VM-2300
Troubleshooting

Including the following consoles

DICKEY-john Seed Check
Vanguard VM-2300
Agco Seed Check

Monitor Troubleshooting Tips

VM-2300

Unit does not power up
>Make sure monitor is hooked directly to <u>12 v. battery</u>
>Check fuse on battery cable
>Inspect touch switch for possible damage

Setup
>Constants are changed in setup mode by using the "set" and "select" keys. Select chooses the digit and set changes it.
>
>If monitor does not ask for row spacing or sensor gain settings in the setup process, console needs to be reprogrammed. Using two fingers, hold down the "setup" and "alarm" keys while turning the console on. Do not let up on the "setup and alarm" keys until after the monitor runs the self-test. Change the digit to "2" by using the "set" key. Press the population key when finished to exit reprogramming mode.
>
>Distance calibration fails to generate a number. If using a radar, check to see if it is a Magnavox or Philips. If so, console needs to be re-worked. Those radar sensors only supply a 5 v. signal, and the VM-2300 is unable to read the signal. Dj will supply a replacement unit and pick up the defective console. After May 1, 2001, we will have replacement consoles in stock. Make sure a 400 ft course has been driven. Make sure a manual speed number is not entered in the setup mode. This value must be 0.0 when a distance sensor is present.
>
>If using magnetic wheel sensor, make sure the proper sensor is installed. Our part numbers are 1690-0003 and 1690-0004. These are cylindrical in shape as opposed the standard magnetic pick up which is rectangular with two corners clipped at about a 45 degree angle. If the wrong sensor is present, it must be replaced before the unit will calibrate.
>
>Distance sensor calibration does not produce correct speed or match tractor console. Check to see if either monitor is in metric. Verify the tractor is correct. Many tractor dash units have not been calibrated for years and could be wrong. If using a magnetic wheel sensor, make sure all 60 magnets are in use and that they alternate line/no-line.

Monitor fails to display population
>Population is a function of seed count and speed. Distance sensor problems can be determined by watching speed on the readout. A wiring harness problem would cause the monitor not to see seed dropping.

Population is wrong

Check setup area for correct row spacing entry. Row spacing is exactly that… not sensor spacing.   If the rows are 8" apart, that is the number to enter, not the distance to the next sensor.

Speed reading is wrong. Check speed and verify that it is correct. Incorrect speed of a fluctuating speed could be caused by a faulty distance sensor and would cause population swings.

If operator has verified his correct population by measuring a section of field and calculated the seed use, this monitor may be calibrated by changing the sensor gain adjustment. Normally this comes set at 100. For a number of drills, this number is set at 110. Slight increases or decreases in this number will be reflected in increased or decreased population displayed. By properly setting this sensor gain, the monitor can be made to read out actual population readings.

Acre count is wrong

Check the entry for overall implement width. This must be in inches. Example, a 20 ft. implement is entered as 240.0 inches in the setup mode. Follow above instructions for row spacing. Speed problems can also produce wrong acre counts.

How do I shut off acre counts on the ends while turning?

It is done automatically when seed flow stops.

All rows do not appear as numbers when unit is powered up

The monitor does a self-test when powered up, and as sensors are recognized and tested, a number appears in the lower area of the window of the monitor indicating the presence of the sensor and the row number associated with it. If a row fails to appear, it means that the monitor has not seen the sensor. Move the sensor to another row, then shut the monitor down and power up again. If the problem moved, the sensor is defective and needs to be replaced.   If the sensor is good, check for correct voltages at the sensor connector (see below), and check for broken, pinched or cut cables.

All Rows Failed

Make sure monitor is connected to implement harness
Check implement harness to verify it is for Dj style wiring. Power and ground wires are on 24, 25, 26 and 27. Not on 27-28.
Check Sensor Voltage – 7.5-8.5v. between Red and Black/ negative 12v. between Green and Black.   If not present, check at 37-pin connector coming from the monitor. 7.5-8.5v. between pins 24 and 26. Negative 12v. between pin 26 and individual row pins. (1, 2, 3, 4 etc.)

Alarm does not work

Blows continuously even with monitor turned off… look for backfeed of voltage from some other source. Check tractor ground.

Fails to blow – Check volume level by holding alarm down as it cycles from high to low volume. If it still does not work, unit must be repaired.

Alarm is too loud

Follow above procedure to cycle through levels until a satisfactory level is reached.

Alarm is too soft

The two pin weather pack connector coming from the back of the box is used to connect to a remote alarm providing a louder alarm for those unable to hear the regular alarm.

Monitor is in Metric

Check setup mode for the "units" screen.

Monitor does not scan rows

The VM-2300 monitor is only designed to display drill or planter average population. In drill applications, the population naturally varies from row to row and there is no way to correct this normal variance. By watching the average which is updated every 88 ft., the operator can maintain a good pulse of the operation of his system. The low limit warning will signal severe problems with any given row when a problem is detected.

When used as a planter monitor, the operator may change the operating mode of the system to show both high and low limits as well as seed spacing by holding the "setup" and "alarm" keys down while turning the monitor on. Change the system mode to 4 to enable this feature. This is suggested for planter applications only and is available only on monitors manufactured in 2001 and after.

I have extra wires on my harness

The harness system designed for grain drills to be used with the VM-2300 also includes hopper level sensor connectors for the optional hopper level sensors. If not used, these may just be tied up on the frame of the drill. DO NOT CUT OFF OR PLUG TOGETHER.

Using Manual Speed

If no distance sensor is used, or in the event of a failure of a distance sensor, the monitor has the ability to work from a manual speed entry. In the setup mode, go to the Speed setup screen and enter the normal travel speed as for example: 5.7 mph. As long as the tractor is traveling close to this speed, the population numbers generated will be quite accurate.

How do I clear my acre count?

Go to the setup mode and when the desired area is displayed, reset the digits to "0". Clearing one area memory will not affect the other.

Can my monitor be used as a speed and area monitor when not planting?

        Yes, by setting the overall implement width to the correct size in inches, and with a properly calibrated distance sensor, accurate speed and area measurements may be recorded. An optional acre cut off switch and harness may be purchased for more accuracy.