



VEHICLE VIEW

Current Speed/Swath Number: 14.6 mph, Navigation Activity: Mark A, Accumulated Area: 0.53 acres

Guidance Mode: Mark A/B, Mark Boundary, Finish Boundary, Nudge A/B Line, Cancel Mark A, Cancel Boundary, Home/Menu Options or press Home Button

Horizon Compass, Vehicle View/Perspective (Zoom In/Out) or press Zoom In/Out Buttons, Painted Coverage Area (Blue = one application, Red = two or more applications), BoomPilot

Navigation Guidelines, Status Bar, Vehicle with Real-time Representation of Active Boom Sections (White = active boom section, Hollow = inactive boom section)

Vehicle View Options

| Icon | Description |
|------|---|
| | Guidance Mode. Press to select a guidance mode. Modes include Straight A-B, Curved A-B, Circle Pivot and Last Pass or No Guidance Mode. |
| | Mark A. Press to mark the first point of the initial guideline. |
| | Mark B. Press to mark the end point of the initial guideline. Grayed = minimum distance has not been traveled. |
| | Cancel Mark A. Cancels the Mark A process. Reverts to previous A-B guideline (when established). |
| | A+ Nudge. Shifts the existing guideline to the vehicle's current position. |
| | Mark Boundary. During Last Pass Guidance, establishes application area and determines the no apply zone. Boundary is established to the outside of an applied pass. Grayed = GPS is unavailable |
| | Finish Boundary. Finalizes boundary process. Boundaries can also be closed by travelling to within a swath width of the starting point. Grayed = minimum distance has not been traveled. |
| | Cancel Boundary. Cancels the new map boundary process. Reverts to previous boundary (when established). |
| | Zoom In/Out. Icons or buttons adjust the vehicle's view or perspective to the horizon from vehicle view to bird's eye view. |
| | BoomPilot. Selects BoomPilot mode. Grayed = GPS is unavailable |



REALVIEW GUIDANCE

Current Speed/Swath Number: -1 Swath, Navigation Activity: 5.8, Accumulated Area: 0.53 acres

Full Screen, Guidance Over Video, Steering Angle, Home/Menu Options or press Home Button

Camera Select, Split Camera View, Guidance Adjustment, Navigation Guidelines

Status Bar

RealView Guidance Options

| Icon | Description |
|------|--|
| | Full Screen. Removes the icons and status bars from the screen. Guidance Over Video and Steering Angle will still be visible. |
| | Guidance Over Video. Places three-dimensional guidelines over the video feed for navigational assistance. |
| | Steering Angle. Displays the direction in which the steering wheel needs to be adjusted. |
| | Video Camera Select. Selects one of up to eight camera views if a Video Selection Module (VSM) is attached. |
| | Split Camera View. Selects one of two sets of four camera inputs (A/B/C/D or E/F/G/H) to divide the screen into four separate video feeds. |
| | Up & Down Icons. Used to adjust the guidance lines to match the camera's view. Zoom In/Out Buttons will not adjust the guidance lines. |

Status Bar Icons

| Icon | Description |
|------|--|
| | FieldPilot Status. Icon = engaged. No icon = disengaged. |
| | Guidance Mode. Straight A-B Guidance. Provides straight line guidance based on A and B reference points. Curved A-B Guidance. Provides curved guidance based on a reference (A-B) line. Circle Pivot Guidance. Provides guidance around a central location that radiates inward or outward. Last Pass Guidance. The console will detect the nearest adjacent applied swath and establish guidance based on it. No Guidance. Turns off guidance. No Icon will be displayed. |
| | BoomPilot Status. Red = Off/Manual, Green = Automatic, Yellow = All On, No icon = Single Boom Section (no SmartCable or SDM installed on system). |
| | Bounded Area Status. Outside Boundary = Currently traveling outside bounded area. Inside Boundary = Currently traveling inside bounded area. No icon = No boundary established |
| | GPS Status. Red = no GPS, Yellow = GPS only, Green = DGPS, WAAS/RTK, Peach = Glide/ClearPath |



