





INTRODUCCION

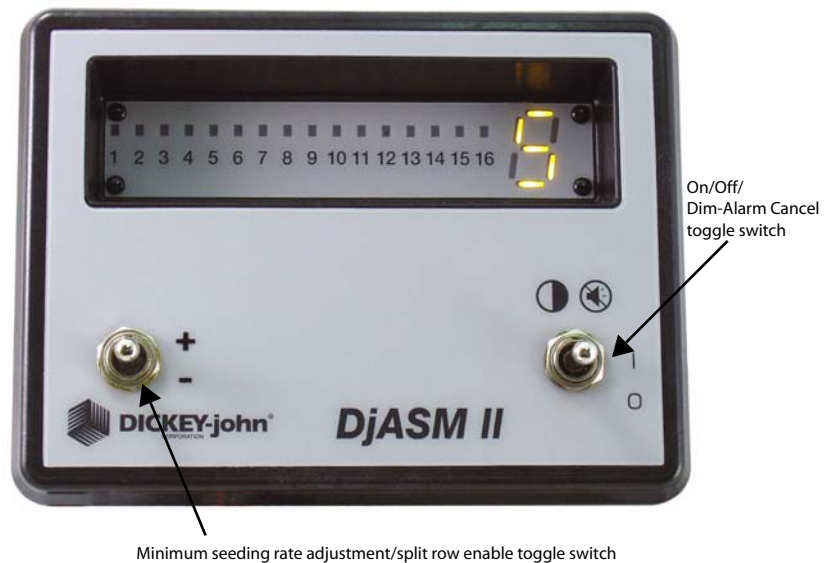
SYSTEM OVERVIEW

The Dj Air Seeder Monitor (Dj ASM II) provides accurate blockage and low cost monitoring of up to 128 rows and 8 hopper levels. It can scan 8 ASM II Modules and display the status of 16 rows for each module, or 15 rows and 1 hopper per module. The monitor provides:

- 128 row maximum monitoring capability
 - 8 ASM II module scanning capability
 - 16 row display capability per ASM II Module or 15 rows and 1 hopper level sensor
- Implement lift switch input
- 16 row indicators
- 7 segment indicator (displays 1,2,3,4,5,6,7,8,9,0, A,C,E,H,L)
- OFF/ON/DIM-ALARM CANCEL toggle switch
- 5 step LED dimming for full sunlight/night time use
- Internal audible alarm (chirp/blare output)
- 12 Vdc power relay switching output (for modules)
- Minimum seeding rate adjustment switch/split row enable

Figure 1

Dj ASM II Air Seeder Front Panel





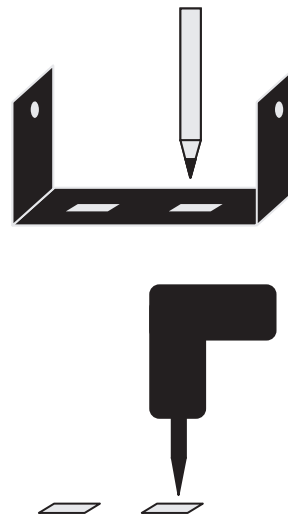
INSTALLATION

CONSOLE MOUNTING

To mount the Dj ASM II console, use the mounting bracket as a template for drilling. Mount the console in a location that is easy to view and easy to reach for threshold adjustment, split row activation, dimming, and alarm silencing.

Figure 3

Console Mounting



Before drilling, assure the power and main hitch harness can be routed in the proper manner. Harness retention and routing outside of the cab is also important.



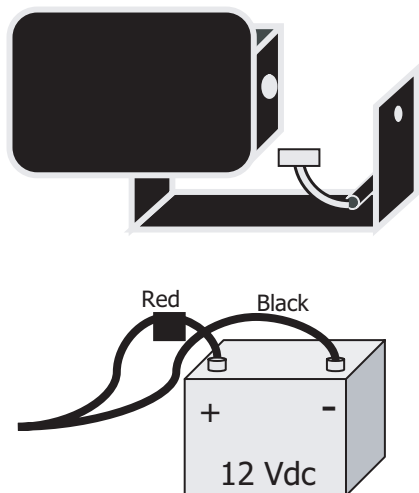
Do not use the enclosure as a guide when drilling. This may cause damage to the mounting bracket.

MONITOR AND POWER CONNECTIONS

Route the power leads of the main harness to the battery. Allow some slack to tie the harness off to the console bracket for strain relief and protection of the harness.



