SMITHCO

START-UP GUIDE

For use with
Aeros 9040 v4.30 • DynaJet Flex • IC18 Sprayer v1.10

Table of Contents

Safety Information

TeeJet Technologies is not responsible for damage or physical harm caused by failure to adhere to the following safety requirements.

As the operator of the vehicle, you are responsible for its safe operation.

The Aeros 9040 in combination with any assisted/auto steering device is not designed to replace the vehicle's operator.

Do not leave a vehicle while the Aeros 9040 is engaged.

Be sure that the area around the vehicle is clear of people and obstacles before and during engagement.

The Aeros 9040 is designed to support and improve efficiency while working in the field. The driver has full responsibility for the quality and work related results.

Disengage or remove any assisted/auto steering device before operating on public roads.

#1 POWER

Turn DynaJet Turf console and Aeros field computer on.

Figure 1: DynaJet Turf Console

Power Switch

USB Port

Figure 2: Aeros 9040 Console

Home Button

Favorites Button

Power Button

USB Ports with Rubber Covers
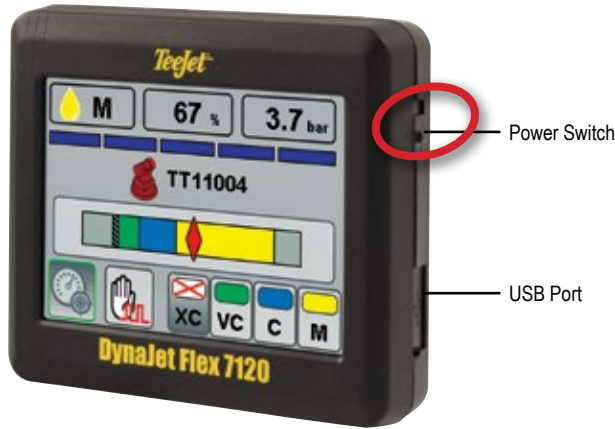
Power On/Off Button

On – Press the POWER button ⏻ to power on the console. Upon power up, the Aeros will begin its start up sequence.

Off – Press and briefly hold the POWER button ⏻ until a confirmation screen acknowledges shut down mode.

WARNING! Wait 10 seconds before restarting the console.

#2 CONFIGURATION

DynaJet Flex

DynaJet Flex target pressure should be preset and established before operating.
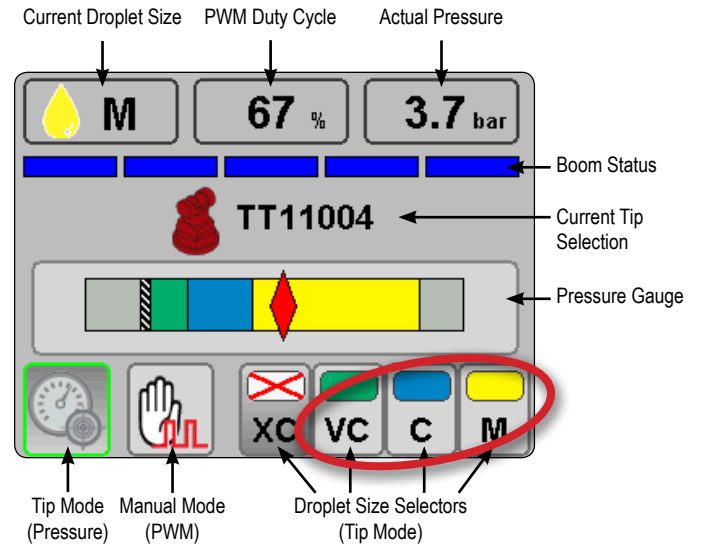
Figure 3: Work Screen - Standard Mode

Current Droplet Size   PWM Duty Cycle   Actual Pressure

Boom Status

Current Tip Selection

Pressure Gauge

Tip Mode (Pressure)   Manual Mode (PWM)   Droplet Size Selectors (Tip Mode)

Figure 4: Work Screen - High Flow Mode Single

Active Solenoid

High Flow Mode Single solenoid   Manual Adjustment (Manual Mode)

