MONOSEM

MONOSEM DM-5150

Startup Guide & Manual

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Introduction

The DM-5150 monitor can monitor up to 16 rows. The rate of each sensor is compared to the average rate across all sensors and displayed on a bar graph. The monitor will alert the operator when a blockage or over/under application of a row is occurring.

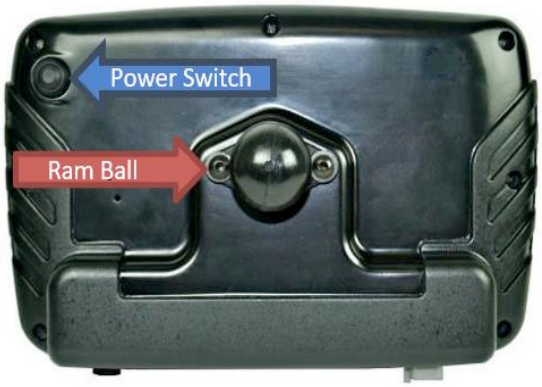
Technical Specifications

Operating Voltage	9 - 36 V DC
Operating Temperature	-20˚C - 70˚C (-4˚F - 158˚F)
Storage Temperature	-40˚C - 85˚C (-40˚F - 185˚F)
Size	27.30 cm W x 16.5 cm H x 5.08 cm D (10.75 in W x 6.5 in H x 2 in D)
Weight	2.22 kg (4.9 lbs)
Sensors	Compatible with Vanguard™ and most other seed sensors
Standard Mounting	RAM Mounts® 1½ in ball mounting
Alarm Adjustment	Five levels
Backlight Adjustment	Five increments plus Day/Night Mode

Installation

Mounting

Mount RAM 238U to back of monitor using the supplied hardware.

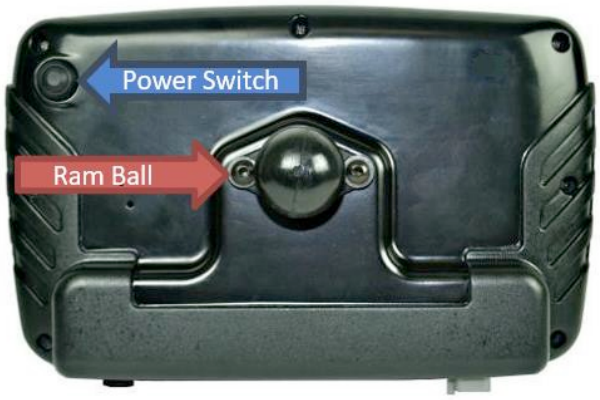


Power Connection

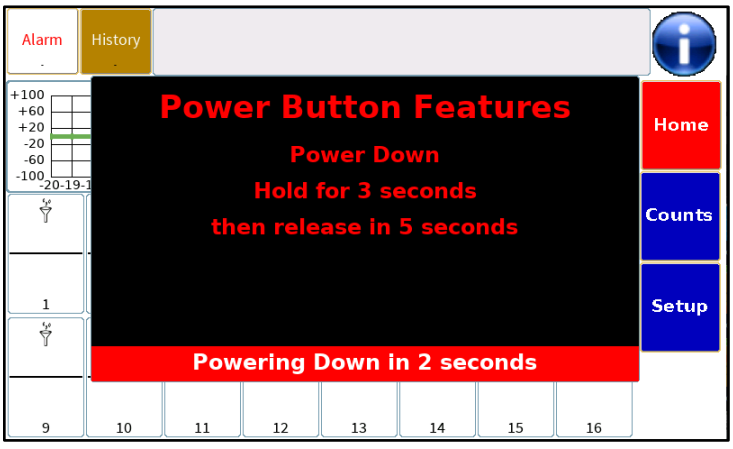
The monitor is powered through the switched power wire in a 3-pin Amp convenience port. Secure the harness so that it is routed to allow for strain relief at the connectors and has enough slack to accommodate any movement of the harness.

