SeedStar™ 3 Planter Quick Reference Guide
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.
**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.

**Pneumatic Down Force Control Panel**
- Enter target margin in input box.
- Select plus or minus 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 quick settings arrow, then Alarms and Limits tab.

**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.

**Crop Setup – Electric Drive**
Select SeedSetup Softkey.
Select 1 Use Rate for All Mapping Groups check box. A check indicates one rate for all motors. An empty box indicates different rates for each section.
Rate 6 is used for map based prescription. To enable controller to use a prescription, select the On 10% box under rate 6. From RUNs 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 dropdown menu. Select desired crop from list. If desired crop name is not listed, select a Custom crop name.

**Active Down Force mode**
- PDF mode
- Target down force margin
- Actual down force margin
- Tank Pressure
- Air bag down force

**Active Down Force Status**
1. No Activity
2. Sensor Diagnostic Check OK
3. Wheel Motion Sensor Active
4. Planter Lowered System Active

**Drives Status**
1. No Activity
2. EPC Engaged
3. Wheel Motion, Sensor Active
4. Planter Lowered
5. Drives Enabled, but disengaged
6. Drives Engaged

**Select Seed Type** drop down menu. Select crop from list.
Select Seed Disk drop down menu and select the vacuum disk used. Verify the disk is in meter.
Select Rates tab, then select Target Rates button.
If using different rates for each Mapping Group assign a specific rate to each Mapping Group.
Select Target input box and enter the target population for the selected rate or mapping group.
High and low warning limits are automatically set to 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, check On in the box next to the rate preset.
Select Enter button.

**Crop Name**
If desired crop name is not listed, select a Custom crop name.
SeedStar™ 3 Planter Quick Reference Guide

**Seed Star™ 3 Navigation Tabs**

- **Seed Population**
- **Seed Singulation**
- **Seed Spacing**
- **Down Force**
- **Ride Dynamics**
- **Ground Contact**

**Alarms and Limits Setup**

- **Population High Alarm**
- **Population Low Alarm**
- **Singulation Alarm**
- **Speed Spacing CV Alarm**
- **Ride Quality Alarm**
- **High Margin Alarm**
- **Target Margin**
- **Low Margin Alarm**
- **Ground Contact Alarm**

**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 red when row is not planting near the target rate. Change population alarm setpoint on Alarms and Limits Setup Page.

**Seed Singulation**

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

**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 mean spacing is above alarm setpoint. Change Seed Spacing CV alarm setpoint on Alarms and Limits Setup Page.

**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 red when down force margin is above alarm setpoint. Change Down Force Margin alarm setpoint on Alarms and Limits Setup Page.

**Ride Dynamics**

- Top of graph is optimum ride quality (100%). Bottom of graph is poorest ride quality (0%). Bars increase in height as row unit ride quality decreases. Bars turn orange when nearing alarm setpoint. Change Ride Quality alarm setpoint on Alarms and Limits Setup Page. Toggle button selects ride quality or ground contact from the same tab.

**Ground Contact**

- Top of graph is optimum ground contact (0%). Bottom of graph is 0% ground contact. Bars decrease in height as row unit ground contact decreases. Bars turn orange when nearing alarm setpoint. Change Ground Contact alarm setpoint on Alarms and Limits Setup Page.