



## YP825AR Monitor Quick Start Guide

Used with:  
• YP825AR



*When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!*

## General Information

These instructions explain how to install and configure a seed monitor console for a model YP825AR planter.

These instructions apply to a configuration of:

DICKEY-john® PM300 .....	2
DICKEY-john® IntelliAg® .....	5

## Models<sup>a</sup> Covered

YP825AR-0822	8 Single Row 22 Inch (55.9 cm) Spacing
YP825AR-0830	8 Single Row 30 Inch (76.2 cm) Spacing
YP825AR-0870	8 Single Row 70 cm (27.6 Inch) Spacing
YP825AR-0875	8 Single Row 75 cm (29.5 Inch) Spacing
YP825AR-16TR30	8 Twin Row 30 Inch (76.2 cm) Spacing
YP825AR-16TR75	8 Twin Row 75 cm (29.5 Inch) Spacing

## Related Documents

Have the current Operator Manual at hand for hitch connections and planter movements.

401-923M YP825AR Operator Manual

Have the current Rate Manual at hand for seed-specific and seed disk-specific setup data.

401-923B YP825AR Seed Rate Manual

Have the current Parts Manual at hand for parts ID.

401-923P YP825AR Parts Manual

## Console Manuals

11001-1372	DICKEY-john® PM300 manual
110011508	DICKEY-john® IntelliAg® Planter/Drill Control, User Level 1
110011501	DICKEY-john® IntelliAg® Planter/Drill Control, User Level 2&3
403-857M	Swath Command™ Operator manual
403-860M	Row-Pro™ Operator manual



Figure 1  
Available Seed Monitors

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## Tools Required

- The planter to be used.
- The tractor to be used.

a. YP825A and YP825A3P models have separate Operator manuals (401-651M and 401-652M).

## DICKEY-john® PM300 Installation

For Dickey-john® IntelliAg®, continue on page 5.

**Refer to Figure 2**

The planter's standard PM300 seed monitor system includes a console ① that needs to be mounted in the cab of the tractor to be used with the planter.

**CAUTION**

**Transport and Field Safety Risk:**

Mount the module so it is easy to monitor during planting, but does not interfere with safe operation of the tractor in the field or on public roads.

The monitor includes cables for power ②, speed sensor ③ and sensor harness ④. Installation instructions are found in the included Dickey-john® manual.

Power color code is:

- + positive: red
- negative: black

The included bracket ⑤ requires customer-supplied fasteners.

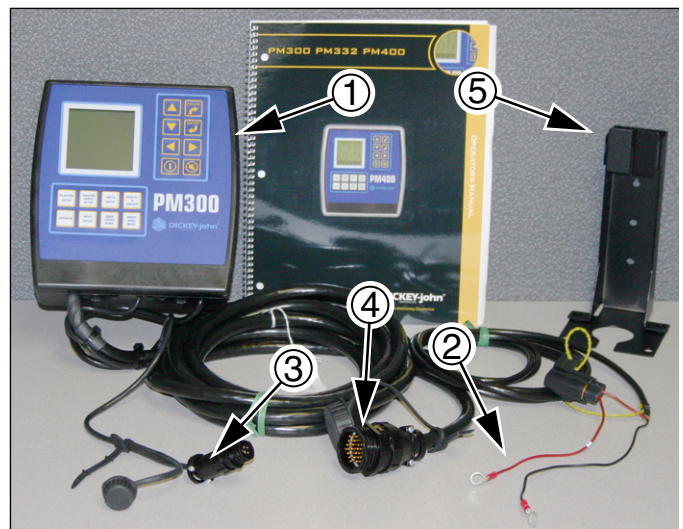


Figure 2  
PM300 Tractor Components

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### PM300 Quick-Start

The PM300 factory defaults may need to be changed to metric mode, the row configuration of a YP825AR planter, and the speed sensing used. Pages 2 through 3 describe setting:

- metric data mode,
- planter row count,
- planter (swath-averaged) row spacing, and;
- initial speed calibration.

The monitor must be connected to +12Vdc power to enter these settings (the monitor does not need to be connected to the implement harness<sup>b</sup>).

See the Dickey-john® 11001-1372 manual for setting limits and alarms.

