

SeedStar™2 and SeedStar™XP Planter

Quick Reference Guide



SeedStar™ 2 Planter Quick Reference Guide

With Optional RowCommand™

Drive Status Bars



Green Bars: Section active and ready to plant.



Black Bars: Section deactivated manually by operator.



Outlined Bars:

Section deactivated by SwathControl™ command (when activated).

Bars Not Visible:

Section active, but cannot be controlled manually or with RowCommand™.

RowCommand™ Buttons:

Select buttons to turn sections on and off manually.

Target Pneumatic Down Force Level

Select button to view Pneumatic Down Force Control Panel

Pneumatic Down Force System Indicator Arrows

Up arrow indicates system is increasing down force level.

Down arrow indicates system is decreasing down force level

Planter At a Glance

Black bars indicate row is planting normally.

Orange bars indicate row is planting above or below alarm setpoints.

Red bars indicate row is not planting.

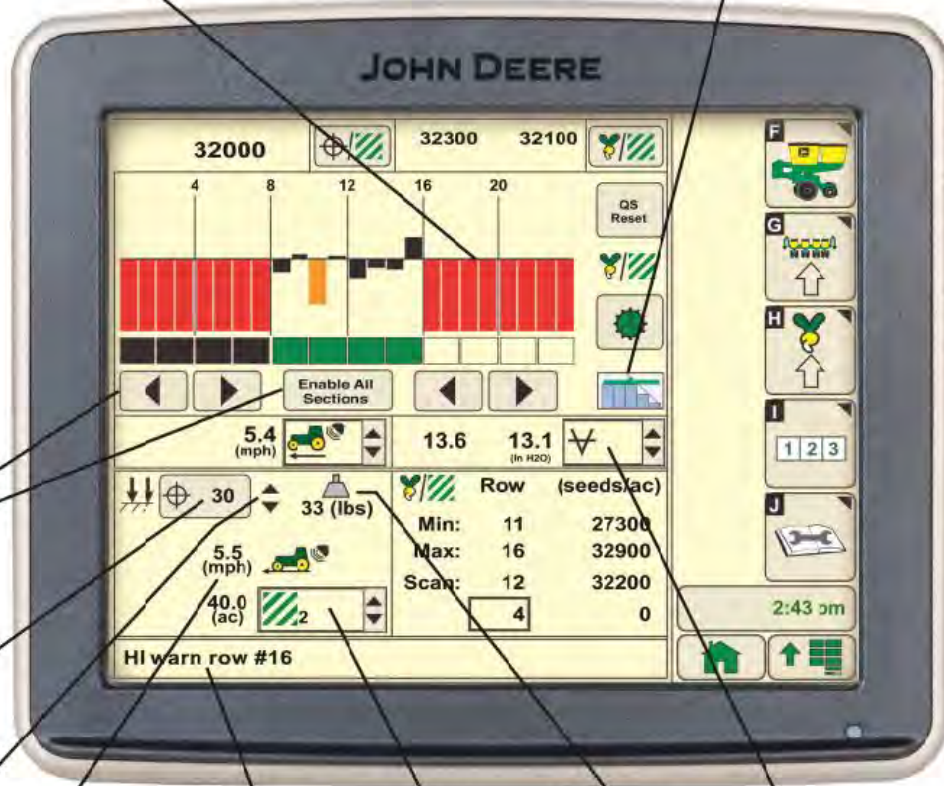
Drives Status ICON



Clutch Icon: Sections can only be controlled manually by operator.



Section Icon: Sections are controlled by John Deere Section Control™ (when activated).



Speed Display

Caution Message Display

User Defined Totals

Actual Pneumatic Down Force Level

Vacuum Level Icon

Population and Rates



Target Seeds per Area displays the desired seeding rate entered in Planter Rates Setup. On VRD machines, select this button to toggle between programmed rates including Rx prescriptions (Rate 6, VRD only).



