



QuickStart Setup Instructions for JDRC 2000 & GX12HP Injection System

PLEASE NOTE: Your setup may vary. Not all screens are shown. See JD JDRC 2000 Operator's Manual for safety information and additional setup/operating information.

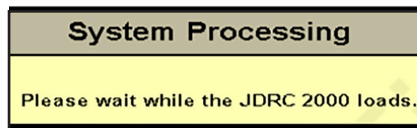
PROFILE SETUP

1. Navigate to the Profile Setup

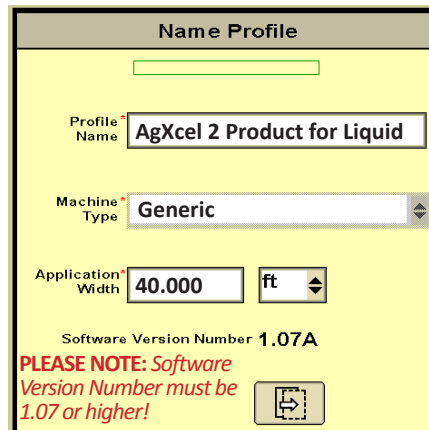


For the initial setup, start a new profile. The JDRC 2000 allows you to store 8 profiles. Be prepared to wait during this phase of the setup process....**A LONG TIME!**

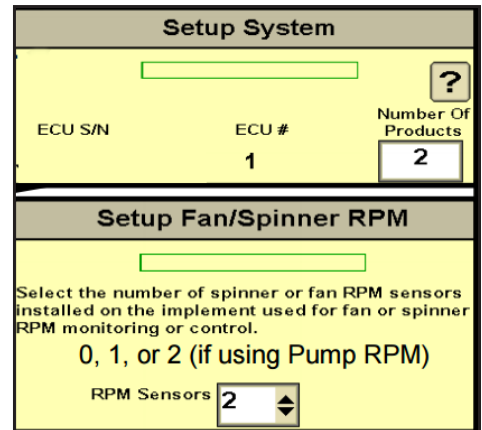
2. Enter Profile Name



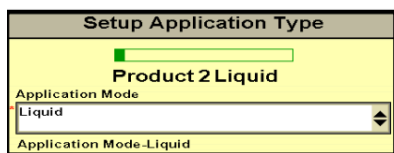
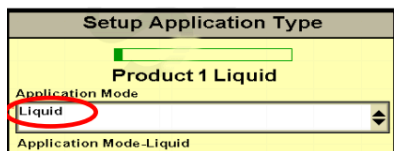
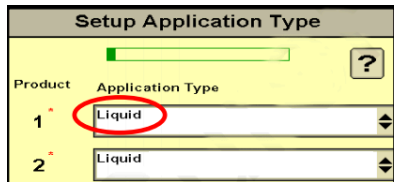
3. Machine Type -> AgXcel 2 Product for Liquid



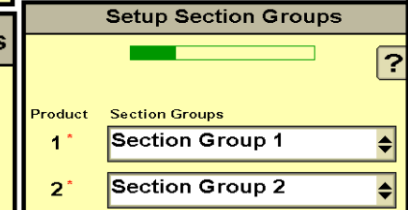
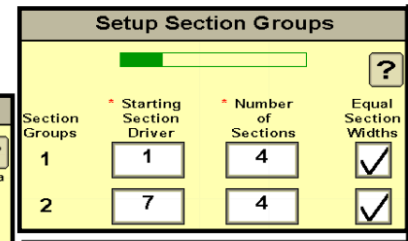
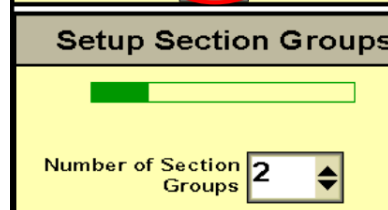
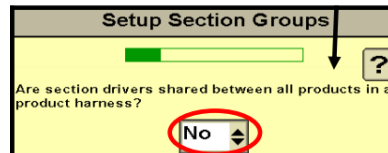
4. Setup System and RPM Sensors



5. Select Application Type & Application Mode.



6. Setup Section Groups. Section Group 2 will start with Section Driver 7. Other Section Setups are possible. The standard AgXcel harness has Sections 1-6 with Product 1, and Sections 7-12 with Product 2.