Figure 4
Monitor and Power Connections



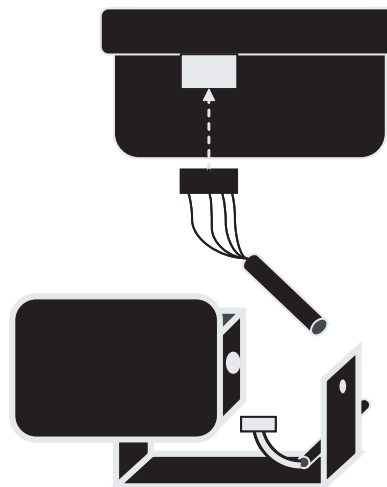
The monitor operates on 12Vdc only. The red (fused) lead should be connected to the positive battery terminal and the black lead should be connected to the negative battery terminal.

ASM II CONSOLE MAIN HARNESS

Insert the connector of the harness into the J1 connector inside the bottom of the ASM II console.



Figure 5
Main Harness Connection



Route the main harness to the rear of the tractor. Mount the relay (part of the main harness) to a suitable location at the rear of the tractor, assuring the connector will reach the implement connector at the hitch.

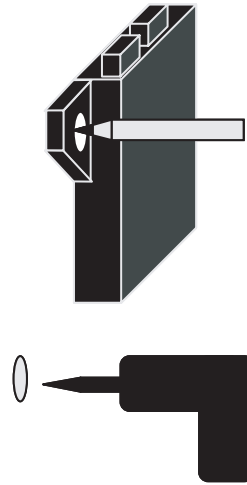
MODULE MOUNTING

Lay out all harnesses and modules on the implement to determine proper mounting locations. Refer to Figure 2 for layout guidelines.

Use the module as a template for drilling in a location that will allow the tower harness to reach all the sensors installed on the air seeder and be connected to the hitch cable or next module in line (1/4-20 hardware is recommended).



Figure 6
Module Mounting



Before drilling, assure the harness can be routed in the proper manner. Consider harness placement in regard to air seeder movement during planting.



SYSTEM DIAGRAM

The following provides an illustration of the Dj ASM II system.