Operation

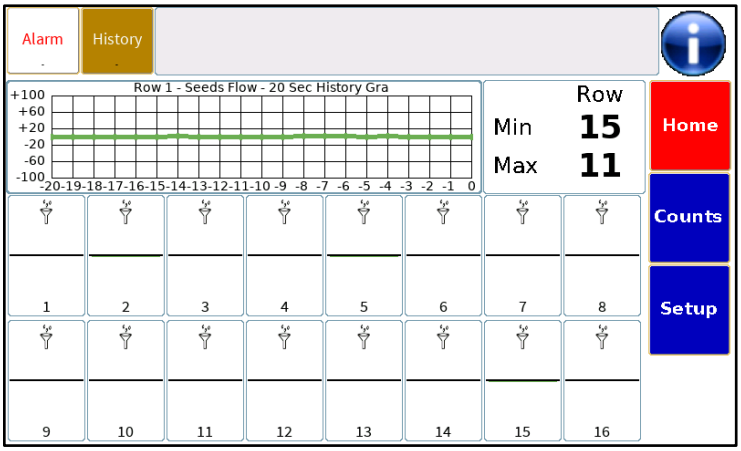
To turn on the monitor, press and release the power button on the rear of the monitor. On initial startup, the monitor will display a start-up screen and detect any sensors that are connected to the monitor. Once the sensors are detected, the Home screen will appear and display a bar graph for each sensor.



To turn off the monitor, press and hold the button on the rear of the monitor, release the button after 3 seconds. A pop-up screen shows the countdown timer. Release the button after 3 seconds to turn off the monitor.



Home Screen

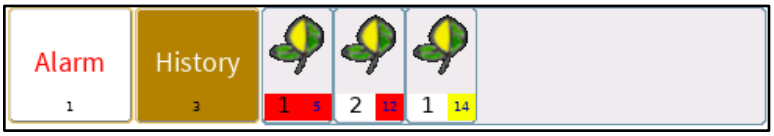


Screen Navigation

Along the right side of the screen are the navigation buttons to go to different screens in the monitor. The screen with the red background will indicate which screen is shown.

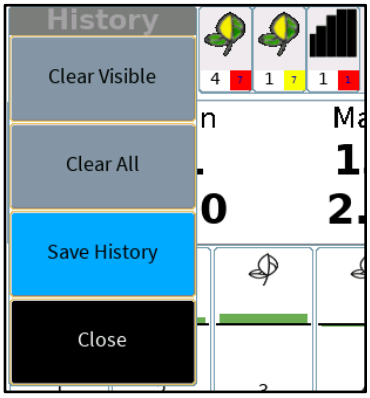
Alarm /History Area

Detected faults are displayed along the top edge of the screen. Each block indicates the row number (large number on the left-hand side of the bottom) and the number of seconds the sensor has been in an error state (small number on the right-hand side of the bottom).



History Pop-Up

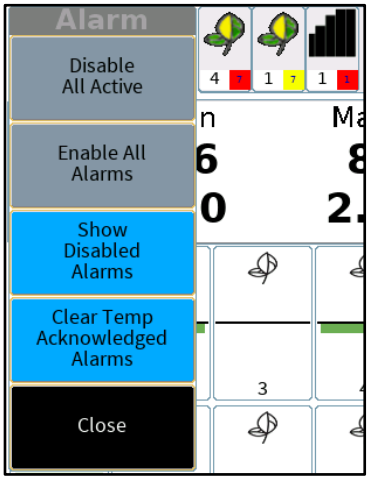
To clear the stored faults, touch the **History** button. In the pop-up screen touch the **Clear Visible** tab to clear the faults shown in the window. Previous faults that have occurred, but not cleared, will then populate the fault history area. Touching the **Clear All** button will clear all faults.



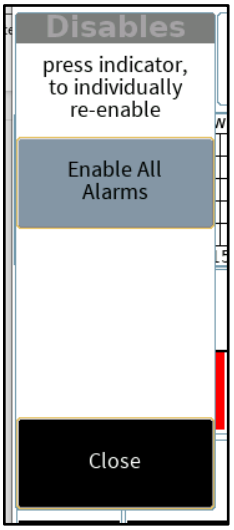
Alarm Pop-Up

The **Alarm** button controls which alarms are active or disabled from the Home screen. The **Disable All Active** option will temporarily disable and silence all active alarms until they are reactivated. **Enable All Alarms** will re-enable any rows that have been disabled.

The **Show Disabled Alarms** function will display the row and seed type of any row alarms that have been disabled. The menu will change to allow all alarms to be enabled.

