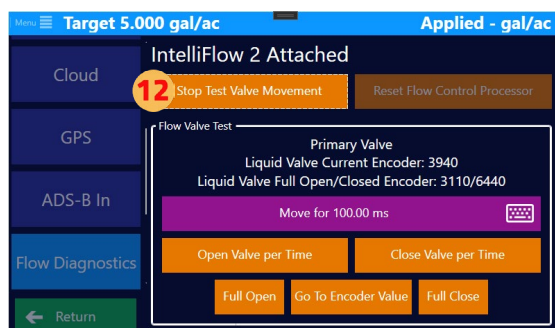


- 1 Tap the 'Diagnostics'
- 2 Scroll down to 'Flow Diagnostics.' Then, tap 'Flow Diagnostics'
- 3 The flow status information will appear on the screen.
- 4 Tap 'Start Test Valve Movement'
- 5 Tap 'Move' button to set movement amount
- 6 Tap 'Open Valve per Time' to open valve by set amount
- 7 Tap 'Close Valve per Time' to close valve by set amount
- 8 Tap 'Full Open' to fully open valve
- 9 Tap 'Full Close' to fully close valve
- 10 Tap 'Go To Encoder Value' to set encoder value
- 11 Enter desired encoder value. Then, tap 'Ok.'



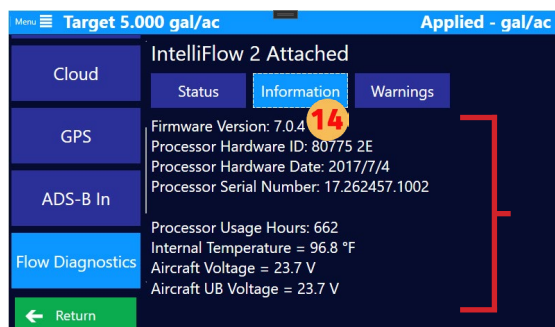


**12** The valve will go to value within tolerance and the flow diagnostics screen appears. Tap 'Stop Test Valve Movement' button to exit test menu.

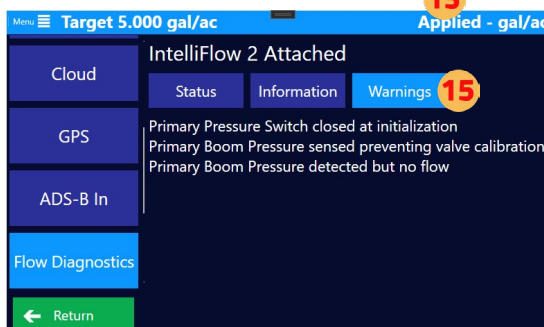
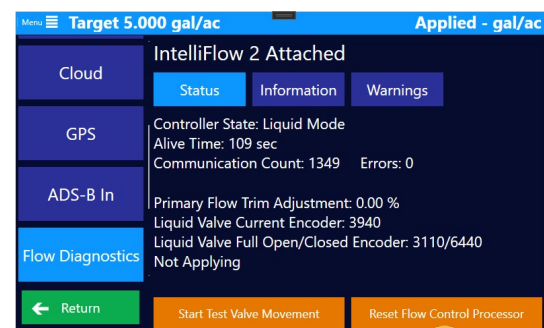


**13** Tap 'Reset Flow Control Processor' to reset flow controller

**14** The flow status information will appear on the screen. Tap 'Information.' The flow controller information is displayed.



**15** Tap 'Warnings' to display flow warnings.



# APPENDIX A: FALCON & FALCON PRO SIMULATOR

## Minimum system requirement for installing the Satloc Falcon & Falcon Pro Simulator:

- Windows 8 OS and above
- 2 G RAM memory
- 32 G Hard drive

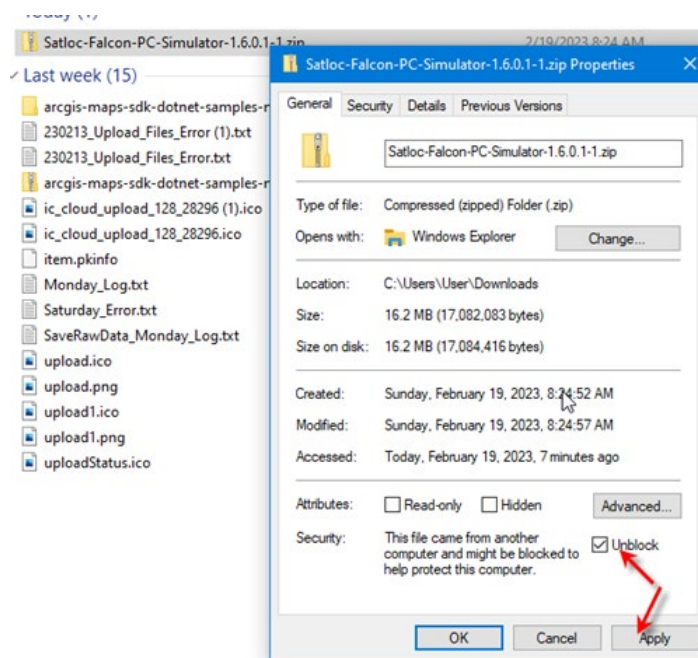
## How-To Download the Satloc Falcon & Falcon Pro Simulator:

- Visit the Resources page on Satloc's website - <https://satloc.com/resources/>
- Scroll down to the Falcon & Falcon Pro Simulator area
- When you click the "Click Here to Download the Simulator", the files will automatically download onto your computer.
- Open the zipped file and follow your computer prompts.

## Troubleshooting the Install for the Satloc Falcon & Falcon Pro Simulator:

There are a couple of scenarios that might cause installation difficulties. So, here are some troubleshooting steps.

1. Downloaded zip file needed to be unlocked prior to unzipping and installing.
  - a. Once the zip file is downloaded. Right-click on the file and select "Properties."
  - b. On the properties screen, uncheck the "Unblock" check box before extracting and installing.



2. The user's computer might be locked down to prevent downloading and installing software.
  - a. Suppose you work for a company that prevents you from automatically downloading and installing software. In that case, you must contact your company's Admin for privileges to download and install the software.

## Path to GPS Signal in the Simulator:

- Main Menu > Mapping > Map Setup > GPS Input > Internal Simulator
- Tap 'Return' button twice to go to Moving Map Screen



# **SATLOC<sup>®</sup>**

## **Technical Support**

To find an authorized dealer near you, visit [www.satloc.com](http://www.satloc.com).

**Satloc**

[support@satloc.com](mailto:support@satloc.com)

Call or Text 833-4-Satloc

(833) 472-8562

[www.satloc.com](http://www.satloc.com)

1206 Hatton Rd.

Wichita Falls, TX 76302

***THE NEXT GENERATION OF GUIDANCE IS HERE!***

***SATLOC.COM***