Figure 2

Dj ASM II System Diagram

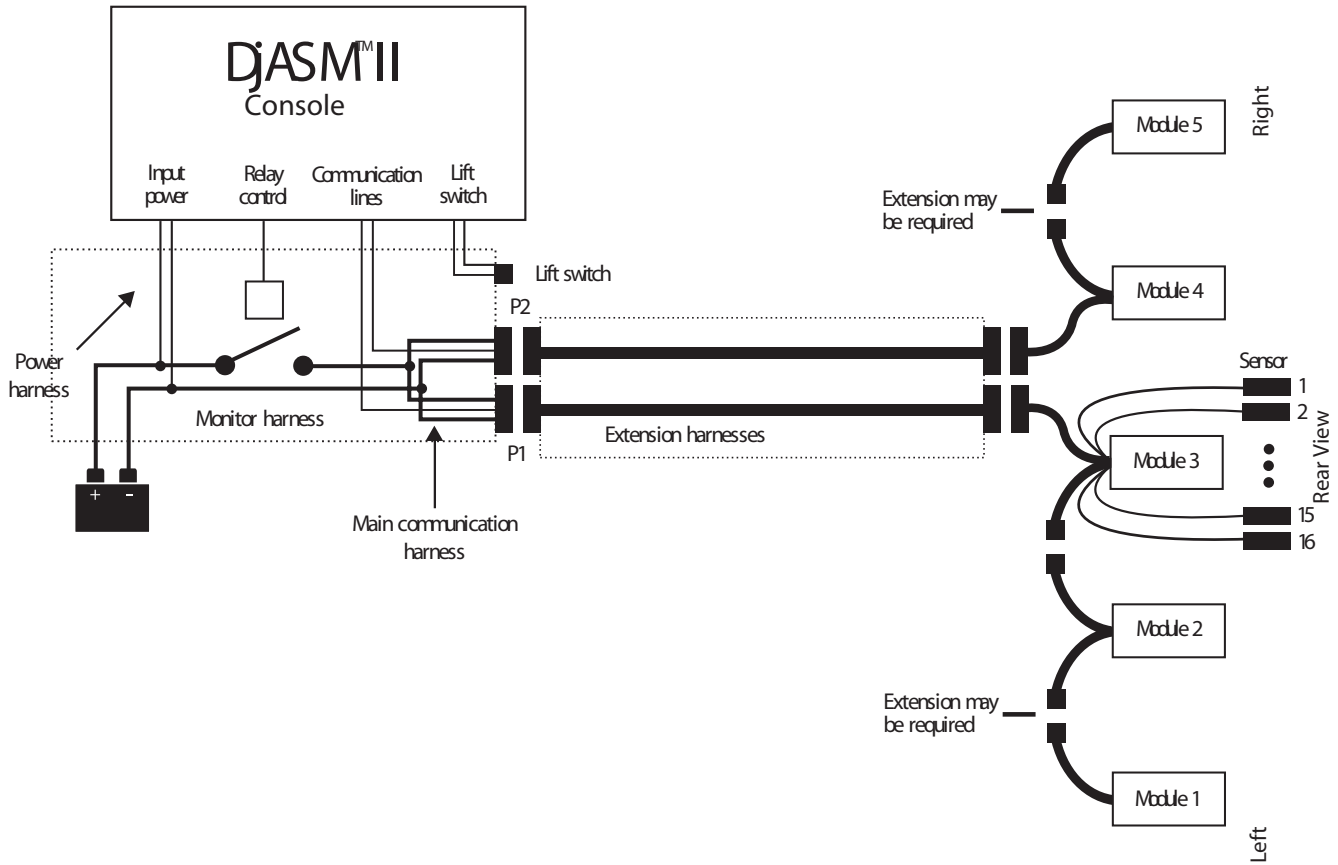


Diagram Notes:

- P1 modules address from left end to middle, while P2 modules address from middle to right end
- Lift switch is optional
- Module power is not carried through the console due to worst-case voltage drop on 128-row system
- P2 is not required for systems with four modules or less (64 rows or less)
- P1 can drive four modules



SYSTEM CONFIGURATION

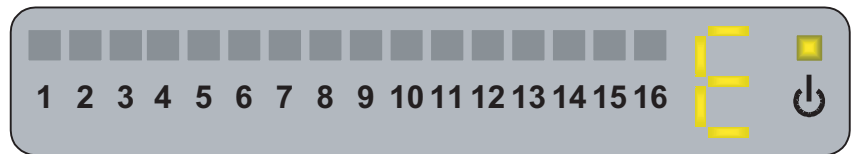
SPLIT ROW ENABLE

This feature will set the Dj ASM II to monitor only odd or even numbered rows.

To configure the Dj ASM II to monitor only even numbered rows, hold the +/- switch to "+" and turn the power switch ON. The letter "E" as well as the even row indicators will be displayed. Release the +/- switch immediately.

Figure 7

Even Row Enable

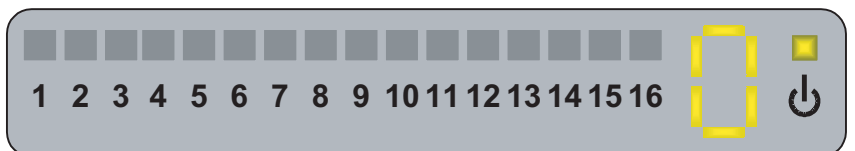


NOTE: Turning the power switch ON with the +/- switch in the center position configures the system to monitor all rows.

To configure the Dj ASM II to monitor only odd numbered rows, hold the +/- switch to "-" and turn the power switch ON. The letter "O" will be displayed as well as the odd row indicators. Release the +/- switch immediately.

Figure 8

Odd Row Enable



MINIMUM SEEDING RATE

The Minimum Seeding Rate feature allows for setting a minimum number of seeds per second that will cause a seed row to fail and alarm to sound. The factory default minimum seeding rate is 2 seeds per second.

To set the minimum seeding rate, perform the following:

1. Power up the console and wait until the start up test of modules, seed sensors, and hopper level sensors is complete.
2. Momentarily hold the +/- switch in either the "+" or "-" position to change the threshold adjustment setting.
3. Refer to Figure 9 and enter the desired threshold.
4. Holding the +/- switch to the "+" position will increase the LED's. Holding the +/- switch to the "-" position will decrease the LED's.