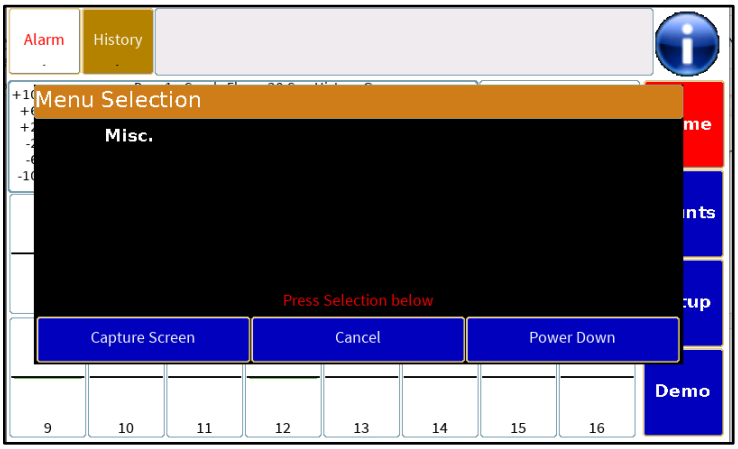


The audible alarm can be silenced by pressing anywhere in the alarm history. This will temporarily acknowledge any active faults.



Information Icon

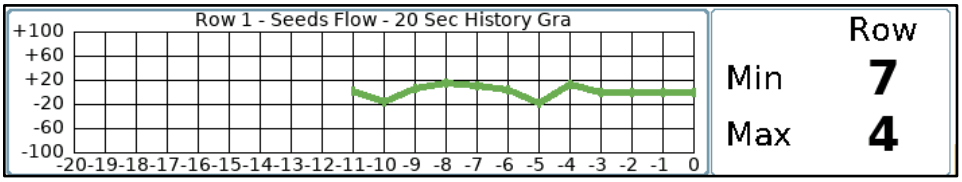
This icon will reveal a pop-up window allowing the user to capture the screen or cancel the selection.



Console

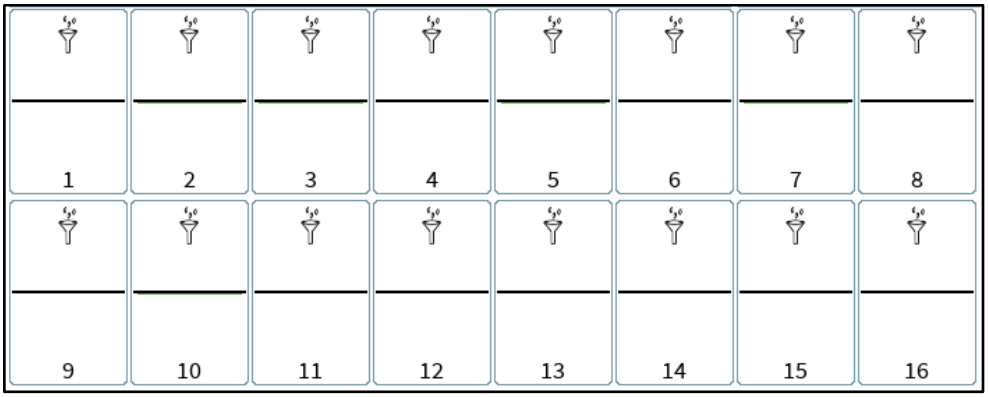
Console (Row-Specific) Information

The console area displays the row numbers for minimum and maximum rates and the 20 second historical graph of a selected row.



Bar Graph

This area provides a visual indicator of each row compared to the average rate. The center horizontal line represents the average rate across all active rows. GREEN bars above or below the center line indicate over applying or under applying but still within 50% of the average rate. If the rate is more than 50% above the average value, the bar graph will turn yellow. If the rate is more than 50 % lower than the average rate, the bar graph will turn red. If bars are not visible, then the rate is on-target.

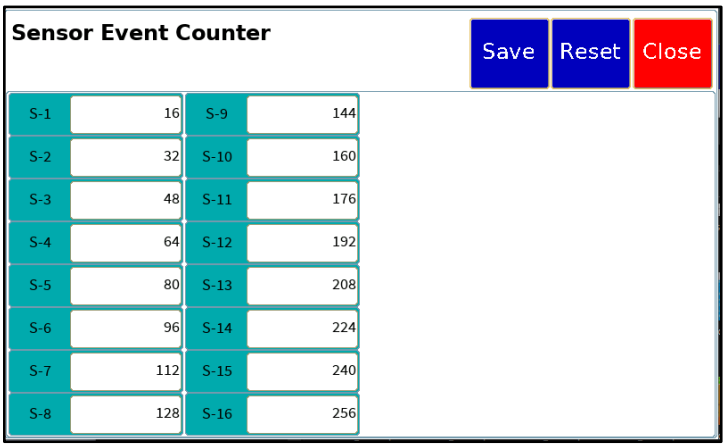


If the row is alarming, there will also be a bell displayed in the bar graph. To temporarily disable the alarm for an input, touch and hold the row for three (3) seconds.

