



**KIBBLE
EQUIPMENT**

Your Farm. Your Future. Our Focus.

READY TO SPRAY GUIDE

2630 Monitors



JOHN DEERE

Contents

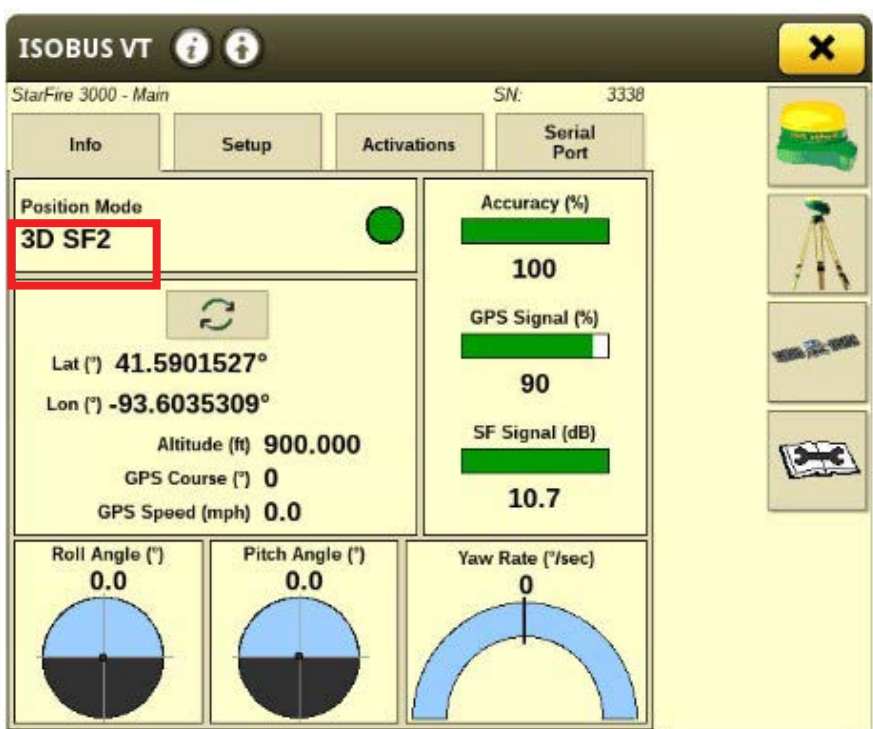
GPS Receiver Setup	2
Importing Data	4
Display Setup	6
Resources Setup	7
Machine Setup	8
Machine Offsets	9
Implement Setup	10
Section Control Setup	11
Documentation Setup	13
Boundary Setup	15
Guidance Setup	16
Mapping Setup	18
Hydro Handle	19
Armrest Controls	20
Rate Setup	21
Spray System Setup	22
BoomTrac Pro	25
ExactApply	26
Nozzle Setup	27
Pulsing Mode	28
A + B Switching	29
ExactApply	30
Autotrak Vision	32

GPS Receiver Setup

Select Starfire Receiver from main menu.

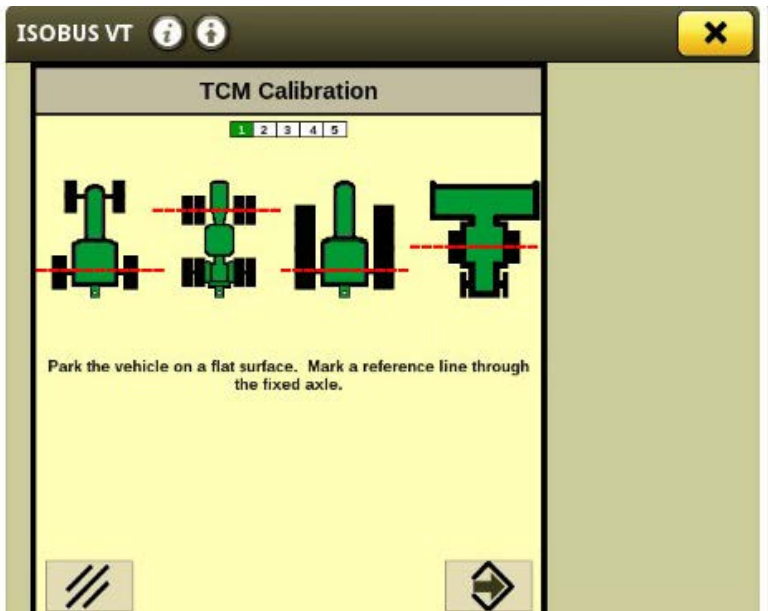
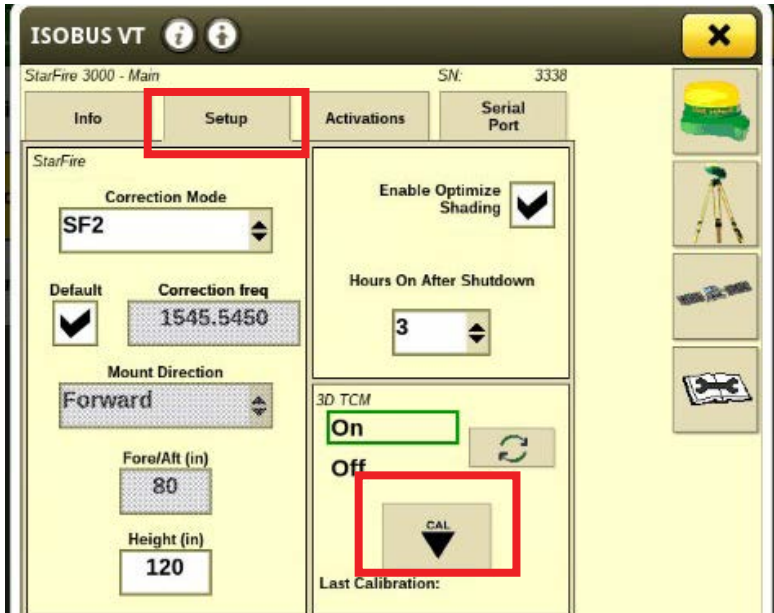


Verify signal is 90% or greater under info tab before starting any fieldwork.



Then navigate to setup tab to calibrate TCM. Follow on screen instructions.

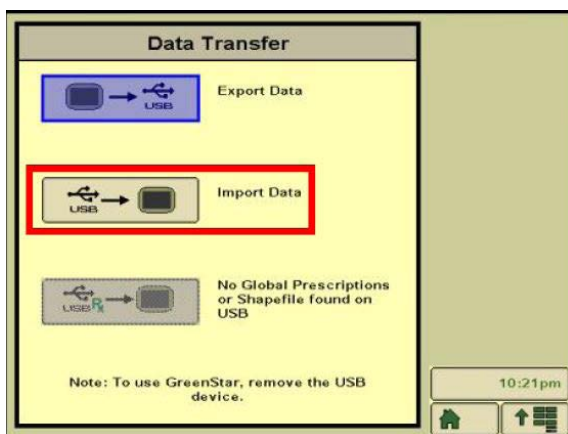
GPS Receiver Setup, continued



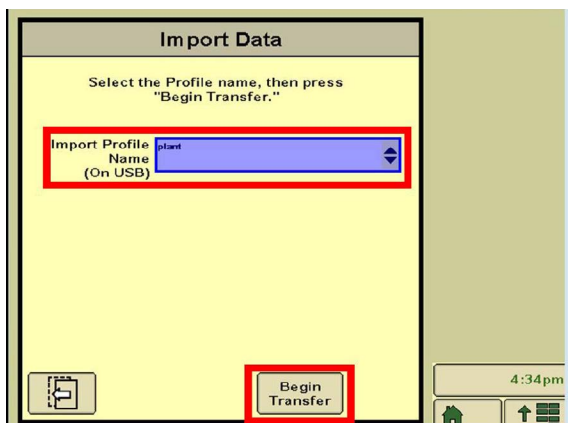
Importing Data

Data Import using a USB Drive

1. Insert USB drive, loaded with your data, into the GS3 2630. Data transfer screen will appear. Select the Import Data button.
2. Select the correct Import Profile Name then the Begin Transfer button.



