

MATRIX® PRO

QUICK START-UP GUIDE



MATRIX® PRO 840G

MATRIX® PRO 570G



TeeJet Technologies
1801 Business Park Drive
Springfield, Illinois 62703 USA
Tel: (217) 747-0235 • Fax: (217) 753-8426

For a complete English User Manual, go to www.teejet.com
or order part number 98-05238

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TeeJet®
TECHNOLOGIES

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#1 Turn Power On

Press the POWER BUTTON to power on the console.

Upon power up, the Matrix Pro will begin its Start Up Sequence.

To turn the power off, press and briefly hold the power button until a confirmation screen acknowledges shut down mode.

WARNING! Wait 30 seconds before restarting the console after powering off.



#2 Start New Job or Continue Job

Once the power up sequence has completed, the Home screen will appear with the option to start a new job or continue an existing job.

To start a new job press **New Job**.

To continue the existing job press **Continue**.

Figure 1-1: MUST HAVE GPS BEFORE STARTING JOB

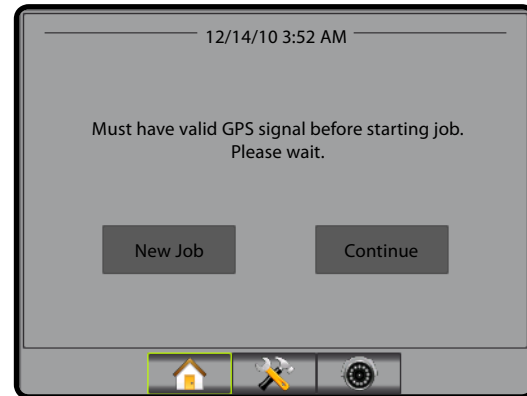
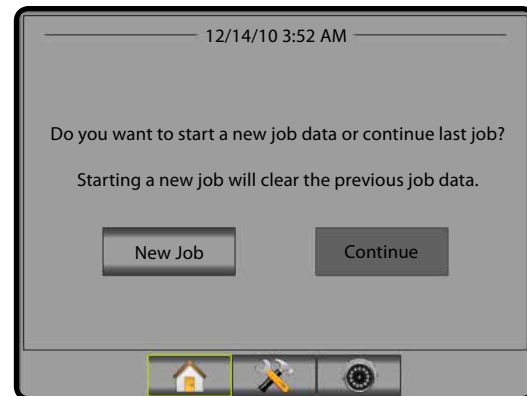


