



# 396-4761Y1 QuickStart Card



## JDRC 2000 Gen3 LiquiShift for 1 Product

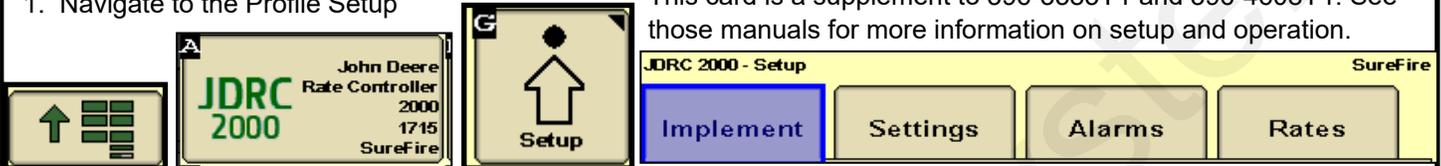
Below are typical SurePoint Liquid Fertilizer System setup screens. *Your setup may vary. Not all screens are shown.*

### NOTICE

The operator must read the John Deere JDRC 2000 Operator's Manual and the SurePoint manual that came with your system for safety

1. Navigate to the Profile Setup

This card is a supplement to 396-3583Y1 and 396-4608Y1. See those manuals for more information on setup and operation.

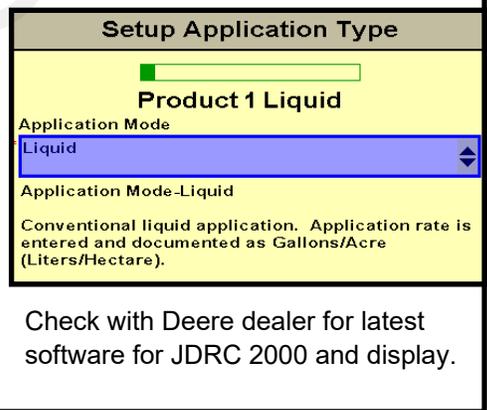
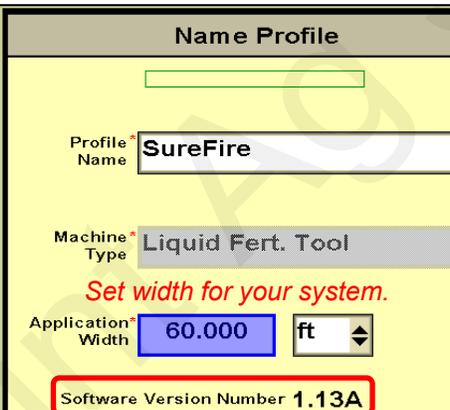
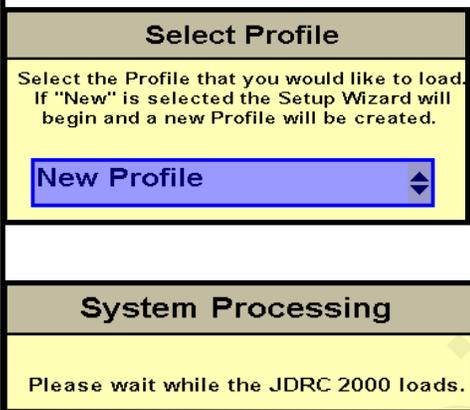


For the initial setup, start a new profile. The JDRC 2000 allows you to store 8 profiles. Be prepared to wait during this phase of the setup process. (Setup tip: If a box is grayed out, the Master Switch may be ON. Turn it OFF.)