QuickStart Setup Instructions for JDRC 2000 & GX12HP Injection System

7. The AgXcel Pressure Sensor will be setup as a Custom sensor. Calibration will be done later.

Setup Pressure Sensors

Pressure Sensor 1: Custom

Pressure Sensor 2: Custom

Pressure Sensor 3: None

Pressure Sensor 4: None

Setup Sensor Assignment

Pressure Sensor 1

Product 1: ☒

Product 2: ☐

Setup Pressure Alarms

	Minimum	Maximum	Alarm?
Pressure 1 (psi)	0	0	<input type="checkbox"/>
Pressure 2 (psi)	0	0	<input type="checkbox"/>

Sensors (such as pressure, pump RPM, spinner RPM) do not need to be assigned to a specific product if they are just being used to monitor a device and not to control it. AgXcel recommends that you NOT assign pressure and RPM sensors to a specific product. However, there may be times when you want to assign the sensor to a product.

For a typical setup, leave these 3 screens as shown on the left.

8. Optional Aux Functions - RPM Sensors

Setup Aux Functions

RPM 1 Calibration Pulses/Rev: 15

RPM 1 Low Limit (rpm): 0

RPM 1 High Limit (rpm): 0

RPM 2 Calibration Pulses/Rev: 15

RPM 2 Low Limit (rpm): 0

RPM 2 High Limit (rpm): 0

Setup RPM Sensor Assignment

RPM Sensor 1

Product 1: ☒

Product 2: ☐

If using RPM sensor for Product 1

(See Display Settings for instructions on how to show pressure and RPM for a product on the product Run Screen).

On the AgXcel wiring harness indicated above, Pressure Signal 1 and RPM Sensor 1 are on the Product 1 connector. Pressure Signal 2 and RPM Sensor 2 are on the Product 2 connector.

The AgXcel hydraulic pump with an RPM Sensor is 15 pulses / rev as shown. If monitoring something else, enter the pulses / rev for that encoder or sensor.

9. Control Valve Setup

Valve Response Rate: (Adjust as needed)

GX5 (hydraulic) 80
GX2 (electric) 100
Synergist 80
GX12HP 80

Control Deadband: Start at 2

Low Limit (Adjust in field as needed)

GX5 (hydraulic) 25
GX2 (electric) 10
Synergist 10
GX12HP 10

Pump Startup (Adjust in field as needed)

GX5 (hydraulic) 40
GX2 (electric) 40
Synergist 10
GX12HP 10

Setup Control Valve

Product 1 Liquid

Control Valve Type: PWM Close

Valve Response Rate (1-100): 80

Control Deadband (%): 2

If the pump is slow to respond to rate or speed changes, increase Valve Response Rate 10hz at a time. If product oscillates around the rate going across the field, reduce Valve Response Rate.

Setup PWM

Product 1 Liquid

Coil Frequency (Hz): 100

High Limit (%): 90.0

Low Limit (%): 10.0

PWM Startup (%): 10.0

NORMAL OPERATION

37.1 DC%

PWM STARTUP

10%



QuickStart Setup Instructions for JDRC 2000 & GX12HP Injection System

10. Enter appropriate Flowmeter Cal.

CAUTION: When choosing **Pulses/Unit**, ensure that you choose **GAL**. When selecting GAL with the Flow Cal. entered, the controller will read in Ounces/Acre.

11. Tank & Fill Flowmeter Setup

Check **Tank Fill Monitor** box if using a fill flowmeter. Then enter **Tank Fill Flowmeter Calibration (Units are 10 gal.)**

13. Set Rates & Rate Smoothing as desired.

Check the **Decimal Shift** box to enter rates with one more decimal point (such as 0.25 gpa).

14. Set Off Rate Alarm as desired.

The **Min. Flow Rate** box will not be present if a pressure sensor has been assigned to this product. Typically, **Min. Flow Rate** will be left at 0.

Number of Pumps	Flow Calibration Number
1 Pump	84
2 Pumps	42
3 Pumps	28
4 Pumps	21

12. Fill Flowmeter Cal Setup

13. Pressure Sensor - When using an AgXcel pressure sensor the steps must be performed below. AgXcel uses a 0 - 100 PSI pressure transducer and a calibration number of **50.0 mv/PSI** is to be used. To ensure that the sensor is properly calibrated, please make sure that the M12 connector with a **GREEN lit LED** is **DISCONNECTED** from the sensor. this will ensure that the sensor does not detect any pressure in the system. 0 Pressure = 0.00 V