3. Remove the USB drive after the transfer is complete.



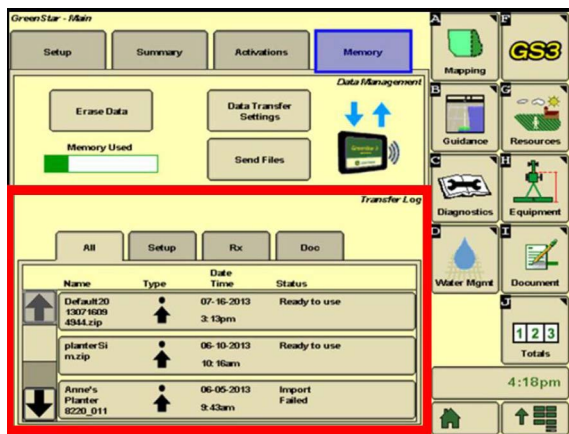
Note:

Profile name would have been created during the creation of the setup file.

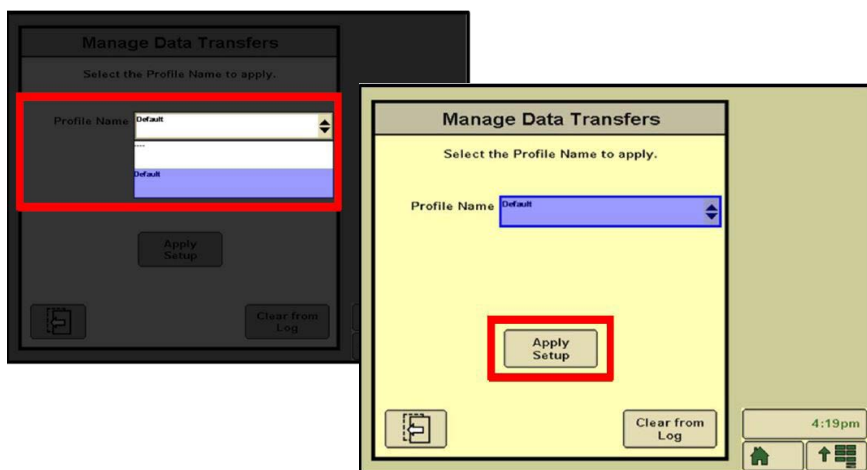
Importing Data, continued

Data Import using Wireless Data Transfer

1. Select Menu → GS3 - GS3 → Memory tab. A list of available files in the Transfer Log at the bottom of the page should be visible. Select the file to load onto the display.

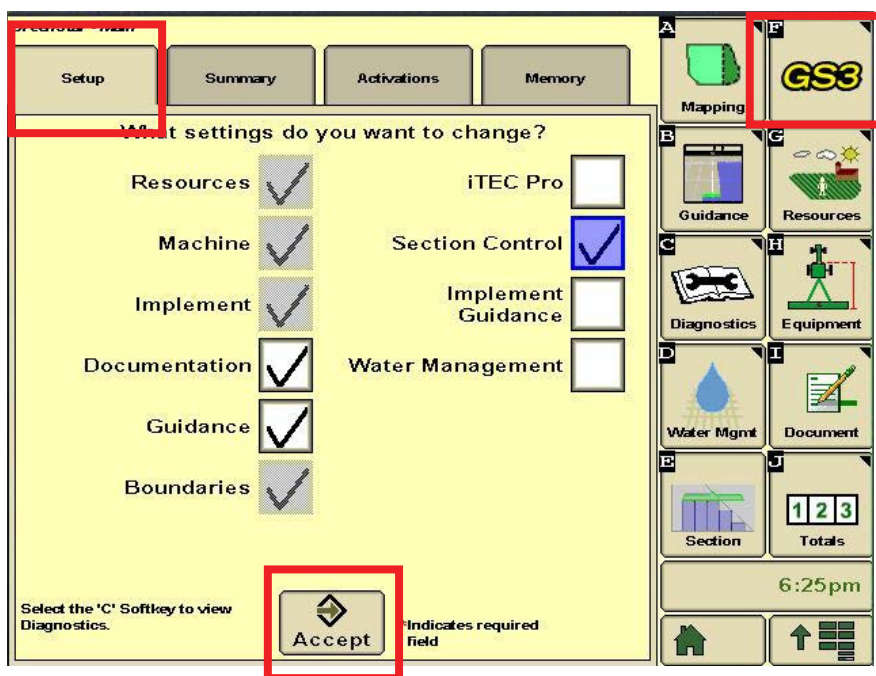


2. Confirm the name of the file from the drop-down box and select Apply Setup.



Display Setup

1. Select the Menu button then select the GS3 button.
2. On the Setup tab, ensure there is a check mark next to Documentation, Guidance, and Section Control. Next select Accept.



Resources Setup

3. If field boundaries have been loaded, select Find Field.
If not, manually select the needed Client, Farm and Field.

Note: | Be sure to also select the appropriate Task and Crop Season (i.e. crop year).

Select the Next button.

GreenStar - R/C

Resources

0.00 (ac)

Client: Deere

Farm: Simulator

Field: South 40

Task: Pre-emerge Spraying

Crop Season: 2020

Operator: _____

Lic #: _____

Field Locator
Requires exterior boundary

Field Locator On/Off

Find Field

Input Client, Farm, and Field. If you would like to use Documentation, select a Task. Note: coverage maps can be created with Documentation Off.

1 / 9

Next

Exit Setup

6:15pm

Machine Setup

4. Select Machine Name. Check that Recording Source is grayed out to Auto. Make sure the offsets loaded are accurately listed on the screen. If not, correct any errors by selecting Change Offsets.

Select the Next button to continue.

Machine Setup

Machine Type: Sprayer

Machine Model: x40

Machine Name: 940

Connection Type: Rear Rigid 3-pt

Machine Turn Radius: 22.0 (ft)

Turning Sensitivity: 70

COM Port

Machine Offsets

0.0 (in)

165.0 (in)

86.1 (in)

Change Offsets

Recording Source: AUTO

Machine Offsets

Non-Steering Location: Rear Axle

A: 0.0 (in)

B: 165.0 (in)

C: 86.1 (in)

D: 0.00 (in)

A Lateral distance from center-line of machine to GPS receiver

B In-line distance from non-steering axle to GPS receiver

C In-line distance from non-steering axle to distribution point

B+C = Documentation/Section Control location when in use

D Vertical distance from the GPS receiver to the ground
Note: Only used with Surface Water Pro applications

Accept

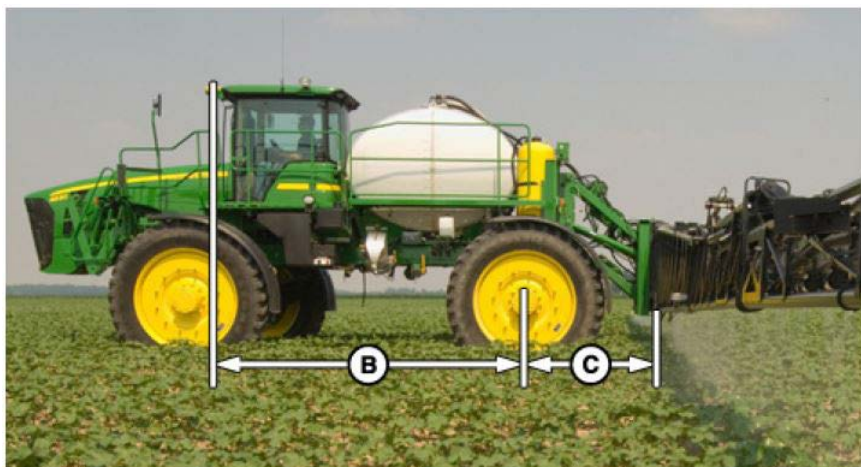
Machine Offsets

- A) Center of GPS Receiver to Center line of Machine.