To re-enable the alarm, touch and hold the bar graph for three (3) seconds. Temporarily disabled alarms are remembered through an all rows failed event but are not saved through a power cycle of the monitor. If all the rows are detected as not applying product, the alarm will sound 3 beeps and then shut off until flow is detected on any of the rows.

Counts Screen

The Count screen shows a running total of seeds or pulses detected by the monitor. This screen can be used for troubleshooting a faulty sensor or harness. The counts can be reset at any time and will not affect the rest of the monitor. Close will navigate back to the Home screen.



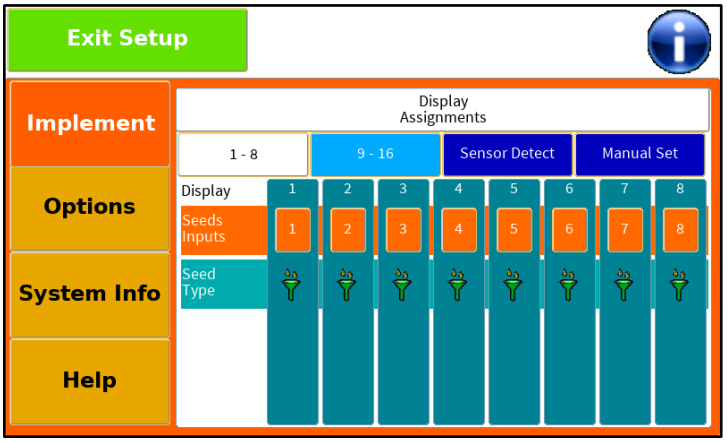
Setup

The DM-5150 will detect the number of sensors connected to the device on startup and configure the Home screen accordingly. The Setup page allows the user to customize the configuration after start up.

Implement

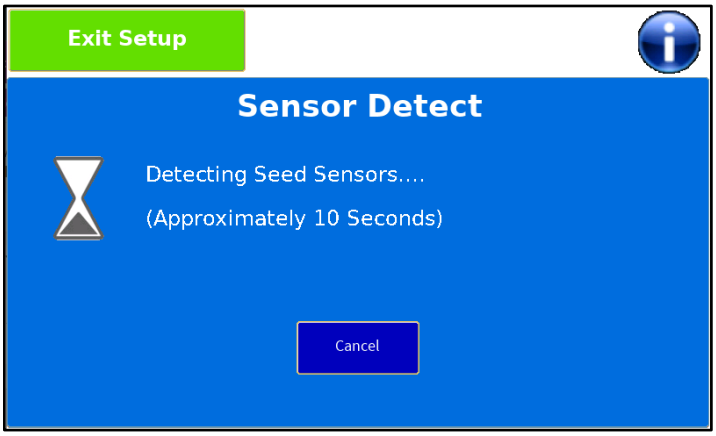
Display Assignments

The Displays Assignments page shows the row number and harness assignment for each input, in groups of 8.

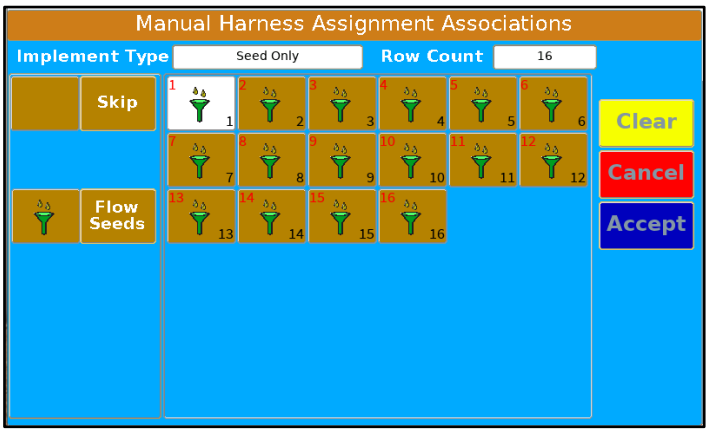


Sensor Detect

This function allows the user to manually detect sensors after the monitor has been powered on.