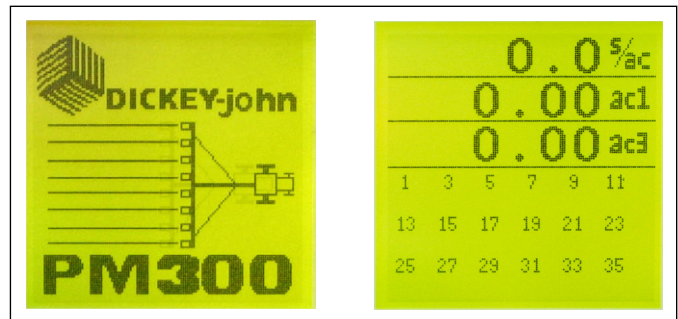


Figure 3  
Power-Up, Operate Screens

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b. If the harness is not connected, there will be nuisance errors, and the console will be unable to verify harness configuration.

## Power-Up The Console

Refer to Figure 2 on page 2

1. Connect the monitor power leads ② to a +12Vdc source. Optionally connect the monitor sensor harness ④ to the planter harness, and the monitor speed sensor lead ③ to the planter speed sensor lead. If the harnesses are not connected, expect an error screen at step 2.

Refer to Figure 3

2. Press the power On/Off key ①.  
Wait for the power-up screen to complete.  
If the next screen displayed is the Operate screen, continue at step 4.

Refer to Figure 4

3. If an error screen appears, with an alert tone, press either the Alarm Cancel (⏏) or the ESCAPE (⏏) keys to silence the alert and display the Operate screen.

## Metric Mode

The factory default is U.S. customary units (⏏)(E).  
If metric units are preferred:

4. Press the DISPLAY & SERVICE (⏏) key.
5. If the icon pair at the lower left is (⏏)(M), metric mode is already set. Skip to step 10.

Refer to Figure 5

6. Press the Down Arrow (⏏) key twice to highlight the Units (⏏)(E) icon.
7. Press the ENTER (⏏) key to modify the Units.
8. Press either the Up or Down Arrow (⏏ or ⏏) to change the large “E” to an “M” (⏏)(M) as shown in Figure 5.
9. Press the ENTER (⏏) key to save this change.

## Set Planter Row Count

The PM300 supports three row configurations pre-defined by you. You may need only one.

Refer to Figure 6 (depicting a YP825AR-16TR30 and U.S. customary units)

At first power-up, the PM300 may have an incorrect row count for your planter.

10. Press the PLANTER SETUP (⏏) key.  
Note that the Planter Configuration Indicator ▲ is under the “1” in the Configuration block 123 .  
This change is for Configuration 1.
11. Press the Right Arrow (⏏) key to highlight the Number of Rows field @ (“16” in the figure).
12. Press the ENTER (⏏) key to modify the # of Rows.

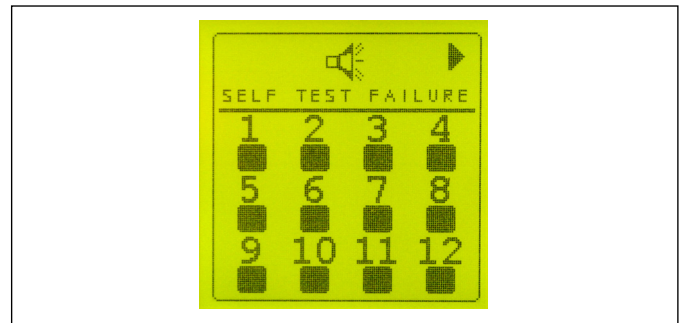


Figure 4  
Error Screen (No Harness)

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Figure 5  
Display: Metric Mode Set

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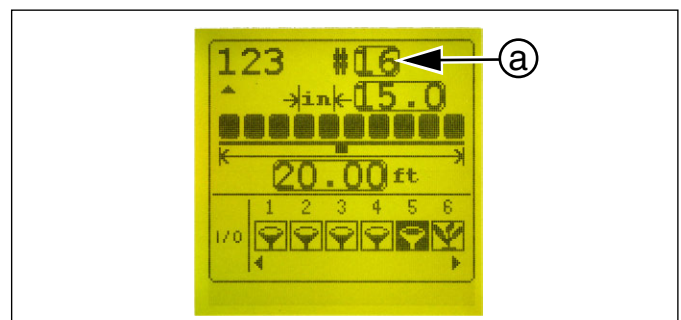


Figure 6  
Planter Row Count Setup

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**Refer to Figure 7**

13. Use the Left and Right Arrow keys (◀ or ▶) to select the digits to modify. Use the Up or Down Arrow keys (▲ or ▼) to increment or decrement. Change the row count to the table value for your planter model and operating configuration.
14. Press the ENTER (↵) key to save the correct row count.