FIELD VIEW

Current Speed/Swath Number: 14.6 kph, Navigation Activity: 0.0, Accumulated Area: 0.21 ha

Mark Boundary, Finish Boundary, Mark Point, Return to Point, Cancel Boundary, Cancel Point, Home/Menu Options or press Home Button

Painted Coverage Area (Blue = one application, Red = two or more applications), Field View (Zoom In/Out) or can use Zoom In/Out Buttons, World View, Pan Mode

Navigation Guidelines, Status Bar, Vehicle Representation

Field View Options

| Icon | Description |
|------|--|
| | Mark Boundary. Establishes application area and determines the no apply zone. Boundary is established to the outside of an applied pass. Grayed = GPS is unavailable |
| | Finish Boundary. Finalizes boundary process. Boundaries can also be closed by travelling to within a swath width of the starting point. Grayed = minimum distance has not been traveled. |
| | Cancel Boundary. Cancels the new map boundary process. Reverts to previous boundary (when established). |
| | Mark Point. Establishes a point at the vehicle location. Grayed = GPS is unavailable. |
| | Return to Point. Provides distance back to an established point. (Switch to Vehicle View to provide navigation back to an established point.) |
| | Cancel Point. Deletes the Marked Point. |
| | Zoom In. Icon or button decreases the area displayed on the screen. |
| | Zoom Out. Icon or button increases the area displayed on the screen. |
| | World View. Extends screen view to the widest area available. |
| | Pan. Allows operator to focus on specific map areas without moving the vehicle. Arrows on screen move the view (down, left, right, up) in the corresponding direction. |
| | Cancel Pan. Cancels the focal area and returns to normal viewing. |

Set First

Select functions must be setup before other functions such as Guidance, BoomPilot and FieldPilot can be activated.

- These items must be completed for Guidance to function.
- These items must be completed for BoomPilot to function.
- These items must be completed for FieldPilot to function.

MATRIX™

REFERENCE GUIDE



A Subsidiary of Spraying Systems Co.®



MENU OPTIONS

| Icon | Description |
|------|---|
| | Home – Displays Menu Options including Unit Setup, Vehicle View, Field View, RealView Guidance, Job View and Boom Monitoring. |
| | Unit Setup – Allows System, BoomPilot/Single Boom, Vehicle, Tilt Correction and FieldPilot setups. |
| | System Setup. Sets options for lightbar, culture (units, language & time zone), GPS, console (volume, display brightness, touch screen calibration, screenshot & about/save) and video cameras. |
| | BoomPilot/Single Boom Setup. Sets swath overlap, delay on/off, number of boom sections and associated boom section widths. |
| | Vehicle Setup. Sets vehicle type, antenna height, boom direction and boom distance from antenna. |
| | Tilt Gyro Module Setup. Sets on/off and calibrates tilt correction. |
| | FieldPilot Setup. Sets autosteer on/off, options for valve setup (frequency and minimum & maximum duty cycles), valve testing and FieldPilot configuration (coarse steering adjustment, fine steering adjustment, deadband & look ahead). |
| | Vehicle View – Allows a computer-generated image of the vehicle position displayed in the application area. Access options for guidance modes, boundary areas and BoomPilot. |
| | Field View – Allows a computer-generated image of the vehicle position and application area from an aerial perspective. Access options for boundary areas and marked point. Enter World View and Pan modes. |
| | RealView Guidance – Allows a single live video input or a set of four live inputs to be displayed instead of a computer-generated image. Enter guidance over video and steering angle modes. |
| | Job View – Allows saving of information to a USB drive or clearing of information from unit. |
| | Boom Monitoring – Allows a computer generated view of active/inactive boom sections. Enable/disable BoomPilot. |



JOB VIEW

| Icon | Description |
|------|---|
| | Job Information. Gives options to clear all current job information, bounded areas information or area counters. Press the trash can to delete selected information. |
| | Save Information. Saves all data including PDF (Google Earth) and SHP (ESRI) files or each individual type to USB drive. |