Figure 5: Work Screen - High Flow Mode Dual

Active Solenoids

High Flow Mode Dual solenoid   Manual Adjustment (Manual Mode)
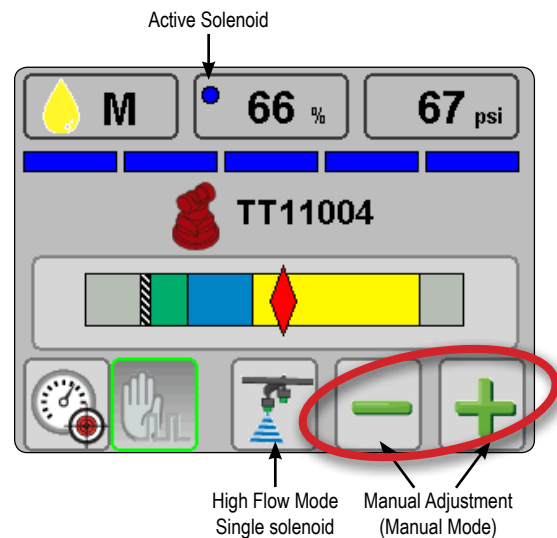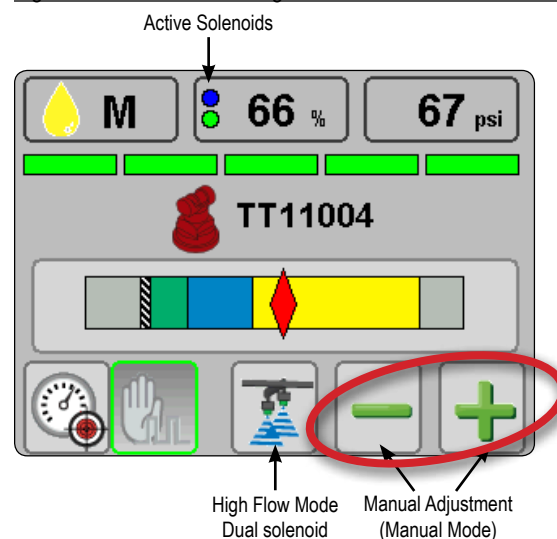
Aeros 9040 • DynaJet Flex • IC18 Sprayer

IC18 Sprayer on Aeros 9040

Once the power up sequence has completed, the Aeros 9040 Home screen will appear with the options to start a new job or continue an existing job. Wait for IC18 Sprayer Home screen to fully load as shown below.
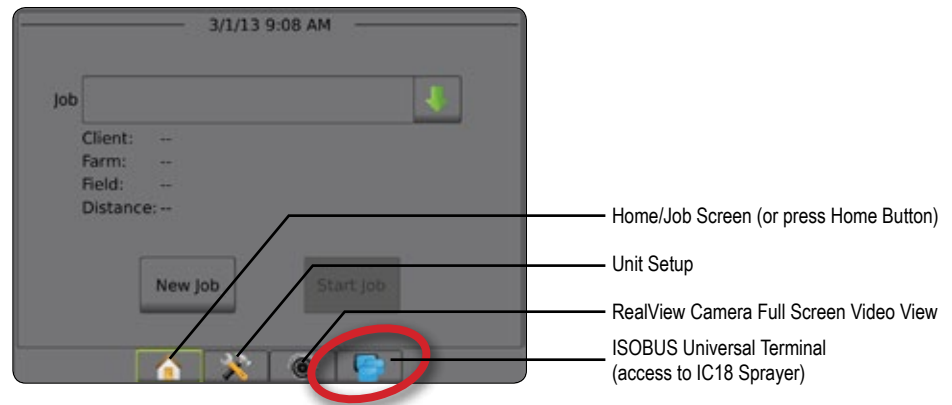
Figure 6: Aeros 9040 Home Screen

Home/Job Screen (or press Home Button)
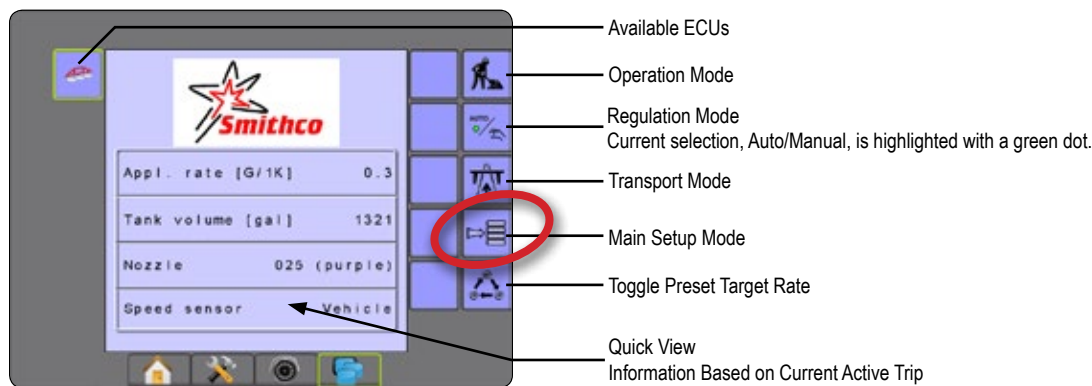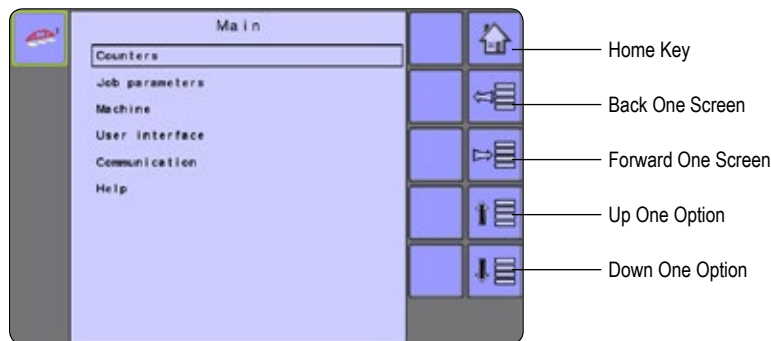
Unit Setup