**Set Planter Row Spacing**

15. Press the Down Arrow key (▼) to select the Row Spacing field (b).
16. Use the Left and Right Arrow keys (◀ or ▶) to select the digits to modify. Use the Up or Down Arrow keys (▲ or ▼) to increment or decrement. Change the row spacing to the value for your planter model (70 cm). Planter swath (c) ("5.60") is automatically calculated.
17. Press the ENTER (↵) key to save the corrected row spacing.

**Row Setup**

The planter row setup defaults to the number of rows detected (8), and defaults to population mode (☑) on every row. For canola, mustard and volumetric seeds, configure the rows for blockage (☑).

This completes initial setup of the PM300 console. Press the On/Off button (⏻) to power-down.

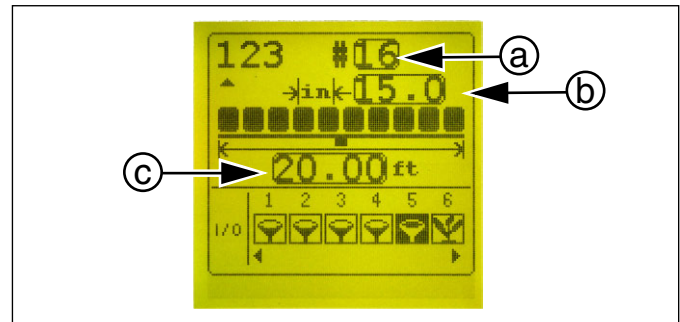


Figure 7  
Twin Row Spacing Configuration

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Note: For twin-row configurations, enter the row spacing as one half the nominal twin spacing.  
For a 30 inch twin row, enter 15 inches.  
For a 70 cm twin row, enter 35 cm.

## DICKEY-john® IntelliAg® Console Installation and Setup

### Console Installation

This optional seed monitor system includes a virtual terminal and switch panel that must be mounted in the tractor cab. As supplied by Dickey-john®, the kit includes a flat bracket for the modules, and ball swivel for mounting the bracket in the tractor.

#### NOTICE

*Mount the modules so that they are easy to monitor during planting, but do not interfere with safe operation of the tractor in the field or on public roads.*

The ball swivel includes four 10-32 screws. You or your dealer must provide the mounting holes for the screws. Your dealer may have alternate suction cup or clamping brackets available if you prefer to avoid drilling holes.

Refer to the Dickey-john® manual for harness connections. Route wiring harnesses with enough slack to allow for tractor movement, especially on articulating tractors.

### Monitor Setup


Refer to the Dickey-john® IntelliAg® Operator manual for general system information. Data specific to your planter model is provided in the following pages.

The Quick Setup Guide assumes the Virtual Terminal, Master Switch, Working Set Master Module, Working Set Member Module, and all sensors have been connected and properly installed.

Note: The separate Master switch is only required for hydraulic drive control systems. Reference the manual for instructions to assign a master switch as an auxiliary input.

### Pre-Programming Preparation

Power on vehicle via ignition switch to activate Virtual Terminal (VT). Main menu displays pre-programmed default settings.

If errors are detected (e.g., failed sensors, incorrect configuration) an alarm and code displays. Alarms are silenced by pressing the Alarm Cancel button . Refer to Dickey-john® IntelliAg® Planter/Drill Control, User Level 2&3 Manual and Planter Operator Manual for troubleshooting assistance.

### Set Regional and Units Preferences (AI100)

Touch the Virtual Terminal icon button .

Touch the Region and Units button  (globe icon).

Adjust all settings to preferences.