Manual Set



This screen allows the user to assign undetected sensors, skip inputs, and manually assign the implement harness input.

Each square represents an input into the monitor. The input assignment is indicated by the number in the lower right corner. The row number is displayed in the upper right corner.

Skipping a row will disregard any signal on that input and shift any remaining sensors on the implement to the next set of inputs.

The **Clear** button will remove any configured inputs and allow them to be setup as needed.

The **Cancel** button will exit this screen without saving any changes.

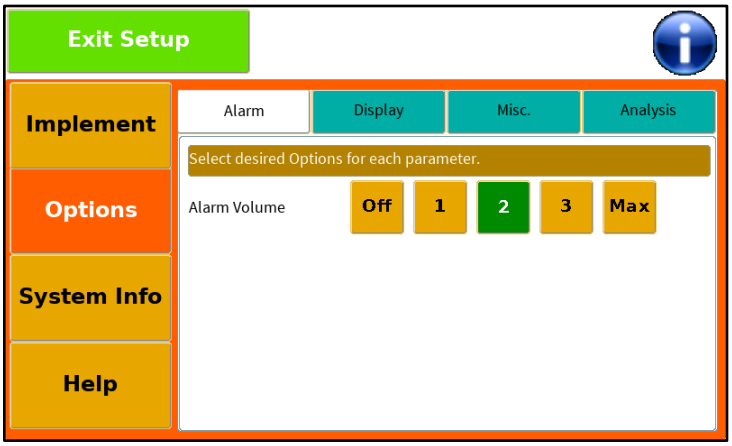
The **Accept** button will exit the screen and accept the changes.

Manual configurations will not be saved over a power cycle as the monitor detects the connected sensors at startup.

Options

Alarm

The **Alarm Volume** has five settings from off to max volume. The selected level has a green background.

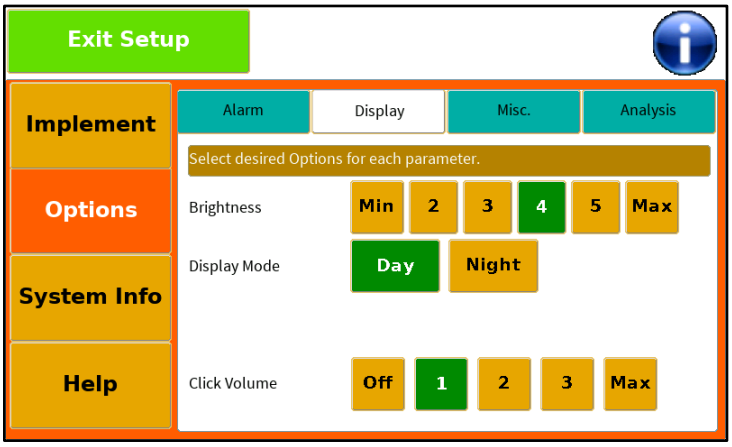


Display

Brightness adjusts the backlight intensity of the display.

Display Mode allows selection of Day or Night mode. Night mode adjusts the color and backlight intensity for easier night viewing.

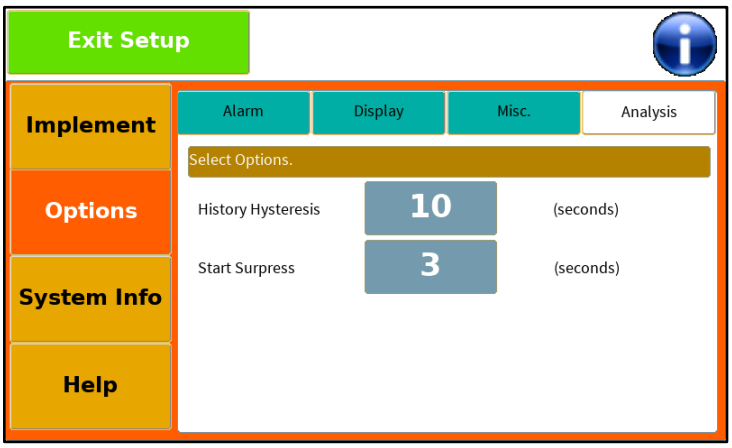
Click Volume sets the sound level of the click whenever the screen is touched. It can be turned off by selecting the Off button.



