



FERTILIZER APPLICATION EQUIPMENT

John Deere GreenStar™ Dry Rate Controller

Quick Setup Guide for Loftness F810/F1210/L1230 spreaders

Model Number:	
Serial Number:	
Date of Purchase:	





Set-up

Follow the procedures below to set up the John Deere GreenStar[™] Dry Rate Controller.

Setting the Implement Name

Setting the Implement Name

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GreenStar Dry Rate C Implement	System	P Alarms	Lotness F810 Display Smoothing		GRC DRY
Pull-behin	d Spreader		¢		
Loftness I	10 F810		÷		Impl. Setup
New Number of Bins	Rename	Remove	Disable This GDC		Prod. Setup
			19122 (5912)		Calibration
					Totals
				† :	Diagnostics

In the "Implement Name" field, enter the spreader model:

- Loftness F810
- Loftness F1210
- Loftness L1230

Set the "Number of Bins" to: 1

Select the "System" tab when complete.

Bin Setup



Select the "Bin 1 System" icon.

Bin 1 Setup

🖻 ISOBUS VT 👔 🚯	_	-	× (
Bin 1 Se	etup		
Conveyor Control Valve Type	VM Close	÷	
Conveyor Control Valve Calibration	PWM Settings		
Conveyor Speed Sensor Calibration	180		
Heaped Bin Capacity (ft^3)	267		
Bin Level Switch Installed			
Cancel		Accept	
			†=

"Conveyor Control Valve Type":

- All models, PWM Close

Set-up (Cont'd)

Bin Setup (Cont'd)

Bin 1 Setup (Cont'd)

"Conveyor Speed Sensor Calibration":

- for F810 models: 180
- for F1210 models: 360
- for L1230 models: 540

"Heaped Bin Capacity":

- F810 models: 266
- F810 models: 333
- F1210 models: 399
- L1230 models: 267

Select the "PWM Settings" icon when complete.

Bin 1 PWM Settings

Y is overshoot reduction, range is 1-9

- System overshoots target, *increase* value.
- Control is slow to adjust, *reduce* value.
- Z is control deadband, range 1-9
 - To make more responsive to error, *reduce* value.
 - To make more accepting of error, *increase* value

"Coil Frequency": 122

"High Limit" - Limits max apron speed may be set using **Calibrate PWM Limits** icons:

- All models, 190

"Low Limit" - Limits min apron speed may be set using **Calibrate PWM Limits** icon:

- All models, 30

Select the "Accept" icon when complete.

90' - 3"gate	<i>i</i> (_	×
	PWM	Settings		
_				
Conti Ca	rol Valve libration	1533		
Fr	Coil equency	122		
	High Limit	190	Calibrate PWM	
	Low Limit	30	Limits	
% Cancel			Accept	
				+=

"Control Valve Calibration" (XXYZ format):

- All models, 1533
- XX is valve speed and adjusts response rate, range 1-99
 - Valve too slow, *increase* value.
 - Valve too fast/constantly fluctuation, *reduce* value.



Verify the Bin 1 Setup.

Select the "Accept" icon when complete.

Set-up (Cont'd)

Spinner Setup



Select the "Spinner Setup" icon.

Spinner Setup

150BUS VT 👔 🔂	×
Spinner Setup	
Spinner Control Valve Type PWM Close	
Spinner Control Valve Calibration PWM Settings	
Spinner Speed Sensor	
Spinner Speed Sensor 20 Calibration	
Cancel	
	+==

"Spinner Control Valve Type":

- All models, PWM Close

"Spinner Speed Sensor Installed":

- Check the box

"Spinner Speed Sensor Calibration":

- All models, 20

Select the "PWM Settings" icon when complete.

Spinner PWM Settings

150 F810 - 90'	ISOBUS VT 👔 🕻		_	×
F	PWM	Settings	;	
	Control Valve Calibration	1533		
	Coil Frequency	122		
	High Limit	160	Calibrate PWM	
	Low Limit	90	Limits	
	% Cancel		Accept	
				+==
				T-=

"Control Valve Calibration" (XXYZ format):

- F810: 1533
- F1210: 1533
- L1230: 5033
- XX is valve speed and adjusts response rate, range 1-99
 - Valve too slow, *increase* value.
 - Valve too fast/constantly fluctuation, *reduce* value.
- Y is overshoot reduction, range is 1-9
 - System overshoots target, *increase* value.
 - Control is slow to adjust, *reduce* value.
- Z is control deadband, range 1-9
 - To make more responsive to error, *reduce* value.
 - To make more accepting of error, *increase* value

"Coil Frequency":

122

Set-up (Cont'd)

Spinner Setup (Cont'd)

Spinner PWM Settings (Cont'd)

"High Limit" - Limits max apron speed may be set using Calibrate PWM Limits icon:

- F810: **160**
- F1210: 160
- L1230: **255**

"Low Limit" - Limits min apron speed may be set using **Calibrate PWM Limits** icon:

- F810: **90**
- F1210: 90
- L1230: 120

Select the "Accept" icon when complete.