- B) Center of GPS Receiver to Center of Non-Steering Axle.

- C) Center of Non-steering axle to spray nozzles (in operating position)



Implement Width: Width of spray area, may extend outside of spray booms.

Implement Setup

5. Select Implement Name. Offsets are entered under the sprayer tab. Enter boom width into track spacing and physical width.

Press Next.

GreenStar - Equipment

Implement

Implement Type
Boom

Implement Model

Implement Name
120

Offsets

Offsets for this platform are entered on the Machine tab.

Physical Width 120.000 (ft)

Implement Width 120.0 (ft)

Track Spacing 120.000 (ft)

Widths

Change Widths

3 / 9

Exit Setup

Service

13.3	10.0	13.3	11.7	13.3	8.3	13.3	8.3	10.0	6.7	11.7
------	------	------	------	------	-----	------	-----	------	-----	------

Section Control Setup

6. Section Control setup. Check mark Section Control Master to enable. Verify Overlap Settings and Turn On/Off Settings are accurate.

Select the Next button.

The main interface is divided into several sections:

- SECTION CONTROL:** Contains a checked checkbox for "Section Control Master" (highlighted with a red box), a checked checkbox for "Operation 1 Planting / Seeding", and a question mark icon.
- HEADLAND CONTROL:** Contains an unchecked checkbox for "Headland Control" and a note: "Note: Requires a headland boundary."
- Navigation:** Includes "Overlap Settings" (highlighted with a red box), "Turn On/Off Settings" (highlighted with a red box), and "Section Control Map Settings".
- Right Panel:** Displays "Review the Section Control Settings to ensure desired operation.", a page indicator "4 / 9", "Exit Setup", and a time display "7:19pm".

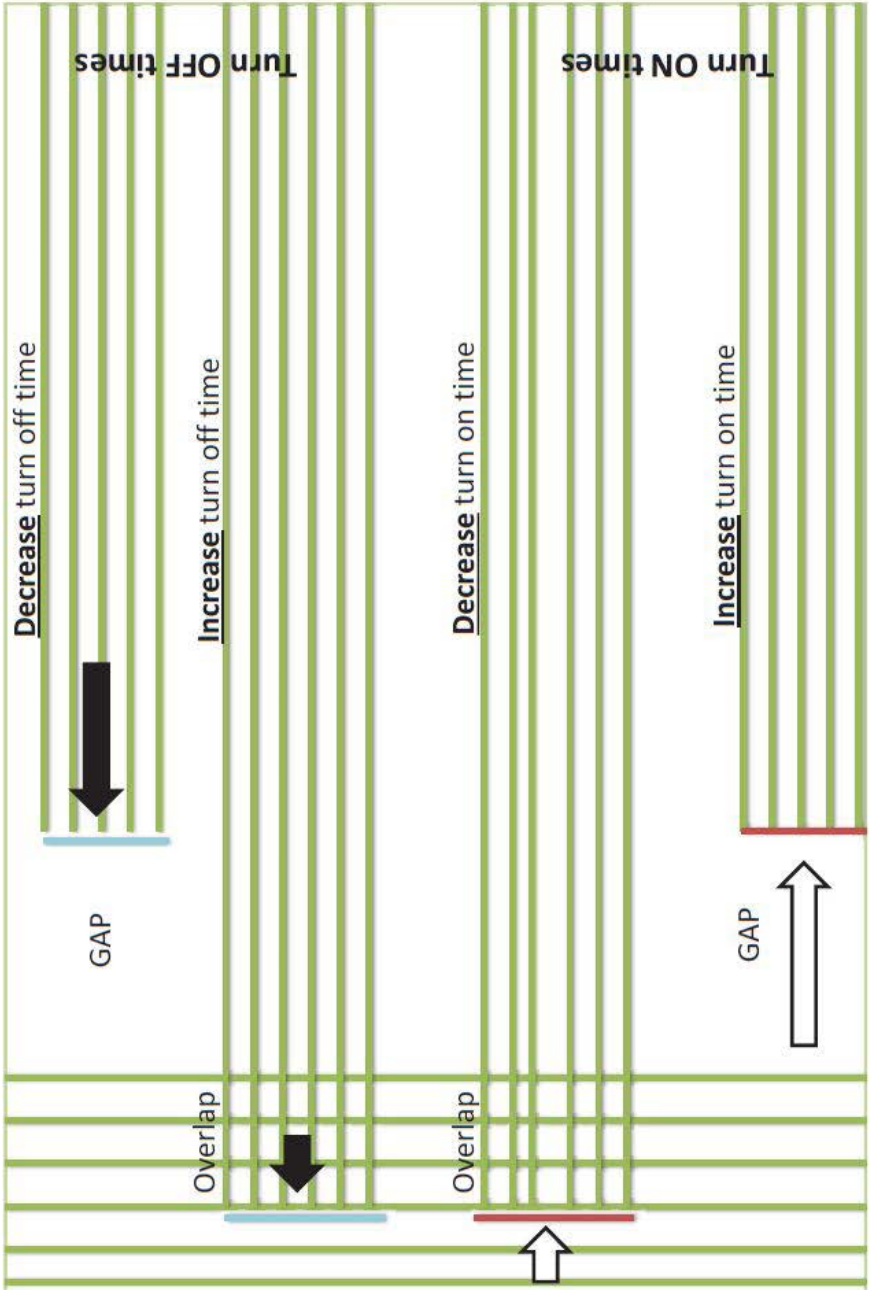
Two detailed settings screens are shown below:

- Overlap Settings:** Shows "Sections: Coverage, exterior and interior boundaries are mapped as minimize skip" with a graph. It includes input fields for "Exterior Boundaries" (100%), "Interior Boundaries" (100%), and "Coverage" (100%).
- Section Control On/Off Settings:** Shows "Turn on (sec): 1.0" and "Turn off (sec): 0.6" for "Operation 1 Planting / Seeding".

Note:

Default settings - On time = 1.0 sec, Off time = 0.6 sec.
See chart on next page to fine tune.

Section Control Setup, continued



Documentation Setup

7. Select Product Application Type (Single or Tank Mix) and click Add Product. Enter product info and click accept.

Next to continue.

Operation **RoundUp**

Product Application Type
Single Product

**Verify Target Rate is correct.
To change, go to sprayer setup.**

RoundUp

Prescription Rate 0.0 (gal/ac)

Actual Rate 0.0 (gal/ac)

Target Rate 10.0 (gal/ac)

Prescription _____

Application Method _____

Height/Depth 0.0 (in)

Disable Operation Advanced Settings Rx

Documentation

Define your current operations by selecting one or more operations and configuring the settings for each operation.

5 / 9

A B C Exit Setup

Park Brake

Home ↑

Product Application

* Product Type Herbicide

* Product Name RoundUp

* Rate Units gal/ac

Cancel Accept

Documentation Setup, continued

To create a tank mix enter your carrier type and base solution rate. Select Add Product to add each product type, name, and rate.