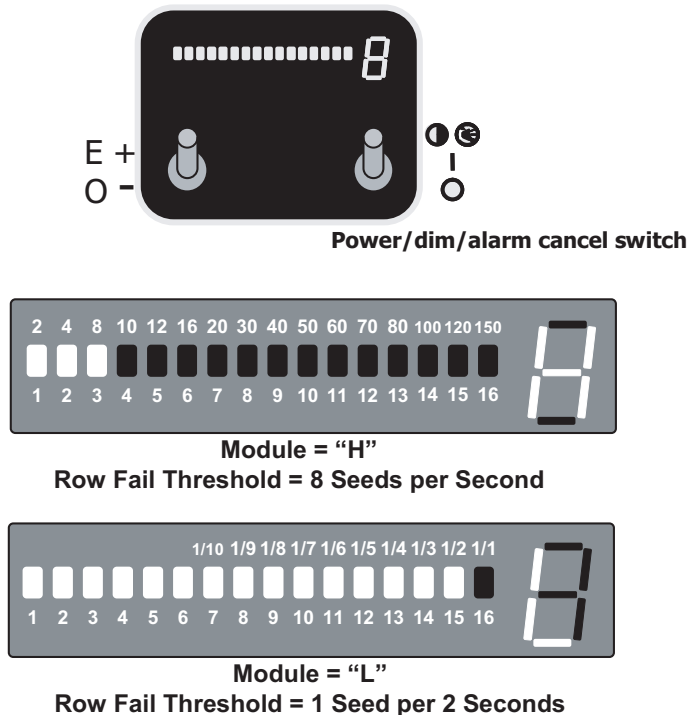


Figure 9
Minimum Seeding Rate Table

Number of LED's on Seeds vs. Second Threshold

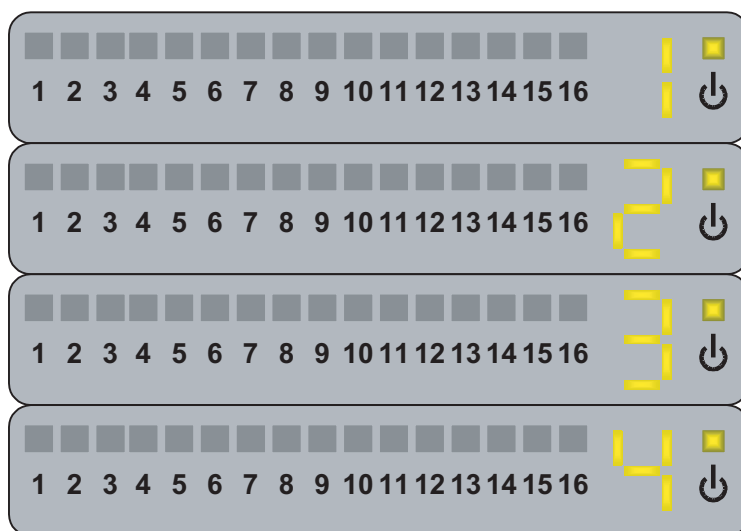
LED Indicator	High Range (H) (seeds per second)	LED Indicator	Low Range (L) (seconds per seed)
1	2 snd	7	1 every 10 seconds
2	4 seeds every second	8	1 every 9 seconds
3	8 seeds every second	9	1 every 8 seconds
4	10 seeds every second	10	1 every 7 seconds
5	12 seeds every second	11	1 every 6 seconds
6	16 seeds every second	12	1 every 5 seconds
7	20 seeds every second	13	1 every 4 seconds
8	30 seeds every second	14	1 every 3 seconds
9	40 seeds every second	15	1 every 2 seconds
10	50 seeds every second	16	1 every 1 second
11	60 seeds every second		
12	70 seeds every second		
13	80 seeds every second		
14	100 seeds every second		
15	120 seeds every second		
16	150 seeds every second		

Figure 10
Minimum Seeding Rate Example





*Figure 15
Planting Display - No Failed Rows*



SINGLE ROW FAILURE

If a single row failure is detected, the appropriate Module Number will be displayed and the corresponding row output will light and the alarm will sound. Figure 16 provides an example of what the display would show with Module 2, Row 5 failure.



Figure 16
Example of Single Row Failure

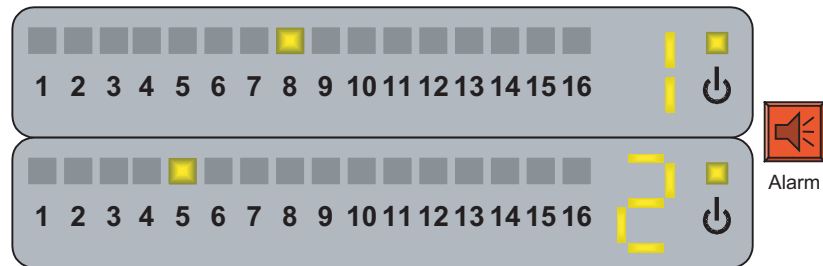


Unless the alarm is cancelled by toggling the I/O (power) switch, the display will continue to show this condition. If this occurs, the display will scroll through each module as before, but will illuminate only the failed rows. If an additional single row failure occurs, the operation will return to dwell upon that failure. If a second alarm cancel is performed, the display will again scroll through each module as before, but will illuminate both failed rows.