RealView Camera Full Screen Video View

ISOBUS Universal Terminal
(access to IC18 Sprayer)

Figure 7: IC18 Sprayer Home Screen

Available ECUs

Operation Mode

Regulation Mode
Current selection, Auto/Manual, is highlighted with a green dot.

Transport Mode

Main Setup Mode

Toggle Preset Target Rate

Quick View
Information Based on Current Active Trip

Figure 8: IC18 Sprayer Main Setup Screen

Home Key

Back One Screen

Forward One Screen

Up One Option

Down One Option

The table below outlines the additional menus and directs you to the setup pages for further information.

MAIN SETUP MODE MENU STRUCTURE

Counters	Job Parameters	Machine	User Interface	Communication	Help
Trip		Filling			Diagnostic
Campaign		Operation	Section width		About
Total		Implement parameters	Nozzle preset setup		
Export Counters	Implement speed sensor	Calibrations	Regulation parameters		
	*Flow sensor	Alarm configurations			
	*Liquid pressure sensor	OEM			
	*Fill flow sensor				
	*Tank sensor				

NOTE: Select functions may not be visible due to OEM settings, available equipment or sensors.

The OEM setup menu is password protected and the settings in this menu are directly related to the fitted OEM equipment.
**Menu settings directly related to fitted OEM equipment.*

Preset Application Rates

Preset Application Rates define up to five (5) target rates of product being applied per hectare/acre. These settings will set the same for all active trips. Target rates set to "0.0" will not be in included in the TOGGLE PRESET TARGET RATE options ⊿ on the Operation Screen or Home Screen. If no changes are required, skip this step.

1. From the Main Setup Screen ▥, select JOB PARAMETERS.

Figure 9: IC18 Sprayer Job Parameters – Preset Application Rates
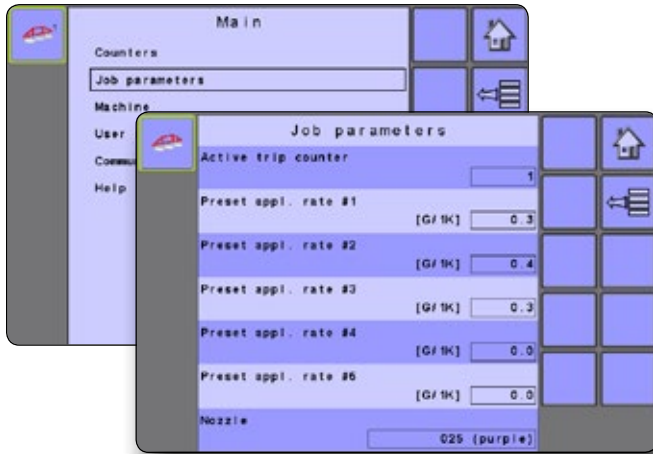
Toggle Preset Target Rates

Return to IC18 Sprayer Home Screen ⌂ or go to IC18 Sprayer Operation Screen ♠, and select rate using the TOGGLE PRESET TARGET RATES KEY ⊿.