The screenshot shows the 'GreenStar - Documentation' software interface. At the top, there are three tabs: 'Product Application #1' (selected), 'Product Application #2', and 'New'. Below the tabs, the 'Product Application Type' is set to 'Tank Mix'. The 'Tank Mix Name' is '<Custom>'. There are three 'Add Product' buttons. The first 'Add Product' button is highlighted with a blue border and contains 'RoundUp' at a rate of '4.00 (floz/ac)'. The second 'Add Product' button contains 'Atrazine' at a rate of '2.00 (floz/ac)'. The 'Carrier' is set to 'Water' at a rate of '10.00 (gal/ac)'. The 'Prescription Rate' is '0.0 (gal/ac)'. The 'Target Rate' is '12.0 (gal/ac)'. The 'Actual Rate' is '0.0 (gal/ac)'. The 'Application Method' is blank. The 'Height/Depth' is '0.0 (in)'. There are buttons for 'Disable Operation', 'Advanced Settings', and 'Rx'. On the right side, there is a vertical toolbar with icons for Mapping, Guidance, Diagnostics, Water Mgmt, Section, and Totals, along with a 'Service' button and a 'GS3' logo.

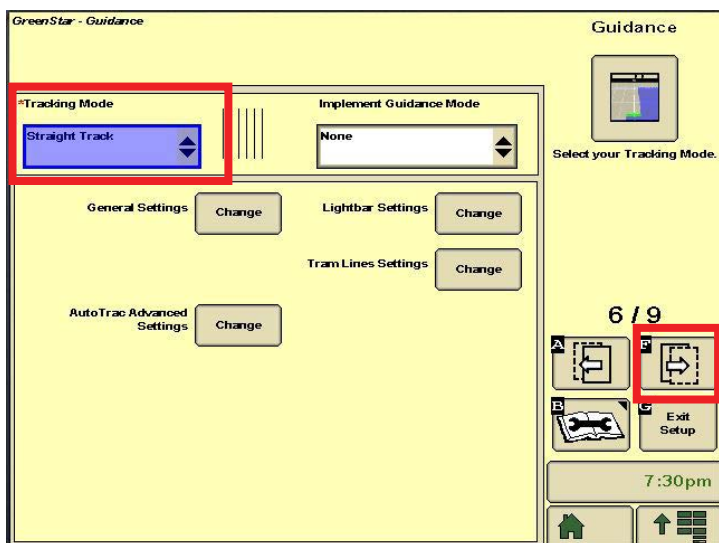
CAUTION: Documentation will not work with two product application tabs. Do not add any additional tabs for any sprayer except for sprayers with direct injection.

The screenshot shows the 'GreenStar - Documentation' software interface. At the top, there are three tabs: 'Product Application #1', 'Product Application #2', and 'New'. The 'Product Application #2' tab is highlighted with a blue border and has a red 'X' drawn over it. Below the tabs, the 'Product Application Type' is set to 'Single Product'. The 'Product Application #2' tab is highlighted with a blue border and has a red 'X' drawn over it.

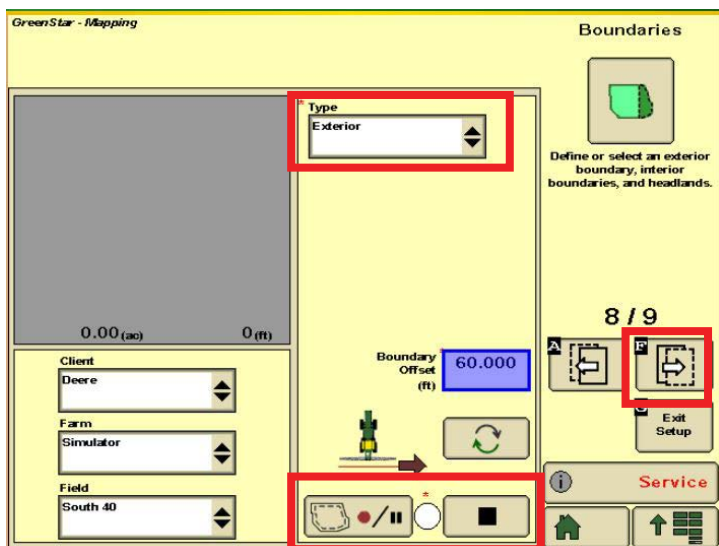
To delete unwanted tabs click into the tab and select remove in the bottom lefthand corner.

Boundary Setup

8. Select Tracking Mode and then Next to continue.

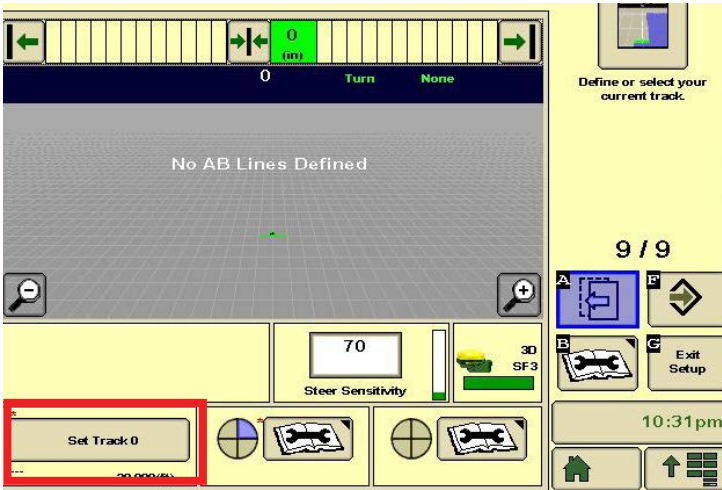


9. Turn on Small Shifts and then Next to continue.
10. Create boundary or click Next to continue.

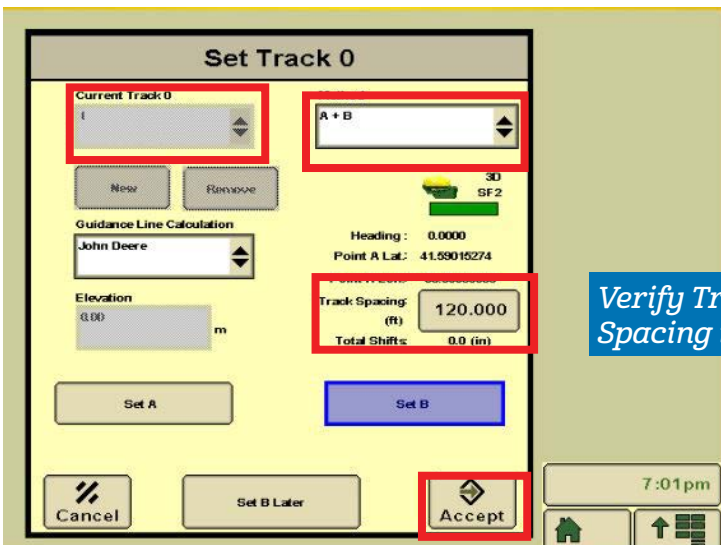


Guidance Setup

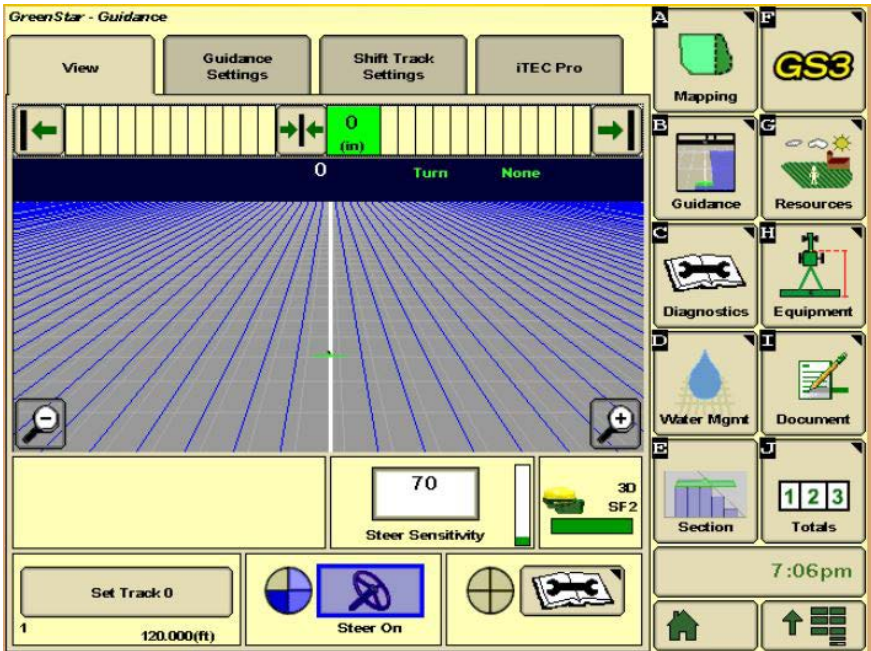
11. Click Set Track 0.