2. Enter a Profile Name.

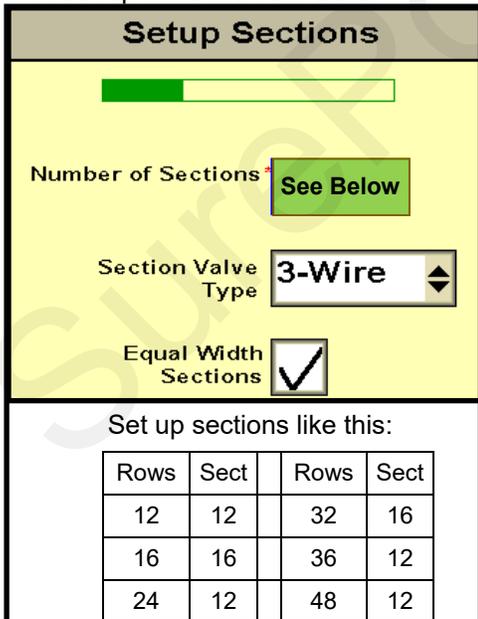
3. Machine Type > Liquid Fert Tool

4. Select Application Mode > Liquid

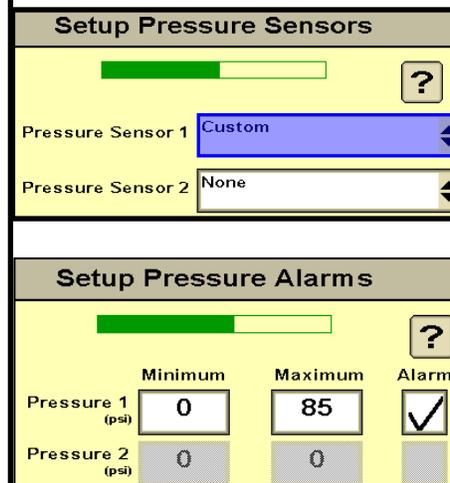


Check with Deere dealer for latest software for JDRC 2000 and display.

5. Set up Sections from table.



6. The SurePoint pressure sensor will be set up as a Custom sensor. Calibration will be done later.



### NOTICE

#### Set up Pressure Alarms

For a hydraulic pump setup, set the Maximum Pressure at 85 PSI and check the Alarm box. This will keep the pump from over-speeding if there is a restriction.

If Minimum and Maximum numbers are entered and the Alarm box is checked, those pressures will become control limits, and the system will not go below or above those limits.

Most fertilizer systems will not need a Minimum Pressure Alarm.



# QuickStart setup instructions for JDRC 2000 (1 Product) and Gen3 LS

13. Pressure Sensor must be calibrated. Enter **50.0 mv/PSI** for SurePoint 0-100 PSI, 0 to 5 volt sensor. (Unplug the sensor during the calibration process.) Put the Pressure Sensor reading in your Display Settings on the Run Screen.

Go to **Diagnostics > Readings > Pressure Sensors**. 0 Pressure Voltage should be 0.00 V. If pressure is running above 85 PSI check metering tube size and be sure both LiquiShift valves are opening.

JDRC 2000 - Setup

Implement Settings Alarms Rates

Control Valve Setup

Pressure Sensor Setup **13**

Flow/Rate Sensor Setup **14**

Auxiliary Features Setup **15**

Tank/Bin Setup

Display Settings **16**

JDRC 2000

Setup

Totals

Diagnostics

Pressure Sensor Setup

**13** Sensor-1

1. Ensure there is zero pressure at the sensor to be calibrated.  
2. Enable the sections to spray.  
3. Press the Calibration button for the desired type of calibration to begin test and set zero point.

Voltage-based Calibration

Calibrate Pressure Sensor

Sensor-1

Voltage-based

1. Ensure the sensor has 12V power supply.  
2. Enter the slope as reported by the implement pressure gauge manufacturer in the box below  
3. Select Accept

50.0 (mv/psi)

14. Set **Flowmeter Low Limit**

Flow/Rate Sensor Setup

**14** Product-1

Flowmeter Calibration

Flowmeter Pulse/Units gal

Flowmeter Low Limit (gal/min)

| Flowmeter | Low Limit |
|-----------|-----------|
| 0.6 to 13 | 0.4       |
| 1.3 to 26 | 0.8       |
| 2.6 to 53 | 1.6       |

15. Set up Pump RPM sensor

The pump is rated at **540 RPM**.

Setup Aux Functions

**15**

RPM 1 Calibration Pulses/Rev 15

RPM 1 Low Limit (rpm) 0

RPM 1 High Limit (rpm) 500

Alarm?

If pump suddenly needs more RPM to reach output, check for restrictions on the inlet side.

Display Settings, Section Switch Box, Run Page (Manual/Auto, Enable/Disable)

16. Set these 4 items in Setup > Settings > Display Settings
- Gal/min **16**
  - Pressure (PSI-1)
  - DC (%) (PWM Duty Cycle)
  - Mi/hr

Section Switch Box

1 3 5 7 9 11

2 4 6 8 10 12

17 Quick Start

All On

MANUAL AUTO

ENABLE Product ON DISABLE Product OFF

JDRC 2000 - Main

Rate Setup Quick Start Master Off

Section Switch Box (17)

0.0 (gal/ac) 3.0 (gal/ac)

Rate 1 3.0 Rate 2 5.0 Rate 3 8.0

0.0 (gal/min) 0 (psi) 0.0 (mi/hr)

0.0 DC (%)

500 (gal)

PUMP RPM

0 (rpm)

11:56am

418.6 (gal)