Figure 1-2: Home Screen with Acquired GPS

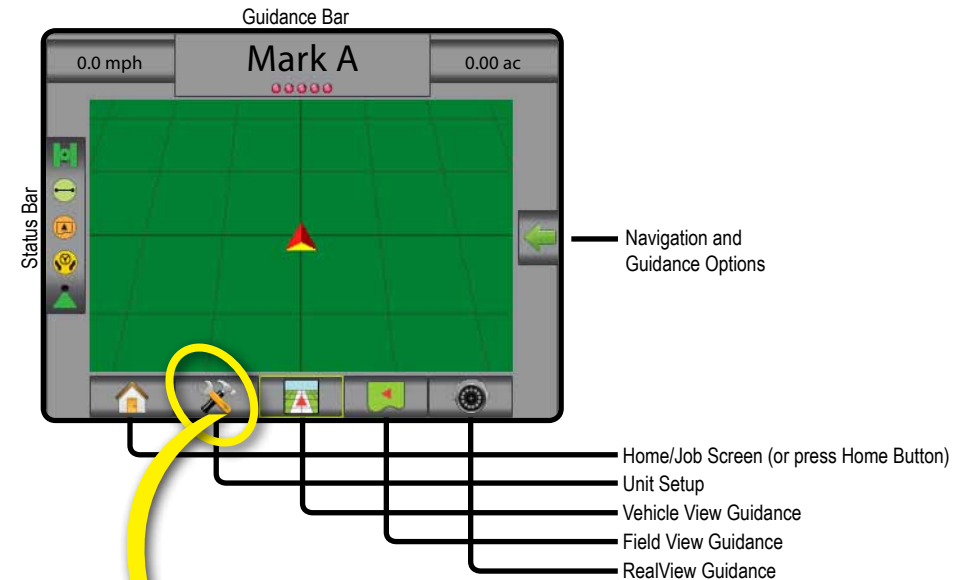


RealView Camera Full Screen Video View

RealView Camera Full Screen Video View

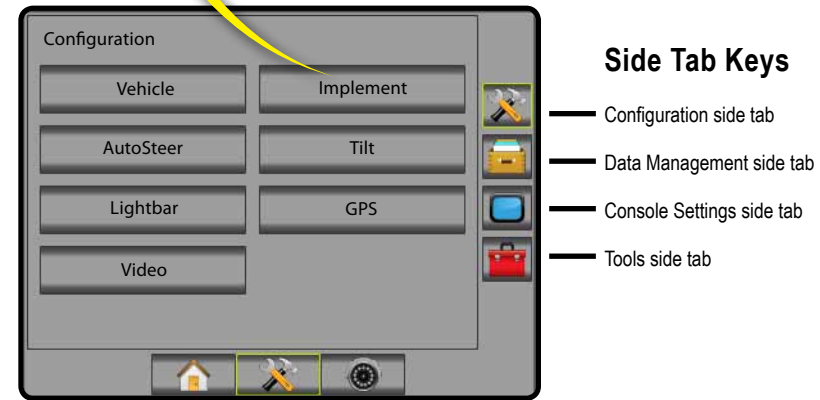
View video feed(s) and setup cameras without GPS available. Options for Realview Guidance are not available on this screen.

#3 Guidance Screen



#4 Go To Unit Setup

The Configuration options will be displayed first. Data Management, Console Setting and Tools can be accessed through the side tab keys.



Side Tab Keys

- Configuration side tab
- Data Management side tab
- Console Settings side tab
- Tools side tab

Light or Dark Console Screen

The console is available in two color schemes.

To change to "dark", press CONSOLE side tab . Press **Display**. Press Color Scheme DOWN arrow and select between "Dark" or "Light" color mode.



#5 Cultural Setup







1. Press CONSOLE side tab .
2. Press **Cultural**.
3. Select from:
 - ▶ Units  – defines the system measurements
 - ▶ Language  – defines the system language
 - ▶ Time Zone  – establishes the local time zone.
4. Press RETURN arrow  or CONSOLE side tab  to return to the main Console screen.