Average Seeds per Area displays the actual average rate planted. Select button to toggle between whole planter average and drive section average.

Other Useful Buttons



Toggle Home Screens



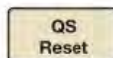
Enter, Done, Save, Finish



Toggle



Rotate Seed Meters



Quick Start Reset



Cancel

Getting Started



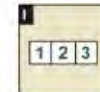
Planter – Main: Select for planter main run screen.



Planter – Configuration: Select to change planter frame, drives, and sensor configuration.



Planter – Rates: Select to change crop type, rates, and meter configuration.



Totals: Select to view planted area, hours, and calculators.



Diagnostics: Select to view sensor readings and fault codes.

Pneumatic Down Force Control Panel



- Enter target down force in input box.
- Select up or down arrow buttons to change pneumatic down force by preset Step Value.
- Enter low down force level alarm set point and Step value in PDF Air Pressure Setup Screen.
- Select: Menu>>Planter>>Configuration Softkey>>Sensor Tab>>Select PDF Air Pressure from drop down menu.

Crop Setup – Ground Drive

Select **Rates** Softkey (H).

Select **Crop Name** from drop down menu. Select desired crop from list. If desired crop name is not listed, select a **Custom** crop name.

Select **Target Rate** input box and enter desired population.

High and low warning limits are automatically set to a percentage above and below target rate. To change limits, select **High** and **Low Warning** input boxes and enter a new value.

Refer to **Rate Charts & Settings** Manual or Seed Transmission Sprocket Calculator (Menu>>Planter>>Totals>>Calculator>>Seed Transmission).

To access Seed Estimators and Vacuum Calculator select **Totals** softkey (I) >> **Calc** tab >> and choose the desired calculator from the drop down menu.

Standard Run Screen

Planter At a Glance

Black bars indicate row is planting normally.

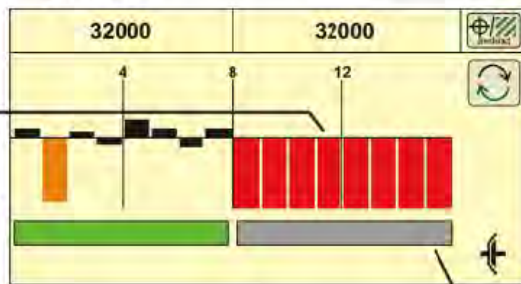
Orange bars indicate row is planting above or below alarm setpoints.

Red bars indicate row is not planting.

Drives Status Bar

Green bar indicates that clutch or motor is engaged and drives are active.

Gray bar indicates that clutch or motor is disengaged and drives are inactive.



Transport Mode:



To disable seed sensor warnings while in transport, navigate to: Planter >> Planter Configuration >> depress "Transport Mode" key. To disable "Transport Mode" to resume planting, depress key on screen.

Headland Warning Suppression:

Check box (Planter Configuration >> Sensor >> Seed) to disable seed sensor warnings when the planter is raised in field position (requires a height sensor and height sensor must be calibrated).

Crop Setup – Variable Rate Drive

Select **Rates** Softkey (H).

Select **Use 1 Rate for All Motors** check box. A check indicates one rate for all motors. An empty box indicates different rates for each motor.

Rate 6 is used for map based prescription. To enable controller to use a prescription, select the **On** drop down box under rate 6. From RUN screen select the Rx rate. Once rate is selected, the run page has a small Rx indicator near the Target Seeds per Area icon.

Select **Crop Name** from drop down menu. Select desired crop from list. If desired crop name is not listed, select a **Custom** crop name.

Select **Disk Type** drop down menu. If planter has mechanical meters, mechanical meter selections appear. If planter has vacuum meters, vacuum disk selections appear. Select meter or crop from list.

Select **Seed Disk** drop down menu and select the vacuum disk used. Verify this disk is in meter.

Select **Show Rates** button, then select **Change Rates** button.