Figure 10: IC18 Sprayer Toggle Preset Target Rates Key on Home Screen
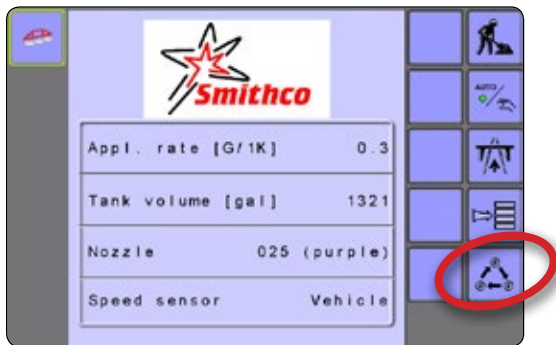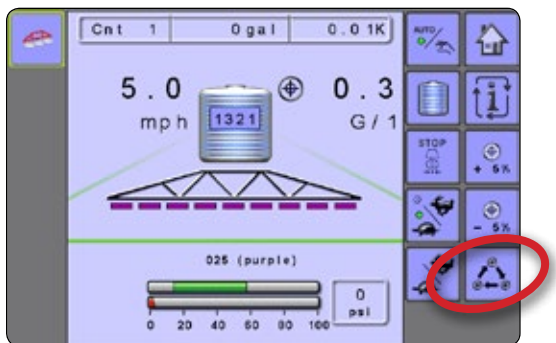

Figure 11: IC18 Sprayer Toggle Preset Target Rates Key on Operation Screen
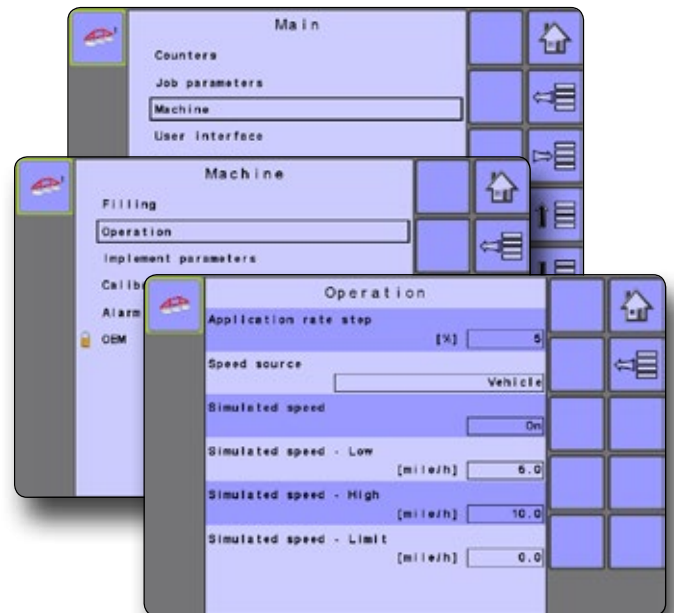

Simulated Speed

1. From the Main Setup Screen ▥, select MACHINE.

2. Select OPERATION.

3. Select from:

   ► Speed Source – selects whether to base the machine's speed on input from the Ground, Wheel, Vehicle, or Implement source

   ► Simulated Speed – establishes if Simulated Speed is available on Operation Screen

   ► Simulated Speed - Low – establishes the low speed to be used when using the Simulated Speed source

   ► Simulated Speed - High – establishes the high speed to be used when using the Simulated Speed source

   ► Simulated Speed - Limit – establishes the speed at which the simulated speed will no longer be used or available, and the established Speed Source will be active. This limit is in place because some speed sources are noisy when the vehicle is stationary. Simulated Speed should ONLY be used when the vehicle is stationary.

   ◄Below this value the user can enable Simulated Speed

   ◄Above this value the established Speed Source will be used

Figure 12: IC18 Sprayer Operation – Simulated Speed

Simulated Speed on Operation Screen

1. Return to IC18 Sprayer Operation Screen .
2. Press the SIMULATED SPEED ON/OFF KEY to turn the selected low or high simulated speed on or off.

   ◄ A green dot will appear when simulated speed is active   .
3. Press the SIMULATED SPEED HIGH/LOW KEY to toggle between the established low and high speeds, so the green dot is on LOW SIMULATED SPEED (turtle) or HIGH SIMULATED SPEED (rabbit) accordingly.

Figure 13: IC18 Sprayer Simulated Speed Keys on Operation Screen
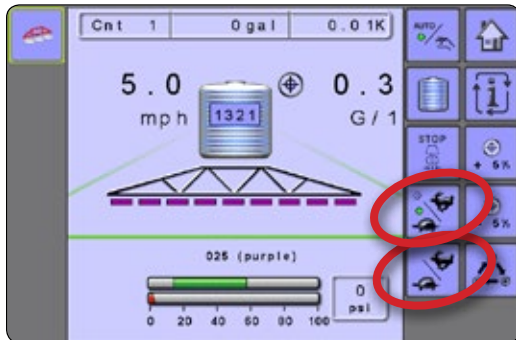
Aeros 9040 Mapping Location

Mapping Location establishes the location from which boundary and polygon mapping will take place.

1. Press CONFIGURATION side tab .
2. Press Guidance .
3. Select:

   ► Mapping Location – establishes the location from which mapping will take place. Up to five (5) user established entries can be setup.