Verifying Bin 1 Setup

🗐 ISOBUS VT (× 810 - 90' - 3"gate **Spinner Setup** Spinner Control Valve Type PWM Close \$ er Control Valve Calibration PWM Settings er Speed Sen Installed ner Speed Senso 20 Calibration Accept % Cancel +==

Select the "Accept" icon when complete.

Alarms



Select the "Alarms" tab.

Select the "Bin 1 Alarms" icon.

Configuring Bin 1 Alarms



"Application Rate (% +/- Target Rate)":

- Check the box
- All models value: 20
- All models value: 20

Set-up (Cont'd)

Alarms (Cont'd)

Configuring Bin 1 Alarms (Cont'd)

"Low Bin Level (%)":

- Check the box
- All models value: 20

"Bin Level Switch":

- Box Unchecked - no bin level sensor installed

Select the "Accept" icon when complete.

Display Smoothing



Select the "Display Smoothing" tab.

"Bin 1" (all models):

- **Check** the box
- Rate Smoothing: 3%

"Spinner" (all models):

- Check the box
- Rate Smoothing: 3%

Select the "Prod. Setup" icon when complete.

Product Information



Select the "Product Information" tab.

"Set Product Name": Test Fert 90ft

"Product Type": Fertilizer

"Application Units": Ibs

"Spread Width (ft)": 90.00

"Target Spinner Speed (RPM)": Refer to the chart in the Owner's Manual

"Product Density (lb / ft^3)": 60.0

"Rate Mode": Predefined

"Spinner Frame (in)": Value does not matter

"Predefined Rates":

- Data Field 1: 100.0
- Data Field 2: 200.0
- Data Field 3: 300.0

Select the "Product Bin Setup" tab when complete.

Set-up (Cont'd)

Product Information (Cont'd)

NOTE: Controller is capable of storing Multiple Products. Loftness recommends to list spread width as part of product name so multiple spread widths can be readily selected for use without making adjustments to spreader settings. Loftness also recommends using "Test Fert XX ft." for making machine settings, adjustments, and calibrations since Task Controllers typically limit each task and product to once per year for a field. In situations where multiple applications with the same product are necessary using names like "Urea 90 ft preseason", "Urea 90 ft in season", "DAP 90 ft post season" can differentiate products and passes.

Product Bin Setup



"Enabled?":

- Check the box (all models)

Select the "Bin 1 Setup" icon when complete.

Bin 1 Product Setup

鼞 ISOBUS VT (×
F810 - 90' - 3"gate			
Bin 1 Proc	luct Setup		
Product Name	Test - Fertilizer	¢	
Feed Gate Opening (in)	1.0		
CFR (ft^3/rev)	0.1590	Calibrate CFR	
% Cancel		Accept	
			+=

"Product Name": Test Fert 90ft

"Feed Gate Opening (in)":

- All models = 1
- Setting value to 1 allows CFR numbers from chart to be directly entered
- Using actual gate opening requires dividing number in chart by gate opening

"CFR (ft^3/rev)":

- See chart

The "Spreader Apron" may be calibrated using the *Calibrate CFR* icon.

Select the "Accept" icon when complete.

Set-up (Cont'd)

Product Summary

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GreenStar Dry Rate Control Product Information	Product Setu Product Bin Setup	Product Summary	F810 - 90' - 3"gate	GRC DRY
Bin Enabled	Enabled			Û
Product Name Product Density (lb / ft^3)	Test - Fertilizer 60.0			Impl. Setup
CFR (ft^3/re∨)	0.1590			Prod. Setup
Feed Gate Opening (in)	1.0			Calibration
Rate Mode Spinner Frame (in)	4.0	\$ 88	790	123 Totals
Spread Width (ft)	90.00	RPM Values are b Bin 1,	ased on: Test - Fertilizer	Diagnostics
				+=

Ignore any warnings and select the "Product Summary" tab.

A summary of settings will appear.

When complete, select the "GRC-DRY" icon.

GreenStar™ Dry Rate Controller - Main Page



Select the "Bin Level" icon.

Refill Bin

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F810 - 90' - 3"gate	Refill Bir	n 1		
	New Bin Level (Ibs)	10000		
% Cancel			Accept	
				+=

"New Bin Level (lbs)": 10000

NOTE: Max bin level is calculated.

After setting the New Bin Level, select "Accept".

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GreenStar Dry Rate Contro Master Off	Iler - Main -10000 (ib)		F810 - 90' - 3"ga Spinner On	1	GRC DRY
لي. Bhac	0.0		<u>↓⊗⊗</u> _{RPM} 0	•	Impl. Setup
€ /∭ b/ac	100.0		⊕⊗⊗ ^{RPM} 790		Prod. Setup
Bin Charge	Bin On				Calibration
5.0	, , , , , , , , , , , , , , , , , , , 	54.4	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		123
5.0		5.0	ac/h		
				†	Diagnostics

Spreader is now configured and ready to test run.

Select the "Spinner On" icon to turn the spinners on.

Select the "Master Switch" toggle between *Master On* and *Master Off*.



www.loftness.com

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