If using different rates for each motor, select **Motor** drop down menu to assign rates to each motor.

Select **Rate** drop down menu and choose a rate from the list to assign a population to that rate.





Select **Target** input box and enter the target population for the selected rate.

High and low warning limits are automatically set to a percentage above and below target rate. To change limits, select **High** and **Low Warning** input boxes and enter a new value.

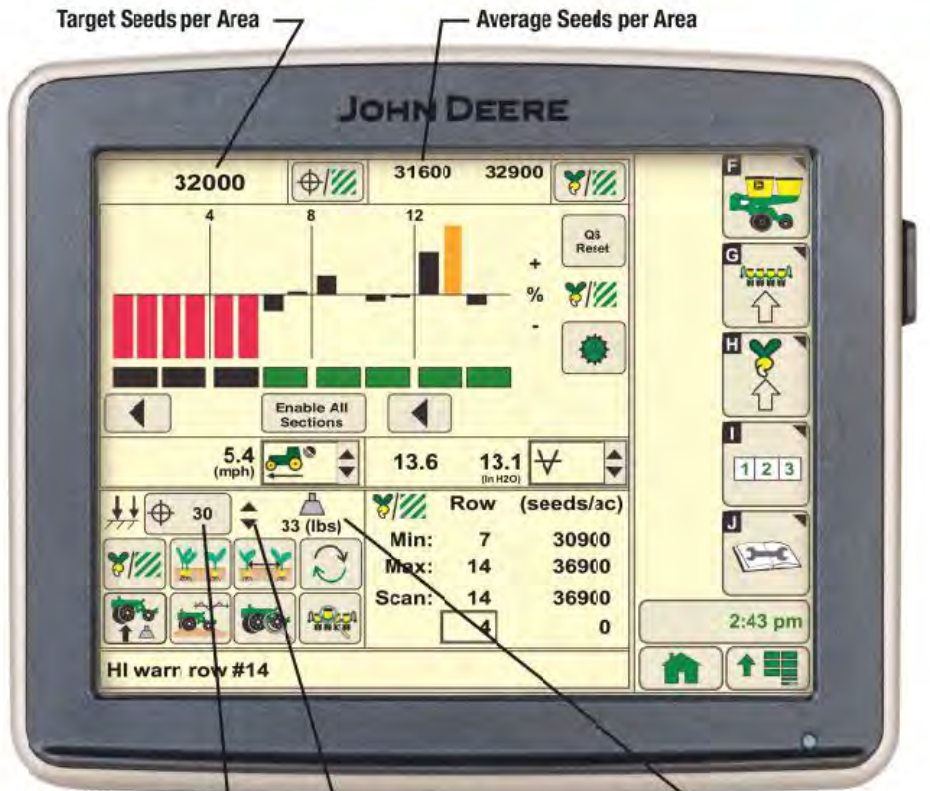
To see a rate on the RUN page as a choice, select **On** and **Off** drop down box and choose **ON**.

Select **Enter** button.

VRD Status

- | | |
|--|--|
| 1. 
No Activity | 2. 
Wheel Motion, Sensor Active |
| 3. 
Planter Lowered | 4. 
Drives Engaged |

SeedStar™ XP Planter Quick Reference Guide





Target Pneumatic Down Force Level
Select button to view Pneumatic Down Force Control Panel


Pneumatic Down Force System Indicator Arrows
Up arrow indicates system is increasing down force level
Down arrow indicates system is decreasing down force level


Actual Pneumatic Down Force Level


SeedStar XP Navigation Buttons


- 


Seed Population
- 


Seed Singulation
- 

Seed Spacing
- 

Down Force
- 

Ride Dynamics
- 

Planter Details
Select to view all SeedStar XP monitor information on one screen.
- 

Scan
Select to scan SeedStar XP run screens. Select and hold to change scan settings.
- 

Row Details
Select to view all monitored information for a specific row.