Figure 1-3: Cultural Options



#6 Vehicle Setup








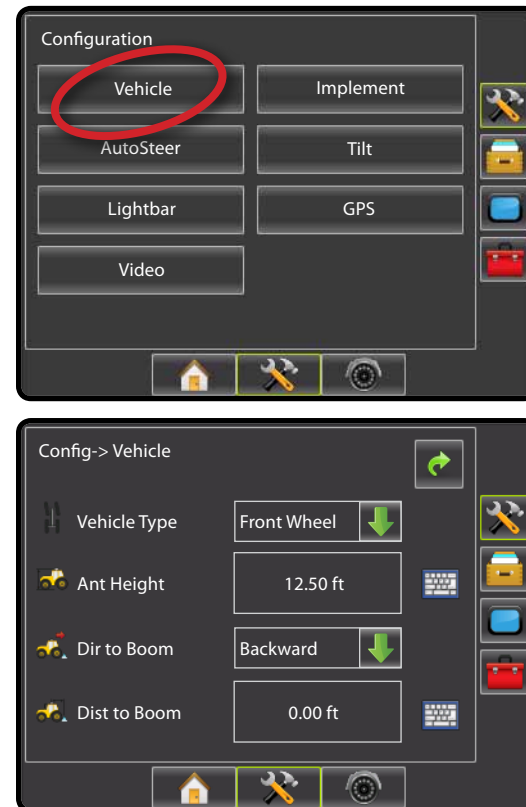









1. Press CONFIGURATION side tab .
2. Press **Vehicle**.
3. Select from:
 - ▶ Vehicle Type  – selects the type of vehicle that most closely represents your vehicle
 - ▶ Antenna Height  – sets the height of the antenna from the ground
 - ▶ Direction to Boom  – sets whether the boom is located behind or in front of the GPS antenna
 - ▶ Distance to Boom  – defines the distance from the GPS antenna to the boom
4. Press RETURN arrow  or CONFIGURATION side tab  to return to the main Configuration screen.



Figure 1-4: Vehicle Setup Options



#7 Implement Setup

When a SmartCable or Section Driver Module (SDM) is not present only a single boom setup is available. Configurations for Overlap, Delay On and Delay Off will not be available, and Number of Sections will be set to one.

1. Press CONFIGURATION side tab .
2. Press **Implement**.
3. Select from:
 - ▶ Number of Boom Sections  – establishes the number of boom sections
 - ▶ Guidance Width  – establishes the width between guidelines
 - ▶ Spray Width  – establishes the width of each boom section for a total spray width
 - ▶ Overlap  – determines the amount of overlap allowed
 - ▶ Delay On  – establishes the timing for the boom section valves to switch on
 - ▶ Delay Off  – establishes the timing for the boom section valves to switch off
4. Press RETURN arrow  or CONFIGURATION side tab  to return to the main Configuration screen.

NOTE: Press  or  to switch between Implement setup screens.

#8 AutoSteer Setup

When a Steering Control Module (SCM) is present, AutoSteer options will be available. For detailed setup instructions, refer to your specific FieldPilot or auto steering installation manual or visit www.teejet.com for the full Matrix Pro User Manual, part number 98-05238.

NOTE: An update of your SCM software may also be required when updating an existing Matrix console to Matrix Pro.

SCM Software Version Required

SCM Software Version	Matrix 1.x	Matrix Pro 2.x
1.03	•	
1.04	•	
1.05	•	
10.0		•

Figure 1-5: Implement Setup Options



#9 Go To Guidance Screen

Figure 1-15: Vehicle View Guidance



Figure 1-16: Field View Guidance



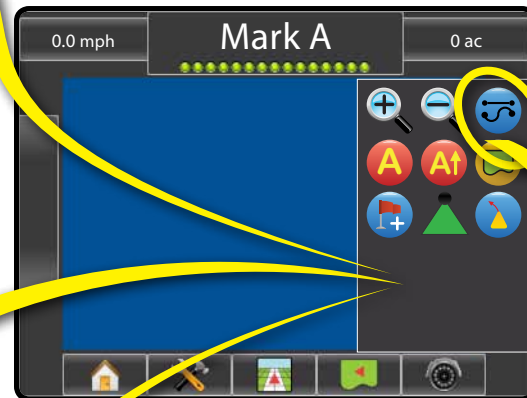
Figure 1-17: RealView Guidance



#10 Choose a Guidance Mode

1. Press NAVIGATION & GUIDANCE OPTIONS icon to display navigation options.
2. Press GUIDANCE MODE icon .
3. Select from:
 - ▶ Straight AB
 - ▶ Curved AB
 - ▶ Circle Pivot
 - ▶ Last Pass
 - ▶ NextRow

Figure 1-18: Choose a Guidance Mode



#11 Mark A and B Points

To establish a AB guideline:

1. Drive to the desired location of Point A .
2. Press NAVIGATION & GUIDANCE OPTIONS icon 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.

NOTE: The MARK B icon is not available for selection (grayed out) until the minimum distance is travelled.

Use CANCEL MARK icon to cancel the Mark A command and revert to the previous AB guideline (when established).

To establish additional guidelines, follow the same steps as the initial guideline.