UNIT SETUP



System Setup

| Icon | Description |
|------|---|
| | Lightbar Setup – LED Spacing, Display Mode and LED Brightness. |
| | LED Spacing. Sets the distance illustrated by the illuminated LEDs. |
| | Display Mode. Determines whether the lightbar represents the swath position or vehicle position. |
| | LED Brightness. Adjusts brightness of the lightbar LEDs. |
| | Culture Setup – Units, Language and Time Zone. |
| | Units. Defines the system measurements. |
| | Language. Defines the system language. |
| | Time Zone. Establishes the local time zone. |
| | GPS Setup – GPS Type, GPS Port and GPS Status Information |
| | GPS Type. Customizes system to accept GPS, DGPS, or either type of signal. |
| | GPS Port. Sets COM port transmission to Internal or External. |
| | GPS Status. Displays information regarding data rates, number of satellites in view, and satellite quality and ID. |
| | Console Setup – Volume, LCD Brightness, Touch Screen Calibration, Screenshot and About/Save. |
| | Volume. Adjusts volume level of audio speaker. |
| | LCD Brightness. Adjusts brightness of the console display. |
| | Touch Screen Calibration. Used to initiate a touch screen calibration. |
| | Screenshot. Allows screen images to be saved to a USB drive. |
| | About. Displays information regarding system software as well as the software versions of modules connected to the CAN bus. |
| | Save. Saves console setup data to a USB drive. |
| | Video Setup. Used to configure up to 8 cameras with the use of a Video Selection Module. Gray = VSM unavailable. |
| | Cameras. Configure cameras to normal, reverse, upside down or reverse upside down. |



Tilt Gyro Module Setup

| Icon | Description |
|------|--|
| | Tilt Correction On/Off. Turns tilt correction on or off. |
| | Level Tilt Positions. Calibrates Tilt Correction. |



BoomPilot/Single Boom Setup

| Icon | Description |
|------|--|
| | Overlap. Determines the amount of overlap allowed when the boom sections are turned on and off using BoomPilot. 0% Overlap |
| | 50% Overlap |
| | 100% Overlap |
| | Delay Off/On. Functions as a look ahead for timing the boom section valves to switch off or on when entering or exiting an area that has already been applied. |
| | Number of Boom Sections. Sets the number of boom sections (1 to 15 depending on SmartCable or SDM). |
| | Boom Section Width(s). Designates the width for the entire swath or individual boom sections (depending on SmartCable or SDM availability on the system). |



Vehicle Setup

| Icon | Description |
|------|---|
| | Vehicle Type. Selects type of vehicle steering that most closely represents your vehicle. |
| | Antenna Height. Sets the height of the GPS antenna from the ground. |
| | Direction to Boom. Sets if the boom is located behind or in front of the GPS antenna. |
| | Boom Offset Distance. Defines the distance from GPS Antenna to the boom. |