Alarms and Limits Setup

Alarms and Limits Setup

Singulation Alarm	<input type="text" value="92"/> %
Seed Spacing CV Alarm	<input type="text" value="0.35"/>
Ride Quality Alarm	<input type="text" value="90"/> %
Step Value	<input type="text" value="5"/> (lb)
Active PDF Pause Timer	<input type="text" value="5"/> sec
High Margin Alarm	<input type="text" value="131"/> (lb) + 75%
Target Margin	<input type="text" value="75"/> (lb)
Low Margin Alarm	<input type="text" value="37"/> (lb) - 50%

Alarms and Limits Setup Page:

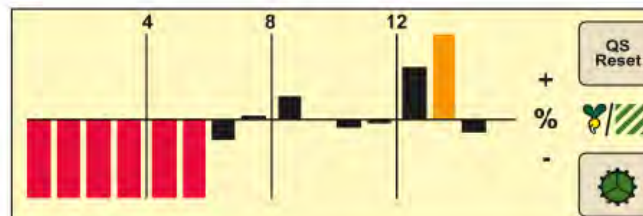
Select and hold any SeedStar XP monitor navigation button for 4 seconds to change alarm setpoints for that function. Enter "0" to disable alarm for monitor function.

Seed Population



Center line is target population. Bars above line indicate rows planting above target. Bars below line indicate rows planting below target. Bars turn orange when above or below alarm setpoint. Bars turn red when row is not planting (less than 2 seeds/second).

Select Menu>>Planter>>Rates Softkey to change alarm setpoints.



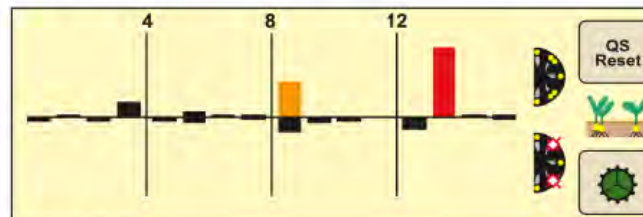
Seed Population

Row	(seeds/ac)
Min:	7 31200
Max:	14 33500
Scan:	10 32100
	4 0

Seed Singulation



Center line is perfect singulation (100%). Bars above line indicate increasing percentage of multiples. Bars below line indicate increasing percentage of skips. Bars turn orange when nearing alarm setpoint. Bars turn red when multiples or skip percentage is above alarm setpoint. Change Singulation alarm setpoint on Alarms and Limits Setup Page.



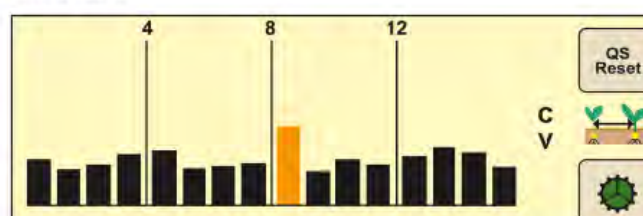
Seed Singulation

Singulation	
Avg.	95 %
Skips	High: 9
1 %	5 %
Multiples	High: 14
3 %	21 %

Seed Spacing Coefficient of Variation (CV)



Bottom of graph is perfect seed spacing (CV = 0). Bars increase in height as seed spacing becomes more variable. Bars turn orange when nearing alarm setpoint. Bars turn red when seed spacing CV is above alarm setpoint. Change Seed Spacing CV alarm setpoint on Alarms and Limits Setup Page.



Seed Spacing Coefficient of Variation (CV)

Seed Spacing CV	
Avg.	0.18
Skips	High: 4
1 %	5 %
Multiples	High: 9
3 %	10 %

Down Force Margin



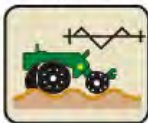
Center line is target down force margin. Bars above line indicate rows with gauge wheel loads above target margin. Bars below line indicate rows with gauge wheel loads below target margin. Bars turn orange when nearing alarm setpoint. Bars turn red when down force margin is above alarm setpoint. Change Down Force Margin target and alarm setpoint on Alarms and Limits Setup Page.