   ► Guidance Width – used to enter the distance between the guidelines

   ► Guidance Sensitivity – sets the distance around the guideline that is perceived as zero error
4. Select user entry location from the Mapping Locations drop-down options.
5. Press MAPPING LOCATION NEXT PAGE arrow to set up the selected specific mapping location options.
6. Select:

   ► Location Name – used to enter the name of the mapping location for the current user entry selected

   ► In-line Offset Direction – used to select whether the mapping location is located in front of or behind the GNSS antenna as the vehicle moves in a forward direction

   ► In-line Offset Distance – used to define the in-line distance from the GNSS antenna to the mapping location

► Lateral Offset Direction – used to select the lateral direction from the center line of the machine to the mapping location while facing in the machine's forward direction

► Lateral Offset Distance – used to define the lateral distance from the center line of the machine to the mapping location

7. Press RETURN arrow to return to the Mapping and Guidance screen or CONFIGURATION side tab to return to the main Configuration screen.

Figure 14: Mapping and Guidance

#3 START NEW JOB OR CONTINUE JOB

New Job

1. On the Aeros 9040 Home screen 🏠, press New Job .
2. Press:
   ► Yes – to automatically generate a name
   ► No – to enter a name using the on screen keyboard

In advanced mode, more than one job will be available at any time.

Client information, farm information, field information, and prescription maps can only be inputted using Fieldware Link. A job name can only be edited using Fieldware Link.

Start Job

The Aeros 9040 is programmed with a field finder tool to assist the user in finding the job closest to the vehicle's location. With GNSS acquired, the job pick list will be updated every ten seconds. During this update, the list of jobs is sorted by distance and the closest two jobs are displayed on the top of the list. The remaining jobs are listed beneath these.

1. On the Home screen 🏠, press DOWN arrow ⬇ to access the list of jobs saved in the console.
2. Select the job name to be started/continued.
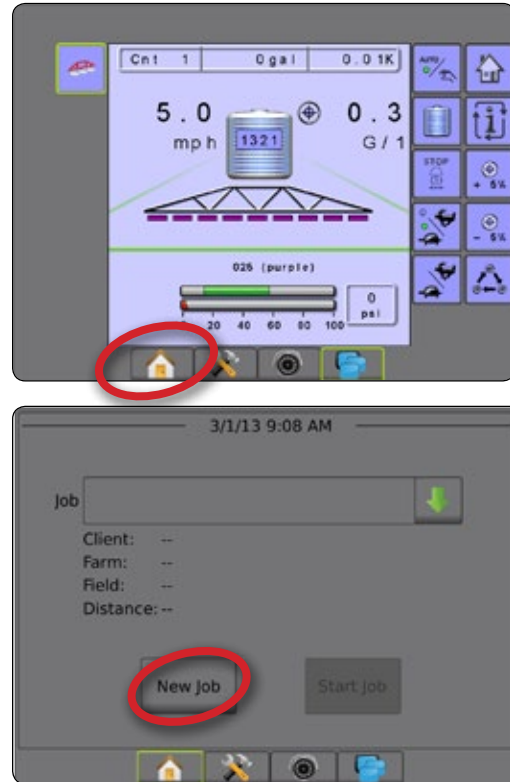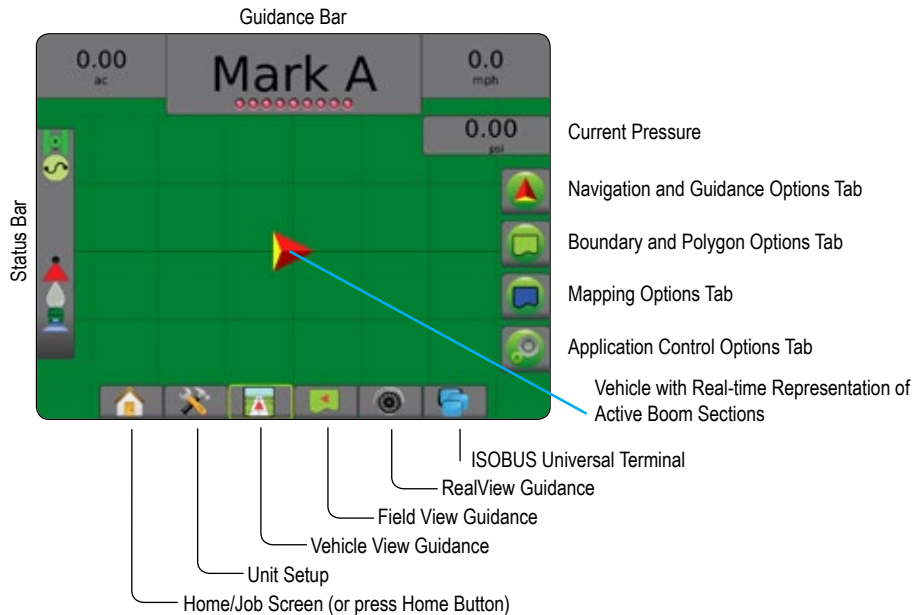3. Press Start Job .