Figure 1-19: Mark A Point



Figure 1-20: Mark B Point

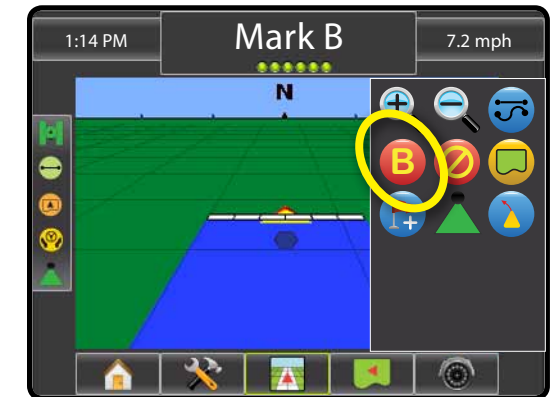


Figure 1-21: Save Guideline

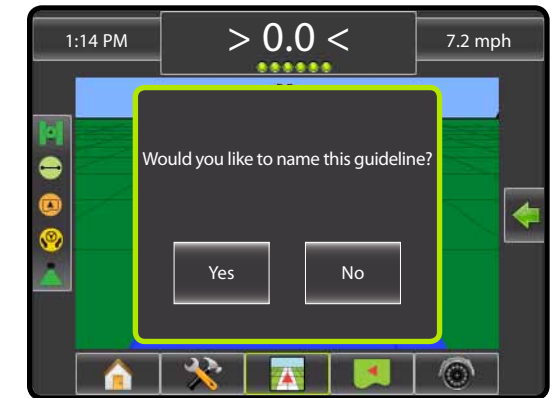
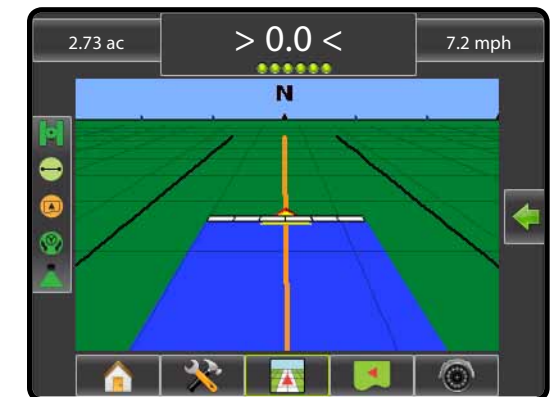
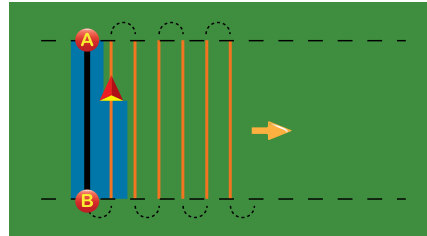


Figure 1-22: Follow Guidance



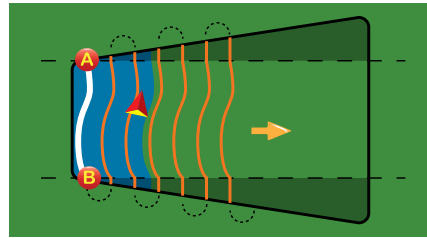
Straight AB Guidance

Straight AB guidance provides straight line guidance based on A and B reference points. The original A and B point are used to calculate all other parallel guidelines.



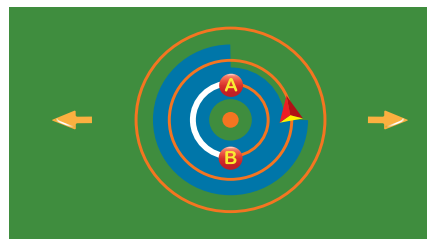
Curved AB Guidance

Curved AB Guidance provides guidance along curved lines based on an initial AB reference line. This initial baseline is used to calculate all other guidelines.