12. Choose New → Create Name → Choose Method (A+B, A+-Heading, etc.) → Set A → Set B or enter heading → Accept to create Track



Guidance Setup, continued



Once track is complete, enable autotrac by pressing the steer on button (3 pieces of the pie).

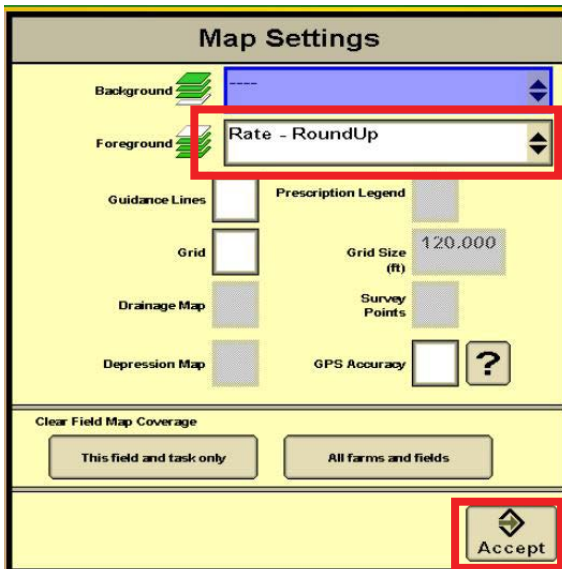
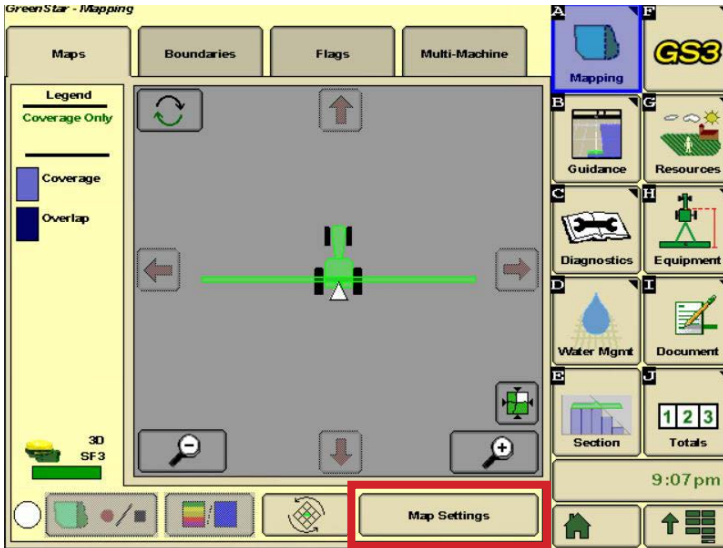
Press resume switch on side of hydro handle to autotrac.

- 1 = boomtrac resume
- 2 = autotrac resume

Mapping Setup

Changing coverage map to a Rate Map

Select GS3 then Mapping. Click Map Settings and for Foreground layer choose Rate Map.



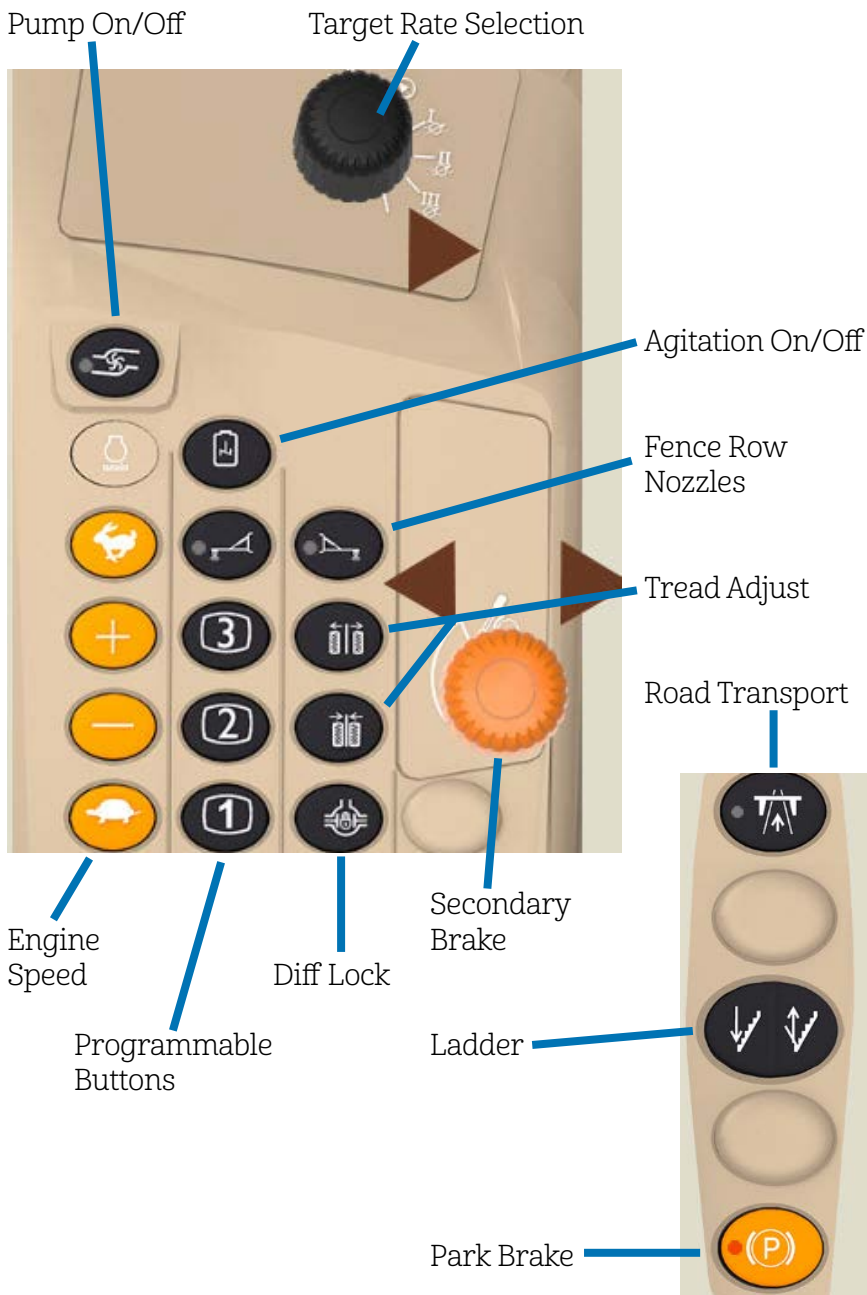
Note:

A RX can be loaded to the background.