Figure 15: New Job

Figure 16: Vehicle View Screen

Guidance Bar

Status Bar

Current Pressure

Navigation and Guidance Options Tab

Boundary and Polygon Options Tab

Mapping Options Tab

Application Control Options Tab

Vehicle with Real-time Representation of Active Boom Sections

ISOBUS Universal Terminal

RealView Guidance

Field View Guidance

Vehicle View Guidance

Unit Setup

Home/Job Screen (or press Home Button)

#4 BOUNDARIES AND POLYGONS

Boundaries

Application boundaries establish areas where product is and is not applied while using ASC or BoomPilot. Boundaries can be established in all guidance modes. 100 total exterior boundary and/or interior boundaries can be stored at one time.

An exterior boundary 🔲 established where application will be applied while using ASC or BoomPilot.

An interior boundary 🔲 established where application will NOT be applied while using ASC or BoomPilot.

Use DELETE BOUNDARY icon 🔲 to delete the last marked boundary (interior or exterior) from the current job. Press again to remove additional boundaries in order from last to first created.

When using the System Default Mapping Location, the exterior boundary will established by the outside of the boom and the interior boundary will be established by the inside of the boom.

Application is not required to map a boundary.

1. Drive to a desired location at the perimeter of the application area and orientate the vehicle in association to the established mapping location. See Aeros 9040 Mapping Location in this guide for details.

2. Press BOUNDARY AND POLYGON OPTIONS tab 🟩 to display boundary and polygon options.

3. Press MARK BOUNDARY icon 🔲 🔲.

4. Verify that the Mapping Location is correct.

   ◄ If the Mapping Location is not correct, press Cancel then go to Configuration-> Mapping and Guidance-> Mapping Location. See Aeros 9040 Mapping Location in this guide for details.

5. Travel the perimeter of the application area.

6. Select from:

   ► Pause Boundary 🔲 🔲 – pauses the mark boundary process.

   ► Resume Boundary 🔲 🔲 – resumes the mark boundary process.

   ► Cancel Boundary 🔲 🔲 – cancels mark boundary process.

   ► Finish Boundary 🔲 🔲 – finalizes current mark boundary process. Boundaries can also be automatically closed by traveling to within a swath width of the starting point.

   NOTE: If the minimum distance is not travelled (five times the swath width), an error message will pop-up.

Figure 17: Exterior Boundary
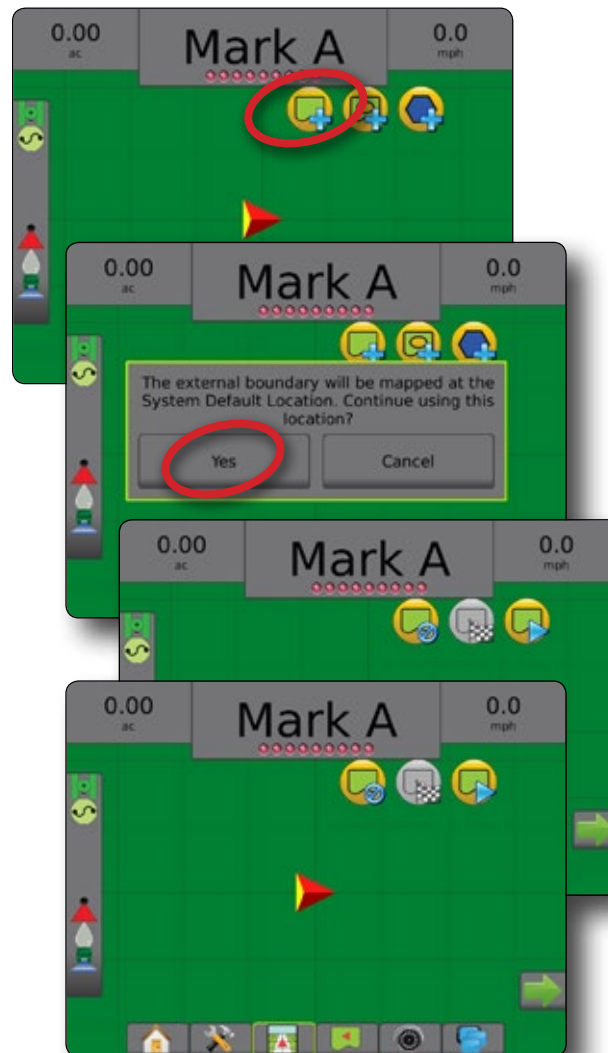
Polygons

Polygons establish mapping areas. Polygons can be established in all guidance modes. 100 polygons can be stored at one time.