MULTIPLE ROW FAILURE

If rows fail on more than one module, the monitor will sequence through the Module Numbers and display the corresponding row numbers for 2 seconds on each module. For example, if Module 1, Row 8 and Module 2, Row 5 fail, the following display sequence will occur and loop.

Figure 17
Example of Multiple Row Failure



The looping of the modules with failed rows will continue unless the alarm is cancelled. If this occurs, the display will scroll through each module as before, but will illuminate the failed rows. If additional rows fail, the operation will return to looping the new failures only. If a second alarm cancel is performed, the display will again scroll through each module as before, but will illuminate all row failures.

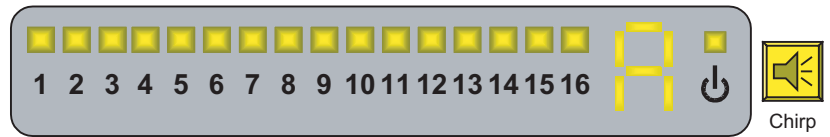
ALL ROWS FAILURE

If all rows fail, which is common when the planter is lifted and no lift switch is installed, the Module Display will output an "A", all rows will light, and the alarm will chirp.



Figure 18

Example of All Rows Failure



DIMMING

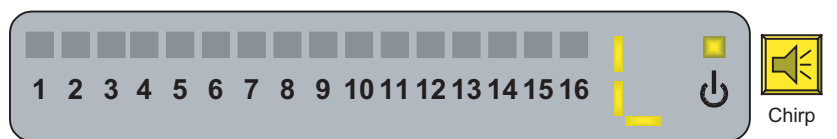
A dimming feature is included for low light planting conditions. After the sensor detection has been completed and only during non-alarm conditions, the dim switch can be toggled into the up position to dim the indicators. Each dim step will cause the alarm to chirp. Once the lowest dim level has been reached, the alarm will sound for 2 seconds. After 2 seconds, or if the switch is released and toggled up again, the indicators will brighten. Once the highest brightness level has been reached, the alarm will sound for 2 seconds.

LIFT SWITCH

The lift switch input will keep the ALL ROWS FAILURE from occurring. When the Lift Switch input is grounded, it is considered active (inhibits ALL ROWS FAILURE). When active, the Module Display will output an "L" and will no longer scan through the modules. The alarm will chirp.

Figure 19

Active Lift Switch



HOPPER LEVEL LOW

Hoppers can be monitored with the Dj ASM II console in the event a 15 row Hopper Module is connected to the system. If a hopper is low, the sensor will ground the signal line and an "H" will appear on the display, indicating a hopper is empty. The LED number indicates which module the hopper level sensor is connected. In the following example, the hopper sensor on Module 4 is indicating a low hopper.

Introduction	1
System Overview	1
System Diagram	2
Installation	3
Console Mounting	3
Monitor And Power Connections	3
ASM II Console Main Harness	4
Module Mounting	5
System Configuration	7
Split Row Enable	7
Minimum Seeding Rate	7
English Conversion For Seeding Rate	9
System Operation	11
Power Sequence	11
Sensor Detection	11
Planting	13
Single Row Failure	13
Multiple Row Failure	14
All Rows Failure	14
Dimming	15
Lift Switch	15
Hopper Level Low	15
Errors	16
Troubleshooting Guide	19
Unit Will Not Power On. No LEDs Will Light During The Power Up Sequence.	19
Row Or Hopper Indicator Fail To Illuminate After Self-Test	19
Rows Fail That Are Correctly Planting. Self-Test Indicated The Sensor Was Present. ..	20
Hoppers Fail That Are Filled Above The Sensor	20
Hoppers Fail To Alarm When Seed Is Not Blocking Sensor	21
Unit Powers On, All LEDs Blink On, And No Error Occurs	21
Unit Displays An "E" Followed By A Module Number	21
Unit Displays A "C" Followed By A Module Number	22
Unit Displays A "C" Followed By An "A"	22
DJ ASM II Service Parts	23
Monitor And Main Harness	23
Module And Module Harnesses	23
Extensions	23