Hydro Handle



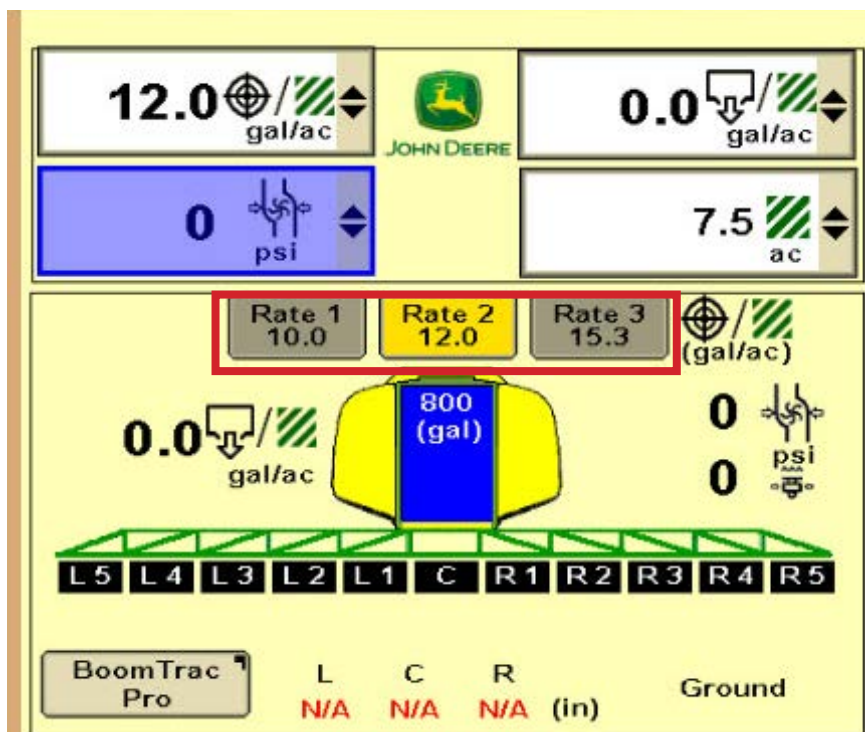
Armrest Controls



Rate Setup

Use the Target Rate Selection dial to choose manual spray mode or target rate 1, 2, or 3. The aux position is for prescriptions.

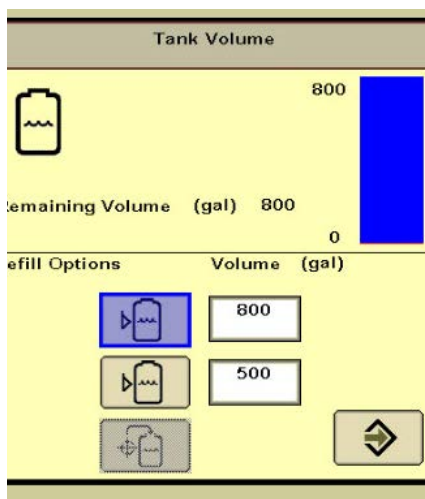
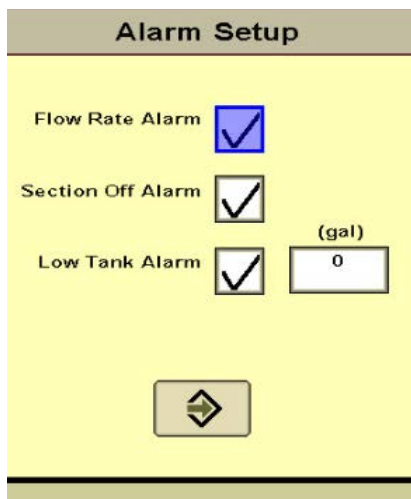
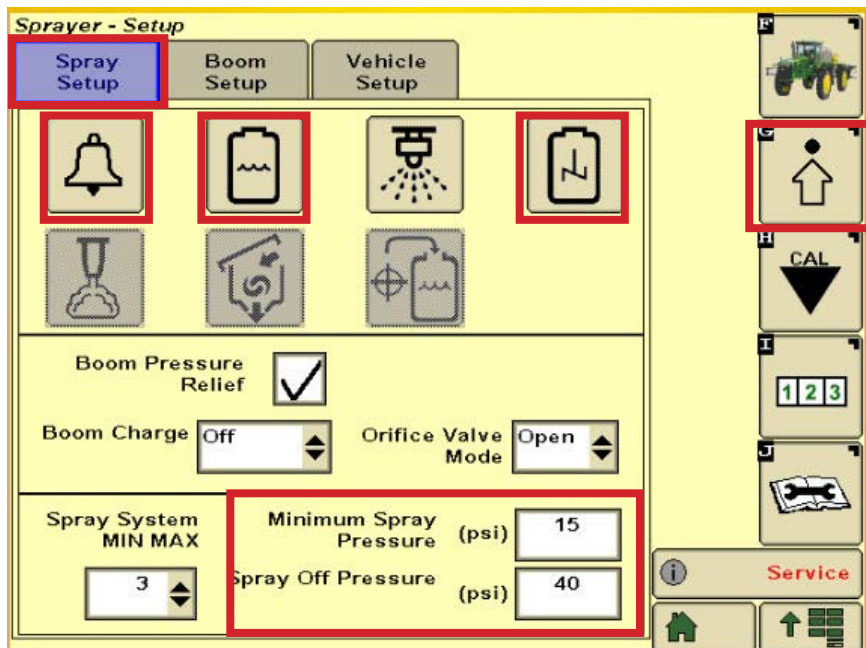
From sprayer run page choose rate box to edit target rates.



Spray System Setup

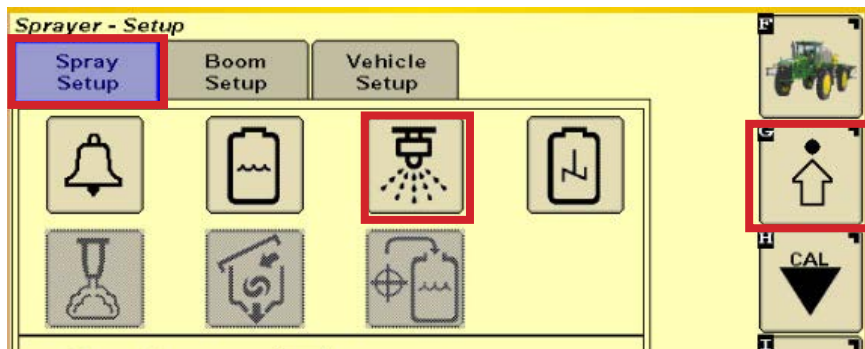
From Sprayer Menu choose Setup Button.

Select spray setup tab to configure alarms, tank fill, agitation, and minimum spray pressure.



Spray System Setup, continued

From the Spray Setup tab use the Nozzle Calculator to determine best nozzle match for desired rate, speed, and pressure.



Nozzle Calculator

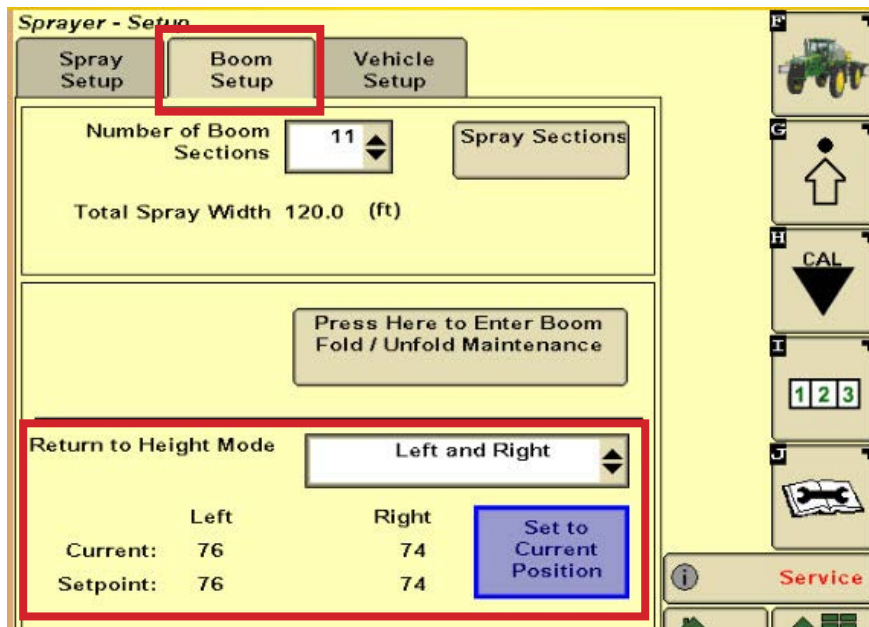
Application Rate (gal/ac)	<input type="text" value="15.0"/>	Nozzle Spacing (in)	<input type="text" value="15"/>
Application Speed (mph)	Low <input type="text" value="7"/> High <input type="text" value="15"/>	Nozzle Pressure (psi)	<input type="text" value="60"/>
Specific Gravity	<input type="text" value="Water - 1.00 SG"/>		