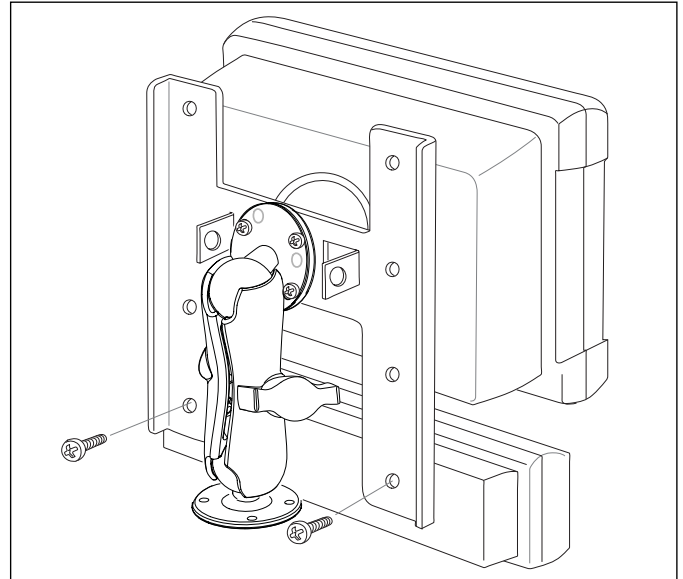







Figure 8  
Terminal and Switch Panel

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### Change User Level to Dealer Level

The system has three user levels. The system loads in User Level 1 (operator level) at every power cycle. Access to User Level 2 and 3 screens to setup constants (system configuration) requires a password.

A 6-digit password is required to change user level. Password includes the five-digit serial number found on the label of the Working Set Master module (WSMT) or on the Information screen.

1. On the IntelliAg Main Work screen, press the Diagnostics button .
2. At the Diagnostics screen, press the Information button .
3. At the Information screen, record the serial number of the WSMT.
4. Press the Password button .
5. On the Password screen, enter a 6 digits as follows:
  - enter the first digit as 2 for User Level 2.
  - enter the WSMT serial number as the next 5 digits.
6. Press the OK button . "Dealer screens on" appears at the bottom of screen confirming the password and dealer screens are activated.
7. Press the Work Screen button  to return to the Main Work screen.

### Auto Configuration

Auto Configuration Identifies modules and sensors connected to each module. Auto config is performed at the factory, but may need to be done in the field as changes are made to the system or if options are added to the base planter.

**Refer to Figure 9**

The base planter has 3 modules:

- WSMT - Working Set MasTer
- WSMB-18R - Working Set MemBer (18 Row)
- WSMB-CFM - Clutch Folding Module

A planter with Row-Pro™ will also have one:

- WSMB-DLPCM





A planter with Swath Command™ will also have one:

- WSMB-TCOM


You can change order of display (“MODULE ADDR.”), but for planters having only one of each module type for the entire implement width, re-ordering is generally unnecessary.

Verify Auto Config results are correct. Check that the correct number of rows are assigned to the correct module and number of hopper sensors are assigned accurately.


#### To Run Auto Config

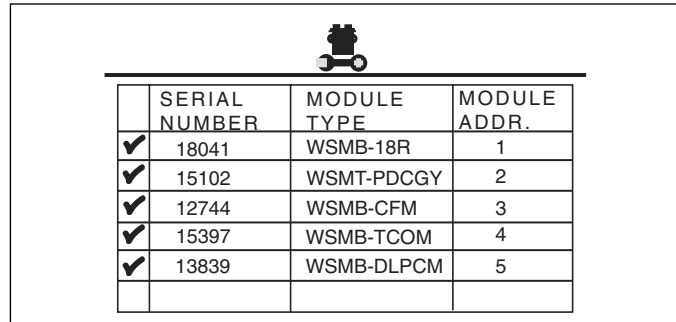
1. Press the Next Page button  until the Module Configuration button appears.
2. Press the Module Configuration button .
3. Press the AUTO CONFIG button .
4. An hour glass indicates that the system is being configured, detecting the presence of seed sensors connected to each module. They are automatically assigned to the appropriate module.
5. Refer to Figure 10
6. When Auto Config completes, press the Row Assign button  to display the Row Assignment screen to verify row count and row to module assignment.
7. Enter the number of rows assigned to each module. As the YP825AR has a single WSMB-18R, this number is always 8 or 16.

#### Row Status / Row Width Setup

At the Row Assignment screen, press the Row I/O button .

Begin entering desired values using the table at right as reference.