Application is not required to map a polygon.

1. Drive to a desired location at the perimeter of the application area and orientate the vehicle for application so that the inside boom establishes the boundary.
2. Press BOUNDARY AND POLYGON OPTIONS tab 🗀 to display boundary and polygon options.
3. While the vehicle is in motion, press MARK POLYGON icon ⊕.
4. Travel the perimeter of the area.
5. Select from:
   ► Pause Polygon 🔵 – pauses the mark polygon process.
   ► Resume Polygon 🔵 – resumes the mark polygon process.
   ► Cancel Polygon 🔵 – cancels mark polygon process.
   ► Finish Polygon 🔵 – finalizes current mark polygon process. Polygons can also be automatically closed by traveling to within a swath width of the starting point.

   ◄ Follow the prompts to name and save the polygon.

Figure 18: Polygon
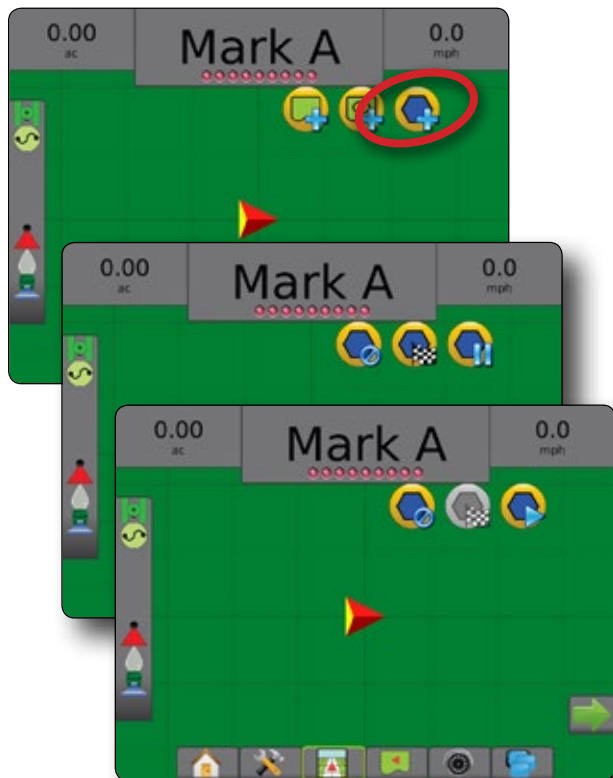
#5 SELECT GUIDANCE MODE

1. Press NAVIGATION AND GUIDANCE OPTIONS tab 🔺 to display navigation options.
2. Press GUIDANCE MODE icon 🔄.
3. Select CURVED AB GUIDANCE 〰️ from:
   ► No Guidance 🚫
   ► Straight AB Guidance ➤
   ► Curved AB Guidance 〰️
   ► Circle Pivot Guidance ◎
   ► Last Pass Guidance 🔢
   ► NextRow Guidance 🔲
   ► Adaptive Curve Guidance 〰️

   Guidance options may not be available depending on assisted/automatic steering system installed.

Figure 19: Choose Curved AB
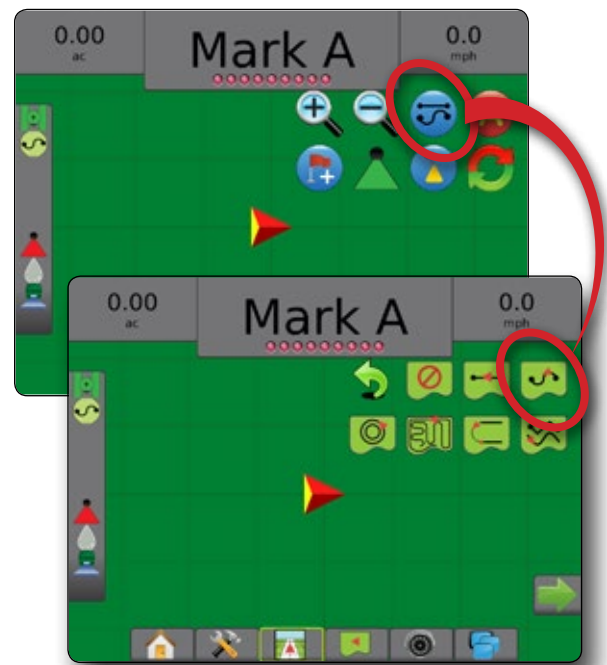
#6 MARK AB GUIDELINE

Determine the center of the fairway or the longest arch. Operator can be spraying this pass.