AUTO MODE ENABLED 0.0 (gal/ac) 20.0 (gal/ac) Rate 1 20.0 Rate 2 25.0 Rate 3 30.0

AUTO MODE DISABLED 0.0 (gal/ac) Off

MANUAL MODE DISABLED 0.0 (gal/ac) Off

MANUAL MODE ENABLED 0.0 (gal/ac) Man - +

## Tests for Initial Operation

### 17. Initial Operation in MANUAL mode:

1. Fill the system with water. For first time startup, open air bleed valve.
2. Enter a Test Speed at Setup > Implement > Test Speed.
3. Navigate to MANUAL MODE on the JDRC 2000 Run page.
4. Height switch must be DOWN (or uncheck Height Switch box).
5. Turn on Master Switch. Press and hold (+) to increase flow. If you get "SOLUTION PUMP DRY", see next box below.
6. Monitor Flow (gal/min), PSI, DC, Pump RPM. Only Valve A will be on unless pressure exceeds 70 PSI. Open Valve B with the manual toggle switch by the valve.
7. Go to Section Switch box (see previous page). Turn Sections OFF and ON. Setup > Implement >
8. Turn Master Switch OFF.

## NOTICE

Running these tests will dispense liquid. Be sure it is safe to dispense the liquid at this time.

Height Switch

Test Speed 

**OPTIONAL MANUAL PUMP OPERATION:** If you get "SOLUTION PUMP DRY", start with this:

**"Solution Pump Dry" will not hurt the SurePointpump.**

Go to **Diagnostics > Tests > Calibrate PWM LIMITS**. This is a place where you can manually run the pump without the system shutting down if it doesn't read flow immediately. When you press START, the section valves will open. Press and hold (+) to increase the PWM Duty Cycle. Hydraulic pumps will need to be around 30% DC to get flow. When priming the pump, it will help to open the air bleed valve and run the pump faster to get it primed and to get the air out.

You can also run the system manually at **Diagnostics > Tests > Control/Section Test**. When running the system here, you will get a *Solution Pump Dry* warning if the system doesn't read flow. This will not hurt the SurePointpump.

**TROUBLESHOOTING TIP: Pump Won't Run**—Start the Calibrate PWM Limits Test. Press and hold the (+) button to run the PWM Duty Cycle (DC) to 100%. With a voltmeter check voltage at the 2-pin PWM connector. Should have 12-13 volts. If there is voltage here, but pump won't run, check the pump as described next:

**Hydraulic Pump**—On the hydraulic valve block, pop up the Manual Override button (red knob on top of solenoid). If unit has been in the field, you may need to loosen the dirt to move the knob. In cab, turn hydraulic flow to very low. Engage hydraulics. Pump should begin turning. Slowly increase hydraulic flow to speed up pump. Do not overspeed pump. When finished testing, lock the Manual Override button in the down position for field operation.

### 18. Initial Operation in AUTO mode: (Could also do **Diagnostics > Nozzle Flow Check**).

1. Enter a Test Speed at Setup > Implement > Test Speed. **Always run a Section Test or Calibrate PWM Limits Test first to be sure valves open.**
2. Navigate to AUTO MODE on the JDRC 2000 Run page. Select a Rate.
3. Height switch must be DOWN (or uncheck Height Switch box).
4. Turn on Master Switch. **(NOTE: Pressure will be much less with water than with heavier, thicker fertilizer.)**
5. Monitor Actual Rate (gal/ac), Flow (gal/min), PSI, DC, Pump RPM.
6. Go to Section Switch box (see previous page). Turn Sections OFF and ON.
7. Turn Master Switch OFF.

Check out the other tests available at **Diagnostics > Tests**. Check out system information at **Diagnostics > Readings > .**

TIPS: (1) Go to **Diagnostics > System Summary** for a quick look at the System Settings.

(2) Go to **Diagnostics > Product Summary** for a quick look at the settings for each product setup.

(3) Go to **Diagnostics > Readings** for important information and feedback: *Hardware/Software, Delivery System, Section Status, System Voltage, Pressure Sensors, RPM Sensors and more.*

(4) See the *JDRC 2000 PumpRight System Manual (396-3583Y1)* and *Gen3 LiquiShift Manual (396-4608Y1)* for more information on safety, setup, and operation. Available at [www.surepointag.com](http://www.surepointag.com).

## WARNING

The operator is responsible for knowing and understanding the safe operation of this equipment. Systems with hydraulic equipment require additional safety precautions to prevent serious injury and/or death. See the full SurePointManual and the *John Deere Rate Controller 2000 Operator's Manual* for important safety information and setup and operating instructions. Go to [www.surepointag.com](http://www.surepointag.com) for the SurePoint manual. MAW