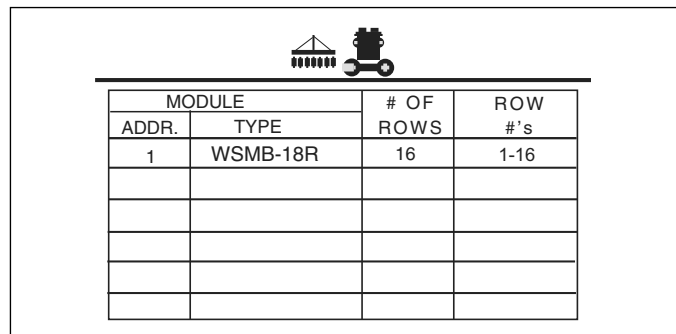
Press the Work Screen button  to return to the Main Work screen.



	SERIAL NUMBER	MODULE TYPE	MODULE ADDR.
✓	18041	WSMB-18R	1
✓	15102	WSMT-PDCGY	2
✓	12744	WSMB-CFM	3
✓	15397	WSMB-TCOM	4
✓	13839	WSMB-DLPCM	5

Figure 9  
Sample Module Config Screen

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MODULE ADDR.	TYPE	# OF ROWS	ROW #'s
1	WSMB-18R	16	1-16

Figure 10  
Sample Seed Sensor Screen

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#### Row Status / Row Width

Menu Item	Default or Value to Enter	Instructions/Definitions
Row Width	22 (in.) 70 (cm) 75 (cm) 30 (in.) 15 (in.) 35 (cm)	YP825AR-0822 YP825AR-0870 YP825AR-0875 YP825AR-0830 YP825AR-16TR30 YP825AR-16TR75
Auto Update Width	Enabled or width	If Enabled, monitor calculates swath based on row count and Row Width.
On/Off Pattern	Every Row On	See PDC manual for other patterns.
Pop/Block Pattern	Every Row Population -or- Every Row Blockage	Population: normal singulation of reliably counted seeds. Blockage: volumetric or small seeds using Canola disk.

### Material Configuration Setup (Hydraulic Drive)

For ground drive, continue at “Material Configuration Setup (Ground Drive)” on page 9.

15 different materials can be configured for use as planter controls. Reference the System Configuration section in the PDC manual for additional information.

1. At the Main Menu screen, press the Control Setup button .
2. Select and press one of the Material buttons (“MATRL 1” through “MATRL 15”).
3. Enter desired values from the table at right.
4. Press the Control Setup button  to return to the Control Setup screen.
5. Repeat steps 2-4 for additional materials.
6. Press the Channel Setup button to proceed to channel setup screen.





Continue at “Planter Control Channel Setup (Hydraulic Drive)” on page 8.

### Material Setup: Hydraulic Drive

Menu Item	Value to Enter or (default)	Instructions/Definitions
MATRL n	<i>your seed name</i>	Material Name can be customized to identify the seed and how it is planted. Creating a name allows for quick identification at the Control Setup screen.
Type	Planter Control	This value is required for monitor control of the hydraulic drive.
Units	Ks/Ac Ks/Ha w/ S/Sec	This controls the rate displayed in operation, and is itself affected by regional units settings (page 5).
Preset Method	Enable / Disabled	Enabled allows 10 user-defined target rates to be selected by Inc/Dec on the Main Work screen. Disabled changes the Inc/Dec function to a percent of target rate.
Seeds per Rev	<i>per seed disk</i>	For singulated seeds, this is the cell count of the currently installed seed disks.
Disc Low Limit	<i>per charts (5)</i>	This is an RPM value. See the seed rate manual (401-923B) for limits for the seed disk currently installed.
Disc High Limit	<i>per charts (37)</i>	
High Pop Alarm	(15%)	This is the percentage above or below the target population of the planter channel if rows are assigned to the planter channel. If rows are not assigned to a planter, this is the percentage above/below average planter population for all unassigned rows.
Low Pop Alarm	(15%)	
Product Level Alarm	<i>preference</i>	This is based on a calculation of unplanted seed remaining.
Row Fail Rate	(2/1 <sup>a</sup> )	Set to desired number of seeds per second to trigger seed sensor failure alarm.

<sup>a</sup> 2 seeds every 1 second.