	Recommended Nozzle Sizes	Pressure Low Spd	Pressure High Spd
Best Match	<input type="text" value="35"/>	<input type="text" value="23"/>	<input type="text" value="105"/>
	<input type="text" value="4"/>	<input type="text" value="18"/>	<input type="text" value="80"/>
	<input type="text" value="5"/>	<input type="text" value="----"/>	<input type="text" value="50"/>

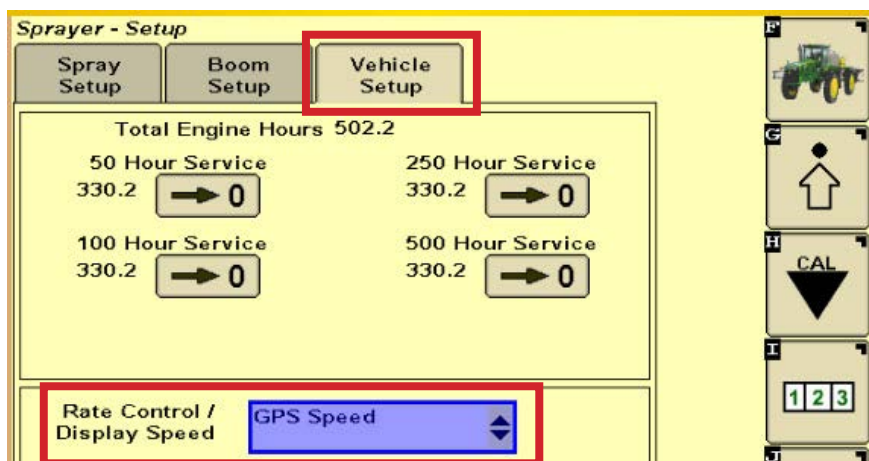
High Speed Tip Flow (gpm)	<input type="text" value="0.555"/>	Total Boom Flow (gpm)	<input type="text" value="40"/>
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Spray System Setup, continued

From the Boom Setup tab setup Return to Height modes and set position.



From the Vehicle Setup tab setup select speed source. GPS or radar will be most accurate.



BoomTrac Pro

From Sprayer Run Page select BoomTrac Pro to enable system and select Ground or Canopy mode. Setup Center Frame Control, Heights and Raise and Lower Sensitivity settings.

The image shows the Sprayer Run Page interface. At the top, there are three rate boxes: Rate 1 (10.0), Rate 2 (12.0), and Rate 3 (15.3), all in gal/ac. A central tank icon shows 800 gal. Below the tank is a boom with sections labeled L5, L4, L3, L2, L1, C, R1, R2, R3, R4, R5. A red box highlights the 'BoomTrac Pro' button. Below the boom, there are labels for L, C, R, and Ground, with 'N/A' under L, C, and R, and '(in)' under Ground.

The image shows the 'Sprayer - BoomTrac Pro' configuration screen. It has several sections:

- Enabled/Control:** 'BoomTrac Enabled' and 'Center Frame Control' are both checked with red boxes around them.
- Target Height Mode:** A circular refresh icon is present.
- Target Heights:** Three boxes show '98' for L, C, and R (in). A red box highlights the 'Sensor Mode' (circular refresh icon) and the 'Canopy' mode selection.
- Raise/Lower Response:** 'Raise Response' is set to 5 and 'Lower Response' is set to 2.
- Sensor Status:** 'Sensor Missing' is indicated with a red X, and 'Sensor Good' is indicated with a green square.
- Actual Heights:** A diagram of the boom shows sections L2, L1, C, R1, R2, all with red X's and 'N/A' below them.

ExactApply



From main menu select Exact Apply. Run Page will show current settings and nozzle percent flow.

The screenshot displays the 'ExactApply' Run page interface. It is organized into several sections:

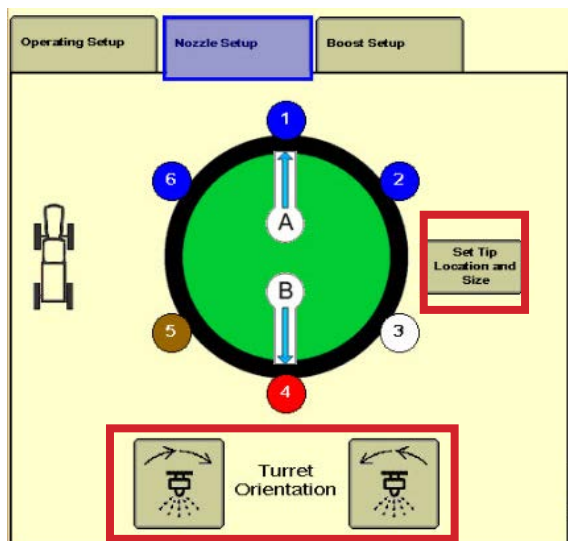
- Top Left:** Nozzle selection for 'A' (03, checked), 'B' (04, unchecked), 'A+B' (unchecked), and 'Auto' (unchecked).
- Top Center:** Pressure settings for nozzle 1 (40 psi, checked) and nozzle 2 (60 psi, unchecked). A pressure adjustment range of ± 5 psi is shown with minus and plus buttons.
- Top Right:** A vertical sidebar with buttons for 'Run' (highlighted), 'Setup', a manual icon, a warning icon, and an information icon.
- Middle:** A row of nozzle position indicators labeled L5, L4, L3, L2, L1, C, R1, R2, R3, R4, R5, with corresponding NZC # values (08, 14, 22, 29, 37, 42, 50, 55, 61, 65, 72) above them.
- Bottom Left:** 'Nozzle Pulsing' set to 'Auto', 'Nozzle Lights' set to 'On', and 'Brightness' set to 'High'.
- Bottom Center:** The John Deere logo.
- Bottom Right:** 'Target Rate' and 'Actual Rate' both at 0.0 gal/ac, 'Boom Pressure' at 0 psi, and 'Vol Remaining' at 800 gal.
- Bottom Far Right:** A 'Service' button with an information icon and a home button.

Nozzle Flow % Bar Chart:

Nozzle Position	Flow %
L5	~100
L4	~100
L3	~100
L2	~100
L1	~100
C	~100
R1	~100
R2	~100
R3	~100
R4	~100
R5	~100

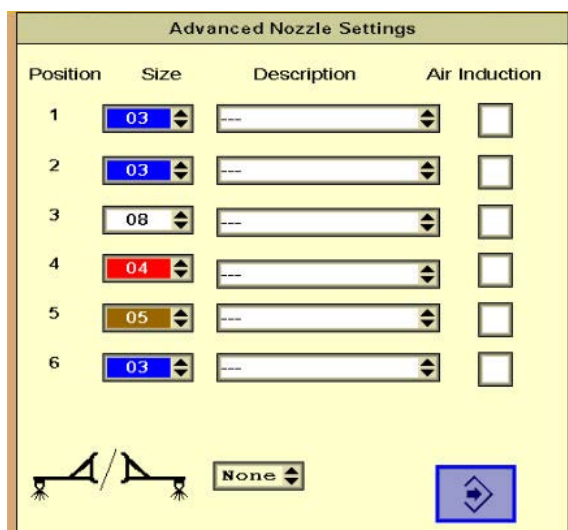
Nozzle Setup

Choose Setup button on right hand menu and go to Nozzle Setup Tab.



