

## DM Control Tips

- The **LEARN** light is always on when drying.
- You can't go into **AUTO** until the **READY** light comes on. The **READY** light goes on when three conditions are met:
  - There are no active alarms (red lights to the left of the display screen)
  - Outlet moisture is within 2% of the moisture set point
  - Predicted moisture is within 2% of the outlet moisture
- To find the current predicted moisture, Press **MODE**, then **#4** for controller status.
- Always check that "**Suggested Rate**" on the screen is reasonable before switching to **AUTO**.
- The "**Control Limits**" screen lets you change some key settings. You can get there by pressing **SETTINGS** -> **Supervisor Setup** -> **123** -> **(1) Control Limits**.
  - You can set the **Maximum** and **Minimum** discharge rates for the DM510. By setting and/or adjusting your range as you dry, you can keep the DM510 in a control range you are comfortable with.
  - You can adjust the **Burner OFF Temperature**. This should be 30-50 degrees F below your drying temperature, and preferably 20-30 degrees above ambient. If this number is too low (below or too close to ambient, the DM510 may continue to do calculations after the dryer is off – meaning a longer time to get ready the next day).
  - The **Dryer Off Rate** should never be 0. Set it below the minimum rate, but above 0. When the dryer is off, the "Rate" on the screen should show "OFF".
- **AUTO FIRST LOAD**. After a shutdown the DM510 uses the drying model from the previous day and only adjusts the rate based on the changing inlet moisture for the first dryer load (because it does not know what happened to the grain that stayed in the dryer overnight). After the first dryer load, the control again uses both the inlet and outlet moistures and makes model adjustments based on both moistures.
- A triggered **critical** alarm (**ALARMS** key) takes the DM510 out of **AUTO** control. The delay is 5 min. for most alarms, but 25 min. for the rate alarm. Control is returned to **MANUAL** and runs at the last running rate. A text on alarm feature is available through DM Mobile.
- The discharge rate on the DM510 panel should be close to that displayed on the dryer panel. A large difference negatively affects control.

## Moisture Sensor Tips

- Do not calibrate the moisture sensor for the first dryer load after start-up. You want the moisture and temperature gradient within the kernels to be similar to when you last ran. This is most important for corn.
- Push the outlet sample button and sample for the full 30 seconds the push button light is flashing. This is the period the DM510 uses for its comparison sample.

- From your sample run three tests and use the average as your calibration entry. If out by more than 1% retest to confirm.
- Use a consistent method to test. Do not let the sample sit before testing.
- If drying all hot and you need the sample to cool for your tester, put the sample in an airtight container (or ziplock bag) and let it cool and reabsorb any condensation before testing. Use the same method each time.

## Hardware Troubleshooting

- The LCD screen is too bright/dark. Open the door to the DM510. There is an adjustment knob on the back of the door.
- The LCD screen is blank or shows "LCD display is terminated". Turn off the unit using the power switch on the bottom of the panel, then turn it back on.
- **I/O Comm Error**. There is a communication error, usually due to bad info from a device. With the DM510 in **Local** mode, open the door. On the right hand side are a number of plugs with wires going into them. Try removing the plugs one by one until the I/O comm error goes away. This can help isolate the particular device having an issue.
- There are two heartbeats flashing "\*" on the screen (top left and right corners). If they stop beating/blinking the DM may need to be rebooted. Power off and back on using bottom power switch (you may see random info on the screen temporarily.)
- Moisture sensor reading is not changing. Check that there is flow past the sensor.

## DM Mobile

- If you cannot log in to DM mobile contact the Dryer Master Support Center. If you can login and have questions you can still call us or you can also check the **Help** page on DM Mobile for any questions.

## Grain Drying Tips

- Start-ups and shutdowns should be minimized to give the best results.
- Make sure your bench top tester is properly calibrated because you will be calibrating the DM sensors to your bench top tester.
- If you are running at your maximum discharge rate and the outlet moisture is below the set point, consider lowering your burner temp.
- Tempering the grain, even for a few hours before drying, will tend to use less fuel when you do dry.
- Consider using 2 wet bins if you have them available. You can segment by wet/dry, or use one for receiving and one for loading the dryer (allowing tempering).



**IF YOU HAVE A QUESTION PLEASE CALL US**  
**Toll Free AT 1-888-318-0009**  
**We always try to answer your call in person.**