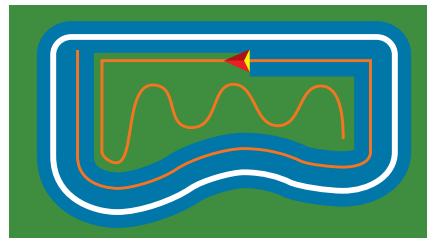
Circle Pivot Guidance

Circle Pivot guidance provides guidance around a central location that radiates inward or outward. It is used for product application in a center pivot field while being guided along a circular guideline that matches a center pivot irrigation system radius.



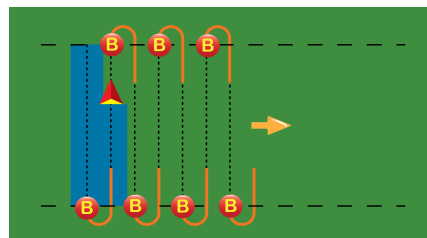
Last Pass Guidance

Last Pass Guidance offers true last pass navigation. The console will automatically detect the nearest "applied" guideline and establish adjacent pass based on that guideline.



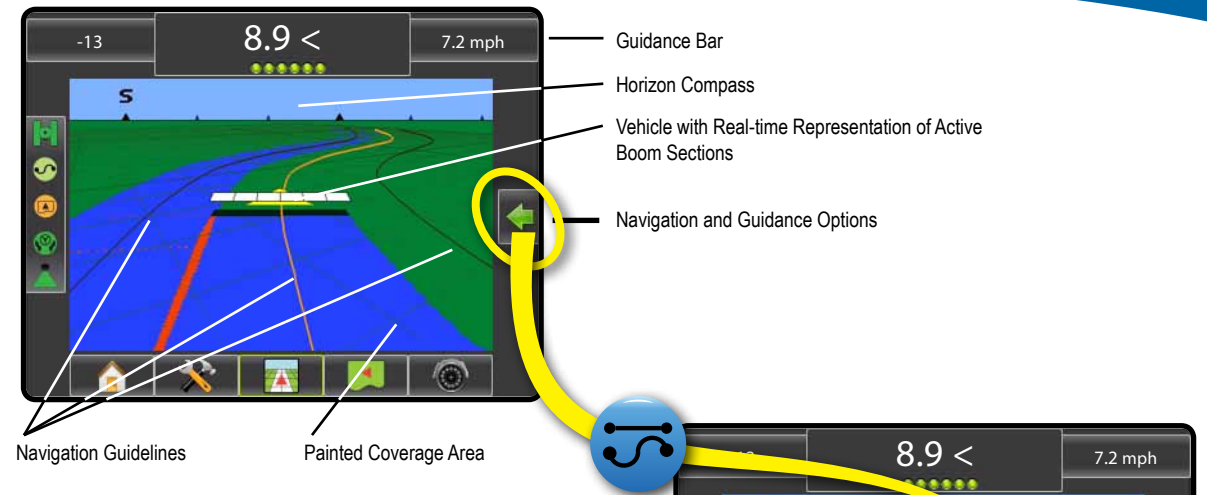
NextRow Guidance

NextRow Guidance indicates where the NextRow is located and provides guidance at row ends to the next adjacent row. When the operator marks the end of the row and begins turning to the next row, a Straight AB guidance line is provided in the next row. When the vehicle is in the NextRow guidance is turned off.



No Guidance

No Guidance turns off guidance.



GPS Status	
	Red = no GPS
	Yellow = GPS only
	Green = DGPS, WAAS/RTK, GLONASS
	Peach = Glide/ClearPath

Guidance Mode	
	Straight AB Guidance
	Curved AB Guidance
	Circle Pivot Guidance
	Last Pass Guidance
	NextRow
No icon	No Guidance

Bounded Area Status	
	Outside Boundary = Currently traveling outside bounded area
	Inside Boundary = Currently traveling inside bounded area
No icon	No boundary established

AutoSteer Status	
	Green = Engaged
	Yellow = Enabled
	Red = Disabled
No icon	no auto steering system installed on system

BoomPilot Status	
	Red = Off/Manual
	Green = Automatic
	Yellow = All On
No icon	Single Boom Section (no SmartCable or SDM installed on system)



Press a Status Bar icon for more information.