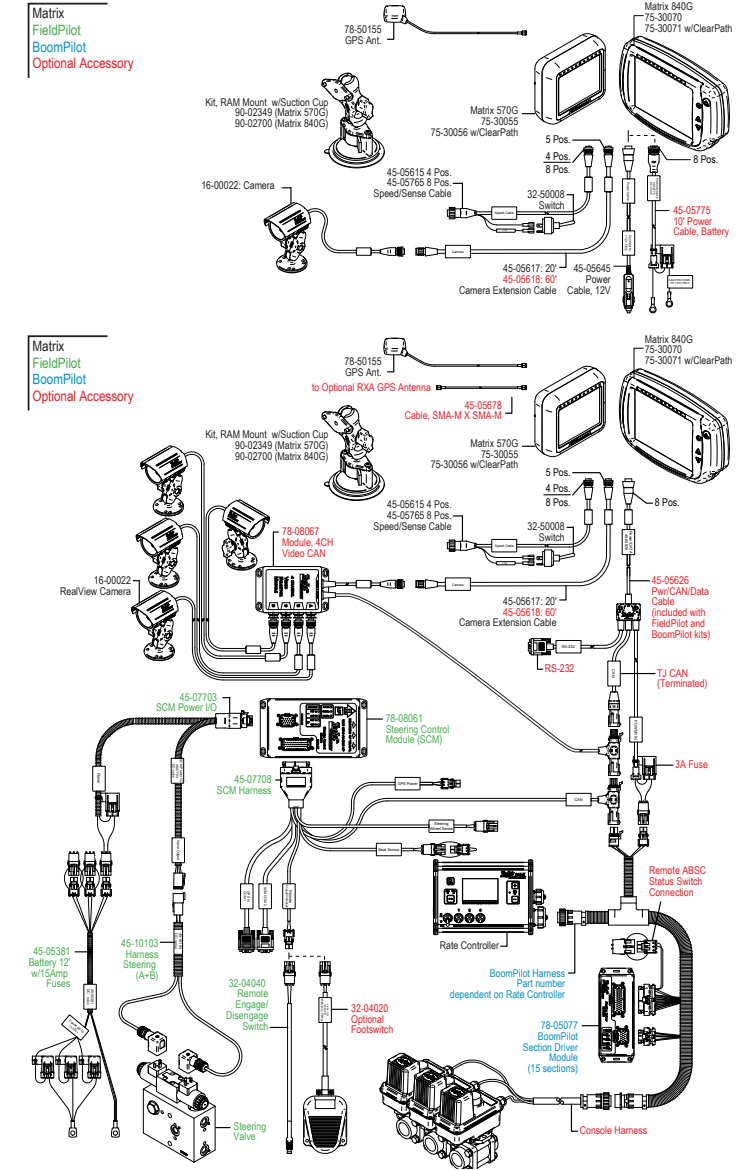
FieldPilot Setup

| Icon | Description |
|------|---|
| | Autosteer. Sets FieldPilot to on or off. |
| | Valve Setup – Valve Frequency, Minimum Duty Cycle Left/Right and Maximum Duty Cycle. |
| | Valve Frequency. Used to drive the steering valve. |
| | Minimum Duty Cycle. Sets minimum amount of drive required to begin steering vehicle left/right. |
| | Maximum Duty Cycle. Sets the maximum speed that the wheels will steer from left to right/right to left (lock to lock). |
| | Valve Test Left/Right. Verifies steering is directed properly. Used to fine tune oil flow to calibrate wheel timing. |
| | Configure FieldPilot – Coarse Steering Adjustment, Fine Steering Adjustment, Deadband and Look Ahead. |
| | Coarse Steering Adjustment. Adjusts how aggressively the vehicle maintains the guideline in Straight A-B Guidance mode. |
| | Fine Steering Adjustment. Adjusts how aggressively the vehicle maintains the guideline in Curved A-B Guidance mode. |
| | Deadband. Adjusts steering if it is too choppy/responsive or vehicle remains consistently off the guideline. |
| | Look Ahead. Used during Straight A-B Guidance mode to adjust the vehicle's approach to the guideline. |

General Controls

| Icon | Description |
|------|--|
| | Home Button. Access Home Menu options including Unit Setup, Vehicle View, Field View, RealView Guidance, Job View and Boom Monitoring. |
| | Zoom In/Out Buttons. Adjust zoom settings in Vehicle View and Field View. |
| | Plus & Minus Icons. Used to increase or decrease a setting. |
| | Red = Page Left or Start Test Left. Green = Page Right or Start Test Right. |
| | Up & Down Icons. Used to change a setting or increase or decrease the setting. |
| | Stop Light. Green Light = Start Testing, Red Light = Stop Testing, Grayed = Testing off. |
| | Finish and OK. Both are used to complete a task. |

SYSTEM DIAGRAMS



Up to 8 cameras can be installed using 78-08068: Module, 8 Channel Video CAN.