1. Drive to the desired location of Point A ⬡.
2. Press NAVIGATION AND GUIDANCE OPTIONS tab 🔺 to display navigation options.
3. **While the vehicle is in motion,** press MARK A icon Ⓐ.
4. Drive to the desired location of Point B ⬡.
5. Press MARK B icon Ⓑ to establish the AB line.
6. "Would you like to name this guideline?"

   Press:

   ► Yes – to enter a name and save the guideline in the console
   ► No – to automatically generate a name and save the guideline in the console

The console will begin providing navigation information.
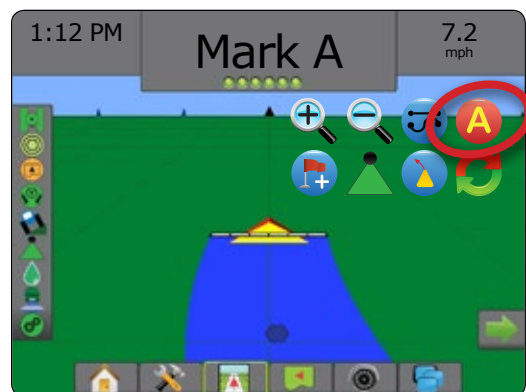
Figure 20: Mark A Point

Figure 21: Mark B Point

#7 BEGIN SPRAYING

To turn Automatic Section Control (ASC) or BoomPilot on:

1. Press NAVIGATION AND GUIDANCE OPTIONS tab 🔺 to display navigation options.
2. Press the BOOMPILOT icon 🔺.
3. All boom section switches in the ON position
4. Turn master switch ON (switchbox) to begin spraying.

Figure 22: BoomPilot Status Button

Figure 23: BoomPilot on Status Bar

BoomPilot Status	
🔺	Green = automatic. Aeros + GPS is controlling the sections based on treated area
🔺	Red = off/manual. Operator is controlling switch manually

NOTES: Spray master switch on floor overrides master switch on switchbox. Ensure it is left in the ON position before application. Use switchbox master switch during application if that is desired.

Step #4 outlines the boundary. If desired, operator could also spray during boundary creation.

Once AB line is established, AutoSteer is engaged with button on the top of the weather protecting orange case

Once BoomPilot is active the system will not spray outside an established exterior boundary. Once an exterior boundary is created and before spraying a new segment of the course a new exterior boundary must be created.

Toggle from Guidance to Rate Control

Figure 24: Toggle from Guidance to Rate Control
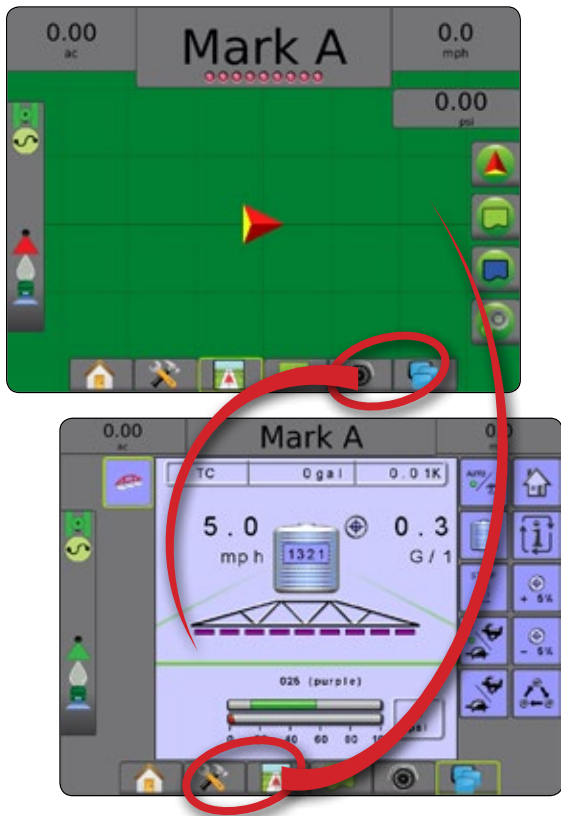
CLOSE JOB

To close a job:

1. On the Home screen 🏠, press **Close Job**.

To create a report of the job when closing a job:

1. Insert a USB drive into the USB port of the console.

2. On the Home screen 🏠, press **Close Job**.

3. Select:

   ► Yes – to create a report of the last job

   ► No – to return to the Home screen without saving

Figure 25: Close Job

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