← Guidance Options

Guidelines	
	Mark A . Marks the first point of the guideline.
	Mark B . Marks the end point of the guideline. Grayed = minimum distance has not been traveled.
	Cancel Mark A. Cancels the Mark A process. Reverts to previous AB guideline (when established).
	NextRow Mark B . Marks the end point of the row.
	Azimuth Degree . Establishes a straight guideline measured by degrees clockwise from a north base line. North = 0, East = 90, South = 180, West = 270.
	A+ Nudge. Shifts the existing guideline to the vehicle's current position.
	Next Straight AB or Azimuth Degree Guideline. Shows the next straight guideline saved in the current job.
	Next Curved AB Guideline. Shows the next Curved AB guideline saved in the current job.
	Next Circle Pivot Guideline. Shows the next Circle Pivot AB guideline saved in the current job.
	Curved Lookahead. Provides an indication of where the current steering will take the vehicle using a 'pointer' as guidance

Return to Point	
	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.

Boundaries	
	Mark Boundary. Establishes application area and determines no apply zones. 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 mark boundary process. Reverts to previous boundary (when established).
	Delete Boundary. Deletes all established boundaries from current job.

BoomPilot	
	BoomPilot. Selects BoomPilot mode. Grayed = GPS is unavailable.

RealView Guidance Options	
	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.
	Guidance Over Video Setup. Access to turn on Guidance Over Video or Steering Angle and adjust guidelines.
	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.
	Up & Down Icons. Used to adjust the guidance lines to match the camera's view.

Navigation Activity & Boom Status

GPS Status
Cross Track Error
Current Activity

Home/Job Screen (or press Home Button)

Unit Setup

Vehicle View Guidance

Field View Guidance



RealView Guidance

Screen Options

	Vehicle View Zoom In/Out. Icons or buttons adjust the vehicle's view or perspective to the horizon from vehicle view to bird's eye view. Field View Zoom In/Out. Icons or buttons increase/decrease the area displayed on the screen.
	Pan. Touching the screen allows operator to focus on specific map areas without moving the vehicle. Arrows on screen move the view in the corresponding direction.
	World View. Extends screen view to the widest area available.





A+ Nudge Feature

To adjust a AB guideline to your current location:

1. Press NAVIGATION & GUIDANCE OPTIONS icon  to display navigation options.
2. Press A+ NUDGE icon  to adjust the guideline to the current location.

A+ Azimuth Degree

To establish the azimuth guideline:

1. Press NAVIGATION & GUIDANCE OPTIONS icon  to display navigation options.
2. Press AZIMUTH icon  to enter azimuth degree.
3. Use the entry screen to establish the Azimuth degree.
4. Press:
 - ▶ Accept  to save the settings
 - ▶ Cancel  to leave the keypad without saving
5. "Would you like to name this guideline?"
Press
 - ▶ Yes – to enter a name and save the guideline.
 - ▶ No – to automatically generate a name.

The console will begin providing navigation information.

To establish additional azimuth guidelines, follow the same steps as the initial azimuth guideline.