Change your active tips by using the arrow button to rotate your nozzle turrets.

Select "Set Tip Location and Size" to identify Nozzles in positions 1 - 6.



Pulsing Mode

Go to Operating Setup tab. Select Nozzle pulsing - off/fixed/auto. Enable turn compensation.

Select Active Nozzle: A only, B only, A+B

Note:

Automatic nozzle switching not available while pulsing is on.

The screenshot displays the 'Operating Setup' tab of a control panel. The 'Active Nozzle Selection' section shows 'A' selected with a blue '03' button and a checked checkbox, while 'B' has a red '04' button and an unchecked checkbox. 'A + B' and 'Auto Select' are also present. The 'Nozzle Pulsing' dropdown is set to 'Auto', and 'Turn Compensation' is checked with a blue box. Below these are 'Nozzle Flow (%)' at 0, and two nozzle pressure settings: 40 psi for nozzle 1 and 60 psi for nozzle 2. A vertical pressure adjustment is set to 5 psi, and 'Specific Gravity' is 1.00. At the bottom, 'Nozzle Lights' are set to 'On' and 'Brightness' is set to 'High'.

Section	Item	Value / Status
Active Nozzle Selection	A	03 <input checked="" type="checkbox"/>
	B	04 <input type="checkbox"/>
	A + B	<input type="checkbox"/>
	Auto Select	<input type="checkbox"/>
Pulsing & Compensation	Nozzle Pulsing	Auto
	Turn Compensation	<input checked="" type="checkbox"/>
Nozzle Flow	Nozzle Flow (%)	0
	Nozzle 1 Pressure	40 psi
Nozzle 2 Pressure	Nozzle 2 Pressure	60 psi
	Vertical Pressure	5 psi
Specific Gravity	Specific Gravity	1.00
	Nozzle Lights	On
Brightness	Brightness	High

A + B Switching

Automatic Nozzle Switching Mode Setup - the following conditions must be met before Auto Mode is available:



1. Valve pulsing set to OFF.
(Operating Setup Tab)

Operating Setup	Nozzle Setup	Boost Setup
Active Nozzle Selection		
A 03 <input type="checkbox"/>	A + B <input type="checkbox"/>	
B 04 <input type="checkbox"/>	Auto Select <input checked="" type="checkbox"/>	
Nozzle Pulsing <input type="text" value="Off"/>	Turn Compensation <input checked="" type="checkbox"/>	
Nozzle Flow (%) <input type="text" value="0"/>		

2. Nozzle body turret set with 1,2, or 3 in the front position.
3. Spray tips setup in both front and rear turret positions.
4. Rate based application selected.

Enable your tip and adjust min and max pressures. (bottom box shows tip used at different speeds)

Auto Select Setup			
Current Nozzles	Min (psi)	Max (psi)	Enable
03	<input type="text" value="10"/>	<input type="text" value="80"/>	<input checked="" type="checkbox"/>
04	<input type="text" value="10"/>	<input type="text" value="80"/>	<input type="checkbox"/>
03 + 04	<input type="text" value="10"/>	<input type="text" value="50"/>	<input checked="" type="checkbox"/>

 Rate Auto  Enabled

Spray Speeds	
03	3.7 to 10.4 mph
04	4.9 to 13.7 mph
03 + 04	8.5 to 19.1 mph

ExactApply

	Nozzles 4, 5, 6 in the Front Position	
	Combined A + B Pulsing OFF	Combined A + B Automatic Pulsing
Speed Range	Base	Better
Turn Compensation	<i>Not Applicable</i>	Good
Boost	<i>Not Applicable</i>	Good
Pressure Selection	<i>Not Applicable</i>	Target
Coverage	Best	Best
High Application Rates	Best	Better
Manual Nozzle Selection using the Display or CommandArm	No	No
Notes		a

Notes:

- a. One nozzle supplied by two solenoids with alternating pulses
- b. One nozzle supplied by one solenoid
- c. Supplies two nozzles with one solenoid each with alternating pulses
- d. Different spray tip sizes can be used on both turret positions. Spray tips must be 02 or larger

Nozzles 1, 2, or 3 in the Front Position		
A Only or B Only - Automatic Pulsing	A + B Automatic Pulsing	Automatic Pulsing OFF
Best	Best	Good
Best	Best	<i>Not Applicable</i>
Best	Best	<i>Not Applicable</i>
Target	Target	Target Range
Good	Best	Best
Good	Best	Better
Yes	Yes	Yes
b	c, d, e	f, g

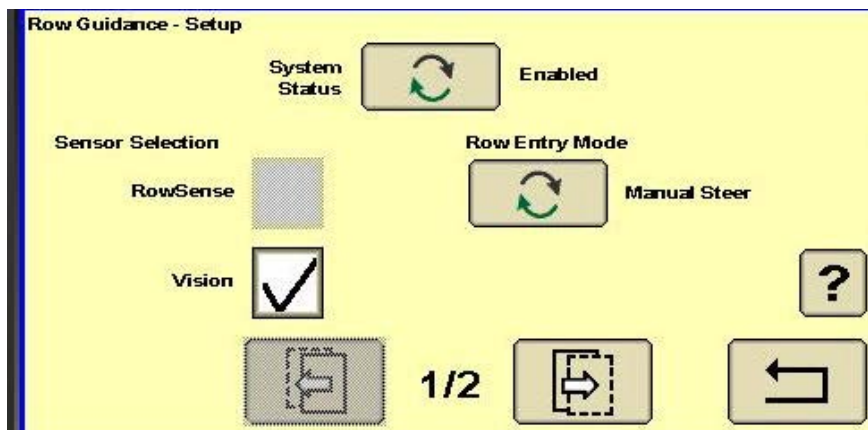
- e. Dual fan pattern possible
- f. Uses a small and a large spray tip. The large spray tip cannot be more than double the size of the small spray tip
- g. Sprays without pulsing, automatically switching between the front, rear, or both nozzles within an operator set pressure range

Autotrac Vision

Choose Layout Manager from main menu. Select split screen configuration. For top of screen select rowsense, bottom select video input.



Choose RowSense setup button to enable system. Change sensor selection and select row entry mode.



System Active operating with both RowSensor and GPS.



No GPS signal. Operating with RowSensor data only.



No RowSensor signal. Operating with GPS only.

Autotrac Vision, continued

For best results, complete accurate TCM calibration for receiver. Use manual steer for row entry mode if not using original AB line from planting. Vision camera may require multiple calibrations due to changing conditions. Select Camera Calibration to start cal.

Row Guidance - Camera Calibration

To begin calibration process do the following:

Step 1: Drive the vehicle into crop row where standing crop exists. Bare spots with no crop will not calibrate correctly.

Step 2: Align the vehicle parallel to row crop and be sure to center the wheels in the middle of the row.

Note: Do not back up during calibration.



1/7



Low
Resolution
Image

Be sure to enter correct row spacing. Continue cal process by lining up indicators on crop row and driving down rows until cal is complete.

Row Guidance - Camera Calibration

Step 3: Please enter the height of the camera from the ground to the mounting holes.

Step 4: Please enter the row spacing.

Sprayer

Camera
Height

88.0

in

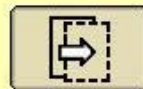
Row Spacing

30.0

in



2/7



Low
Resolution
Image

Need Assistance? Contact us!

Belle Plaine, MN	952-873-2224
Bird Island, MN	320-365-3445
Blue Earth, MN	507-526-2714
Brookings, SD	605-693-3514
Garretson, SD	605-594-3476
Hollandale, MN	507-889-4221
Huron, SD	605-352-8519
Madison, SD	605-256-4575
Mankato, MN	507-387-8201
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