Misc.

The Misc. tab is not available on the DM-5150.

Analysis

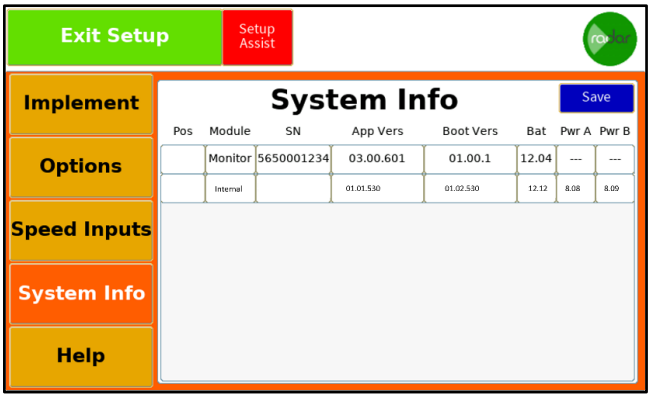


History Hysteresis: The time between failures detected by a sensor before the failure is displayed in the Alarm History Area. Once the set number of seconds passes from the last failure and a new failure is detected, an icon will be displayed. If a second failure of a row happens within the set time, the second failure will be ignored and not displayed.

Start Surpress Time: The time that is used to allow the system to stabilize once application resumes. Row failures are ignored and not stored during this time.

Systems Info

The System Info screen displays software information in the monitor and internal voltage levels. The top row is the display portion of the monitor, and the second row is the internal processor that controls the row power supplies and sensor information.



Column	Monitor	Internal
Pos	N/A	N/A
Module	Display Processor	Sensor Processor
SN	Serial Number of Monitor	N/A
App Vers	Application software version	Application software version
Boot Vers	Boot block version	Boot block version
Bat	Input Battery Voltage	Input Battery Voltage
Pwr A	N/A	Power Supply A Voltage
Pwr B	N/A	Power Supply B Voltage

Note: Voltage levels are at the monitor

Help

About

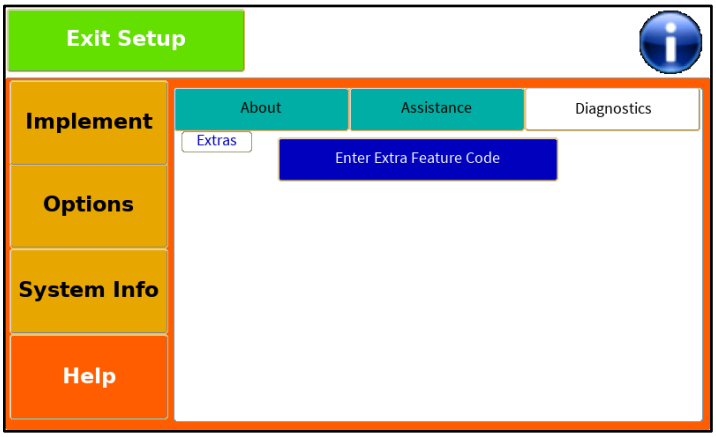
The About page displays the monitor model number, serial number, and software versions.

Assistance

The contact information in the Assistance tab is available for additional support. A QR code is provided for access to this manual.

Diagnostics

The Diagnostics page allows extra features to be enabled by the user. If necessary, a code will be provided. Please contact your dealer.



Console Pinouts

Monitor Power

Description	4-Pin Console	Power
12V DC In	1	1
Ground	2	3
Alarm Out Positive	3	
Alarm Out Ground	4	

Cab Harness

Description	18-Pin Console	37-Pin Implement Standard
Row Input 1	A1	1
Row Input 2	A2	2
Row Input 3	A3	3
Row Input 4	B1	4
Row Input 5	B2	5
Row Input 6	B3	6
Row Input 7	C1	7
Row Input 8	C2	8
Row Input 9	C3	9
Row Input 10	D1	10
Row Input 11	D2	11
Row Input 12	D3	12
Row Input 13	E1	13
Row Input 14	E2	14
Row Input 15	E3	15
Row Input 16	F1	16
8V Power		24, 25
8V Ground		26, 27

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