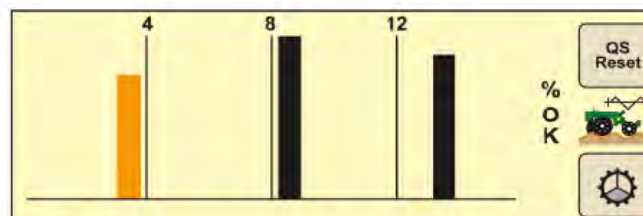
Down Force Margin

Margin (lbs)		
Margin	Low: 4	High: 9
	65	102
	35	

Ride Dynamics



Top of graph is optimum ride quality (100%). Bottom of graph is poorest ride quality (0%). Bars decrease in height as row unit ride quality decreases. Bars turn orange when nearing alarm setpoint. Bars turn red when ride quality is below alarm setpoint. Change Ride Quality alarm setpoint on Alarms and Limits Setup Page.



Ride Dynamics

Row	%
Min:	4 85
Max:	9 100
Scan:	14 93
Good Ride:	93

SeedStar™ Pneumatic Down Force Quick Reference Guide

Active Down Force

This system automatically makes down force adjustments based on target down force margin and feedback from the gauge wheel sensors. Data from the row unit gauge wheel sensors is displayed as margin on the monitor.

The operator selects a desired target margin (the amount of extra down force applied to the row unit, over and above what is required for the opener disks to penetrate the soil and achieve full planting depth). Active Down Force automatically monitors the readings from the gauge wheel down force sensors and make pressure changes to the air spring system to ensure the actual margin is equal to the target margin. As field conditions change the system automatically makes the necessary pressure adjustments to maintain target margin.

Target Margin:

The center line of the Down Force at a Glance chart is the target margin. Down Force at a Glance bars above the center line indicate down force levels are higher than desired. Bars below the center line indicate down force levels are less than desired.

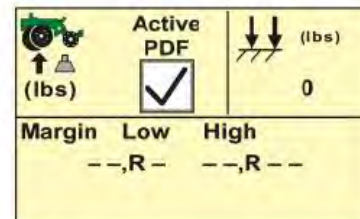


Active PDF status Target margin Actual margin Active system on/off check box Actual down force in air spring circuit

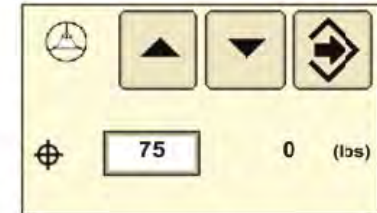
Active Downforce input screen. When the Active Down Force Status icon is shown, the system is in active mode and margin is displayed.



The Active Down Force Margin run screen contains the active on/off check box, actual system down force, the row with the lowest margin, and the row with the highest margin.



Pneumatic Down Force Margin Control Panel



- Enter target margin in input box.
- Select up or down arrow buttons to change margin target by preset Step Value.
- Use default high and low margin alarm values or enter custom values as desired in Alarms and Limits setup page.
- Select:
From main run screen select and hold any SeedStar XP monitor navigation button for 4 seconds.

Active Down Force Status

- No Activity
- Sensor Diagnostic Check OK
- Wheel Motion Sensor Active
- Planter Lowered (System Active)

Set-Point Down Force

This system allows the operator to make manual down force adjustments on the display. Data from the air pressure sensor located in the air tank valve block is displayed as down force on the monitor.

The operator selects a desired target margin (the amount of extra down force applied to the row unit, over and above what is required for the opener disks to penetrate the soil and achieve full planting depth). The operator then monitors the readings from the gauge wheel down force sensors to determine if down force changes are necessary to ensure the actual margin is equal to the target margin. As field conditions change, margin should be monitored to determine if down force adjustments should be made to maintain target margin.