Figure 1-6: Azimuth Degree

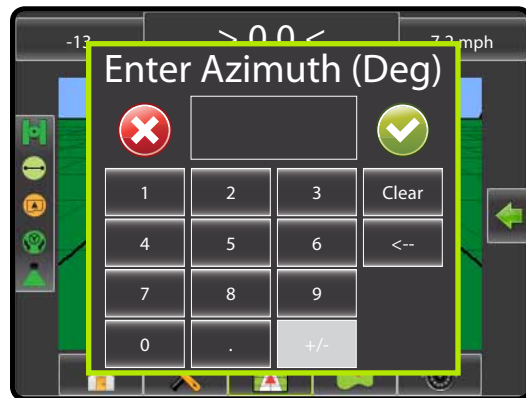


Figure 1-7: Save Guideline

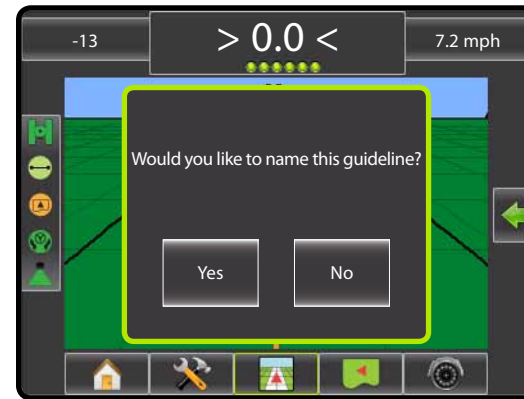
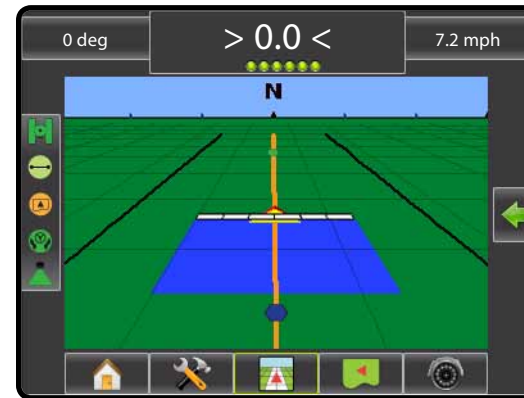


Figure 1-8: Follow Guidance



Field Boundary

To establish a field boundary:





1. Drive to a desired location at the perimeter of the field/area.
2. Press NAVIGATION & GUIDANCE OPTIONS icon  to display navigation options.
3. While the vehicle is in motion, press BOUNDARY icon .
4. Travel the perimeter of the field/area.
5. Finish boundary:
 - ▶ Travel to within one swath width of the starting point. The boundary will close automatically (the white guideline will turn black).
 - ▶ Press BOUNDARY FINISH icon . A straight line will complete the boundary between your current location and the starting point.
6. Press:
 - ▶ Yes – to save the boundary.
 - ▶ No – to delete the boundary.

Figure 1-9: Boundary in Progress



NOTE: On the external or initial boundary, the BOUNDARY FINISH icon  is not available for selection (grayed out) until the minimum distance is travelled (five-times the swath width).

To create an interior boundary, follow the same steps as the initial boundary.


Figure 1-10: Save Boundary - Field View






Figure 1-11: Boundaries Complete



If a swath was applied while creating an external or initial boundary, the boundary line will be to the exterior of the applied swath. If a swath was applied while creating an interior or additional boundary, the boundary line will be to the interior of the applied swath.

Use CANCEL BOUNDARY icon  to cancel the new field boundary process and revert to the previous boundary (when established).

Use DELETE BOUNDARY icon  to delete all field boundaries for the current job.

In correspondence to your current location, the IN BOUNDARY icon  or OUT BOUNDARY icon  is displayed on the Status Bar once the boundary is established.

Return to Point

To mark a return point:







1. Drive to the desired location of Return Point .
2. Press NAVIGATION & GUIDANCE OPTIONS icon  to display navigation options.
3. Press ADD POINT icon .

Figure 1-12: Return Point Established - Vehicle View



To show distance and guidance to the established point:

1. Press NAVIGATION & GUIDANCE OPTIONS icon  to display navigation options.
2. Press the RETURN TO POINT icon .

Use CANCEL RETURN TO POINT icon  to delete the established point.

Next Guideline

To show other saved guidelines:



1. Press NAVIGATION & GUIDANCE OPTIONS icon  to display navigation options.
2. Press NEXT GUIDELINE icon .

Figure 1-13: Next Guideline



To view which guideline is active, press the Guidance Mode icon on the Status Bar.

Figure 1-14: View Which Guideline is Active