### Planter Control Channel Setup (Hydraulic Drive)

1. Select Channel 1 and verify that the channel is set to Planter Control.
2. Enter desired values per the table at right.
3. After planter control setup, calibrate hydraulic valve by pressing the Valve Cal button .
4. Ensure implement is raised. With brakes locked and transmission in PARK position, start engine.
5. Engage hydraulics and run engine at normal speed until hydraulic fluid is at operating temperature.
6. Verify section clutches are turned ON.
7. Do NOT perform this step unless meters and seed disks are installed in all locations across planter row units or drive damage will occur. Press the START button . Turn the master switch to the ON position. The valve calibration will immediately start. Keep the hydraulics engaged until the calibration completes.
8. When the screen indicates calibration is complete, press the Channel Setup button  to return to Channel 1 home screen.
9. Turn the master switch OFF.
10. Press the Work Screen button  when channel configurations are complete to return to the Main Work screen.
11. Once a control channel has been established as Planter Control, any new materials established as Planter Control on the Material Setup screen will automatically be added as optional materials for Planter Control channels on the Control Setup screen.

Continue at “**Speed Set Calibration Setup**” on page 10.

### Material Setup: Hydraulic Drive

Menu Item	Value to Enter or (default)	Instructions/Definitions
Type	Planter Control	Required value
Material Name		Displays only materials that have been configured for channel type Planter Control.
Control Mode	AUTO	Auto is used in normal operating conditions calculating the rate of how the system is running. Manual mode acts as an override if application rate sensors are inoperable allowing the use of increase/decrease buttons to set the flow rate for the control. Refer to System Configuration section of PDC manual for additional information.
Drive Type	PWM	Required value
Drive Frequency	100 Hz	Required value
Input Filter	50	Required value
Gear Ratio	1.900	Required value
Sensor Constant	360	Required value
# Seed Rows	8 or 16	If all rows operating
Channel Width <sup>a</sup>	176 (in.) 560 (cm) 600 (cm) 240 (in.) 240 (in.) 600 (cm)	YP825AR-0822 YP825AR-0870 YP825AR-0875 YP825AR-0830 YP825AR-16TR30 YP825AR-16TR75
Precharge Time	+ 0.0	Typically used during startup conditions in the field, a Precharge time is a specified length of time a control channel will operate at the defined Precharge Ground Speed. Must be entered as a positive (+) number.
Delay Time	- 0.0	Length of time before the control channel will start after the master switch has been turned ON and the implement switch is in a lowered position. Must be entered as a negative (-) number.

<sup>a</sup> Calculated by default, and would match “Auto Update Width” on page 6.







### Material Configuration Setup (Ground Drive)

For hydraulic meter drive, see “Material Configuration Setup (Hydraulic Drive)” on page 7.



Note: For Ground Drive Metering, all control channels (1-4) MUST be disabled and the Monitor Only feature must be selected at the Control Setup screen.

Note: Material Name must also be selected at the Row Monitor screen to activate high and low population alarms.



1. At the Main Work screen, press the Next Page  button one time.
2. Press the Control Setup button .
3. Select and press one of the Material buttons (Material 1-15).
4. Enter desired values from the table at right.
5. Press the Control Setup button  to return to the Control Setup screen.
6. Repeat steps 3-5 for additional materials.
7. Press the Channel Setup  button to proceed to the Channel Setup screen and disable any active channels (below).

### Planter Control Channel Setup (Ground Drive)

Note: For Ground Drive Metering, all control channels (1-4) MUST be disabled and the Monitor Only feature must be selected at the Control Setup screen.

1. Press the Channel Setup button .
2. Select Channel 1 and verify that the channel is set to Disabled.
3. Press the Next Channel button  to change control channels 2, 3 and 4 to Disabled.

### Row Monitor Setup

1. At the Main Work screen, press the Row Monitor button .
2. Enter desired values per the table at right.
3. Press the Work Screen button  to return to the Main Work screen.