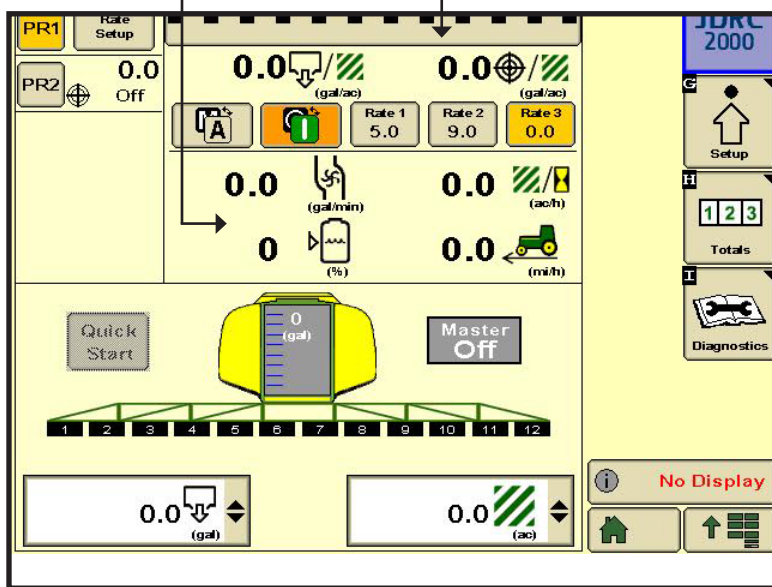
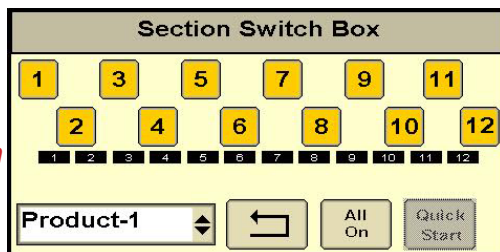


QuickStart Setup Instructions for JDRC 2000 & GX12HP Injection System

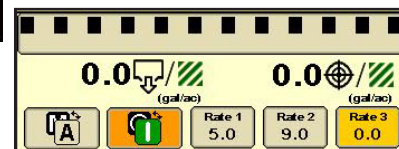
Set these 4 items in Setup -> Settings -> Display Settings

- Gal/min
- Pressure (PSI)
- DC(%) (PWM)
- Mi/hr

Press on this bar to open Section Switch Box



Auto Mode



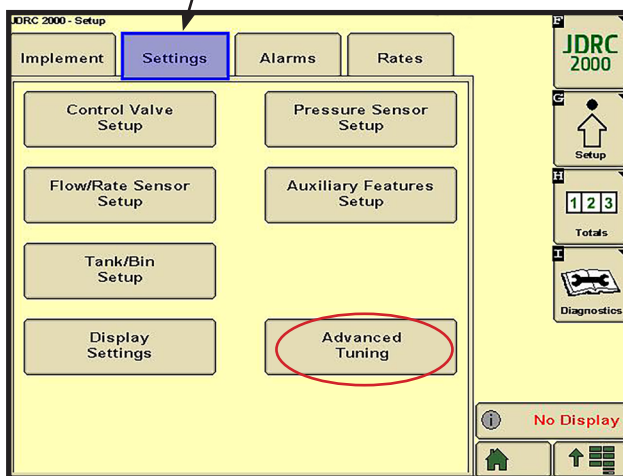
System ENABLE / DISABLE



MANUAL
AUTO



Press and HOLD the SETTINGS tab for about 10 seconds until the Advanced Tuning button displays



15. Advance Tuning - Many times the Control Valve Settings are not enough to appropriately control the AgXcel EMD PWM Intelligent Module. Therefore, additional fine tuning using the JDRC2000 under the Advance Tuning section is required. On the AgXcel GX2 or Synergist system the PID values must be modified. For more in-depth details of this feature press the ? button.

Default Settings are:

P = 50 D = 50

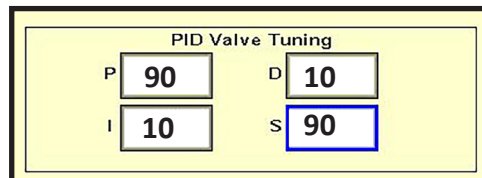
I = 20 S = 50

PID Valve Tuning for AgXcel GX2 Electric System:

Set P = 90 D = 10

Set i = 10 S = 90

Setting P = 100 and S = 100 will ensure the quickest response from the AgXcel GX2 Electric System