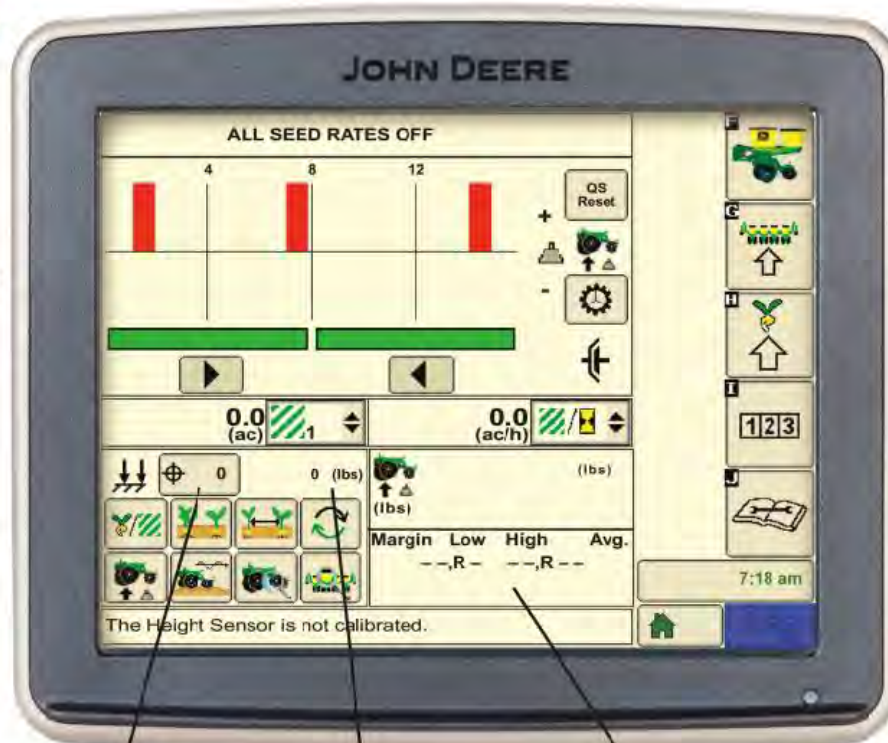
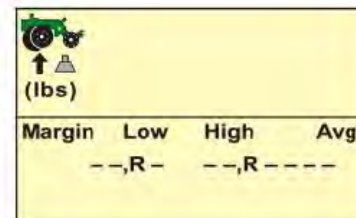
Target Margin:

The center line of the Down Force at a Glance chart is the target margin. Down Force at a Glance bars above the center line indicate down force levels are higher than desired. Bars below the center line indicate down force levels are less than desired.

The set-point Down Force input screen displays target down force and actual down force in the air spring circuit. Pressure changes are made when the target is changed by the operator and on a timed interval to ensure that target and actual down force is equal.



The set-point Down Force Margin run screen displays average margin, the row with the lowest margin, and the row with the highest margin.

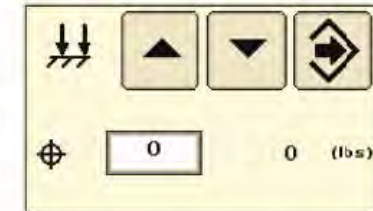


Target down force

Actual down force


Margin run page

Pneumatic Down Force Control Panel



- Enter target down force in input box.
- Select up or down arrow buttons to change pneumatic down force by preset Step Value.
- Enter low down force level alarm set point and Step value in Alarms and Limits setup page.
- Select: From main run screen select and hold any SeedStar XP monitor navigation button for 4 seconds.

Down Force Margin

- Enter target down force margin based on field conditions. 
- Use default high and low margin alarm values or enter custom values as desired in Alarms and Limits setup page.
- Select: From main run screen select and hold any SeedStar XP monitor navigation button for 4 seconds.