### Material Setup: Ground Drive



Menu Item	Default or Value to Enter	Instructions/Definitions
Type	Planter Monitor	This value is required for a meter drive not under monitor control.
Units	Ks/Ac Ks/Ha w/ S/Sec	This controls the rate displayed in operation, and is itself affected by regional units settings (page 5).
Target Population	<i>preference</i> (32.0)	1000s of seeds per acre or hectare (32,000 seeds per acre).
High Pop Alarm		Warns of a high population problem. Values are % based.
High Pop Alarm		Warns of a low population problem. Values are % based.
On/Off Pattern		Rows can be automatically turned ON or OFF according to the pattern.
Row Fail Rate	2/1 <sup>a</sup>	Set to desired number of seeds per second to trigger seed sensor failure alarm.

### Row Monitor Setup: Ground Drive

Menu Item	Default or Value to Enter	Instructions/Definitions
Material Name	See PDC instructions	Material Name only appears on the Row Monitor Setup screen when all control channels are disabled and material is set for Monitor Only. This is only used for ground drive/non-hydraulic applications to monitor population with high and low alarms. A material must be configured and selected to activate alarms.
High Alarm Delay	(5)	Desired number of seconds that high population can be above high alarm point before alarm will sound.
Low Alarm Delay	(5)	Desired number of seconds that low population can be below low alarm point before alarm will sound.
Population Adjust	(100)	Enter a % to allow for seed sensor population inaccuracies to achieve the desired population display. 100% represents true calculation.
Population Filter	(50)	Set filter value to stabilize the monitored population display. 0% is no filtering. 99% is a high level filtering.
Row Fail Rate	2/1 <sup>a</sup>	Set to desired number of seeds per second to trigger seed sensor failure alarm.

<sup>a</sup> 2 seeds every 1 second.

**Speed Set Calibration Setup**



1. At the Main Work screen, press the Speed Set button .
2. Enter desired values per table at right.
3. Press the Work Screen button  when ground speed calibration configurations are complete to return to the Main Work screen.

**Speed Set**

Menu Item	Default or Value to Enter	Instructions/Definitions
Source	(Digital Frequency)	Select Digital Frequency if radar or hall-effect is connected to WSMT actuator harness. Select CAN Ground if radar is connected to ISO tractor cab harness.
Gspd Constant	(2546)	Input based on pulse count produced by the ground speed sensor over 400 foot distance. See PDC manual for calibration instructions.
Shutoff Speed	(0.5 mph)	Set desired minimum ground speed allowed before the system shuts off.
Minimum Override	(2.0 mph)	Set to operate when actual ground speed falls below the designated value. Control will operate at this speed until actual ground speed rises above minimum override speed or actual speed drops below shutoff.
Master Sw Timeout	(10)	Set to desired number of seconds system shuts off if the master switch is turned on and there is no ground speed. Toggle master switch to restart the system and turn off alarm.
Gspd Fail Alarm Delay	(5)	Set to desired number of seconds alarm sounds after the ground speed is zero and seed flow continues. (Monitor only)
Precharge Ground Speed	(0)	Set to the desired speed the system will use when a precharge time has been enabled for a control channel (page 8). This setting will only display when a Precharge Time has been entered.
Implement Lift	(Enabled)	Implement lift switch, when enabled, displays an implement lift indicator on the Main Work screen indicating implement lift position as up or down. Control channels can be turned on and off without using the master switch.

### Accessory Sensor Setup

#### RPM Assignment

1. At the Module Configuration screen, press the Acc Assign button .
2. Press the RPM Setup button .
3. Enter number of RPM sensor monitored, if required.

Note: There must be at least one RPM sensor configured before the RPM Setup button appears on the screen.

4. Enter desired RPM values per table at right.

### RPM Setup

Menu Item	Default or Value to Enter	Instructions/Definitions
High Alarm (fan speed)	(3000 rpm)	Sets the RPM value at which a high RPM warning error is generated.
Low Alarm (fan speed)	(750 rpm)	Sets the RPM value at which a low RPM warning error is generated.
High Alarm Delay	(10 sec.)	Establishes the delay between the detection of a high RPM alarm condition and the resulting alarm display. The value is entered in seconds.
Low Alarm Delay	(10 sec.)	Establishes the delay between the detection of a low RPM alarm condition and the resulting alarm display. The value is entered in seconds.
RPM Constant	3 pulses/rev	Required value. Number of pulses per sensor revolution.
RPM Filter	0	Required value. Filters the signal out of the RPM sensor.
Disable Control on Low Alarm	Disabled	Allows for disabling of all control channels if the RPM value of the selected sensor falls below the low alarm level setting.

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