AgXcel John Deere GS 2000 Two Product Harness

Agxcel #5 5457
320-430 Rev.B

47-PIN MALE



HC GROUND
SENSOR GROUND

HC GROUND
HC POWER (15A)
HC POWER (15A)
PRESSURE 01
PRESSURE 02

FLOWMETER 01

FLOWMETER 02

MASTER ON/OFF

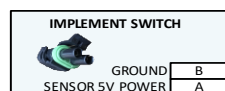
SENSOR 5V POWER
PRODUCT 01 PWM (-)
PRODUCT 01 PWM (+)
PRODUCT 02 PWM (+)
PRODUCT 02 PWM (-)

SECTION 13
SECTION 14
SECTION 15
SECTION 16
IMPLEMENT SWITCH INPUT

SENSOR 12V POWER
SENSOR GROUND

SECTION 01
SECTION 02
SECTION 03
SECTION 04
SECTION 05
SECTION 06
SECTION 07
SECTION 08
SECTION 09
SECTION 10
SECTION 11
SECTION 12

Version 1.1
Revised 06-28-18



Wire Size: 18G
Length: 25in

PRODUCT 01



01 VALVE GROUND
02 VALVE GROUND
03
04 SECTION 01
05 SECTION 02
06 SECTION 03
07 SECTION 04
08 SECTION 05
09 SECTION 06
10 SECTION 07
11 SECTION 08
12
13
14

15 PRODUCT 01 PWM (-)
16 PRODUCT 01 PWM (+)
17
18 MASTER ON/OFF
19
20

21 FLOWMETER GROUND
22
23
24

25 FLOW 5V
26
27

28 FLOW SIGNAL
29 SENSOR GROUND
30 SENSOR 12V POWER
31 PRESSURE 01
32
33
34
35

36 VALVE POWER (15A)
37 HC POWER (15A)

PRODUCT 02



01 VALVE GROUND
02 VALVE GROUND
03
04 SECTION 09
05 SECTION 10
06 SECTION 11
07 SECTION 12
08 SECTION 13
09 SECTION 14
10 SECTION 15
11 SECTION 16
12
13
14

15 PRODUCT 02 PWM (-)
16 PRODUCT 02 PWM (+)
17
18 MASTER ON/OFF
19
20

21 FLOWMETER GROUND
22
23
24

25 FLOW 5V
26
27

28 FLOW SIGNAL
29 SENSOR GROUND
30 SENSOR 12V POWER
31 PRESSURE 02
32
33
34
35

36 VALVE POWER (15A)
37 HC POWER (15A)



AgXcel John Deere Green Star GS2/GS3 Integration Harness 37-Round Pin to Twin 16-Round Pin "Y" Connector

Agxcel #53593
309-524

37-PIN MALE



Wire Size: 18G
Length: 3ft

VALVE GROUND	01
VALVE GROUND	02
VALVE POWER (15A)	03
SECTION 01	04
SECTION 02	05
SECTION 03	06
SECTION 04	07
SECTION 05	08
SECTION 06	09
SECTION 07	10
SECTION 08	11
SECTION 09	12
SECTION 10	13
	14
PWM (-)	15
PWM (+)	16
	17
	18
SECTION 12	19
SECTION 11	20
FLOWMETER GROUND	21
	22
	23
	24
	25
	26
FLOWMETER	28
	29
PRESSURE SIGNAL	31
	32
	33
	34
	35
HC POWER (15A)	36
HC POWER (15A)	37

SECTIONS



01	VALVE GROUND
02	SECTION 02
03	SECTION 03
04	SECTION 04
05	SECTION 05
06	SECTION 06
07	SECTION 07
08	SECTION 08
09	SECTION 09
10	SECTION 10
11	SECTION 11
12	SECTION 12
13	PRESSURE SIGNAL
14	VALVE POWER (15A)
15	SECTION 01
16	VALVE POWER (15A)

PUMP



01	GROUND
02	
03	PWM (+)
04	PWM (-)
05	
06	SECTION 01
07	
08	
09	PRESSURE SIGNAL
10	
11	FLOWMETER GROUND
12	
13	FLOW SIGNAL
14	
15	
16	VALVE POWER (15A)

Revised 1.1
Created 07-02-18



AgXcel Channel Integration Harness (PWM,Flowmeter,Pressure)

Agxcel #53697
309-506

16-PIN ROUND CONNECTOR TO NH3



Wire Size: 18G
Length: 10ft

GND	01
	02
Servo (+) PWM	03
Servo (-) PWM	04
Flow 5V	05
12V Sensor Power	06
Sensor GND	07
	08
Pressure Signal 1	09
Pressure Signal 2	10
Flow GND	11
	12
Flow Signal	13
	14
MASTER ON/OFF	15
Power	16

Version 1.0
Created 07-2-18

