

# Dry Fire Cheat Sheet

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**Warning:** Dry Firing the Burner, without a satisfactory amount of grain in the Dryer to satisfy a fill condition, can cause damage to Moisture Sensors and other components of the Dryer. Red Board Systems is not responsible, nor liable, for such damage. Dry firing the Burner is done at the operator's own risk.

## Purpose:

The purpose of this document is to show users how to Dry Fire the Burner using the Red Board System, if they elect to do so at their own risk.

## Overview:

The four main steps to Dry Fire the Burner are:

- (1) satisfy the Grain Switch;
- (2) account for low (or zero) air pressure in the Dryer;
- (3) set the Plenum Temperature to a value that will not harm the Dryer or its components; and
- (4) start the Dryer in Manual Mode.

## Information:

### Satisfying the Grain Switch

This can be accomplished by pulling/disconnecting Wire #11 from the Carrier Board.

### Accounting for low (or zero) air pressure

*For Dryers with a QPM2 module...*

This can be accomplished by:

- (1) Setting the maximum "Pressure Upper Limit" to 7.2 "W.C. under Dryer Config → Limits → Pressure Upper Limit.

**Note:** To get into the Dryer Config menu, tap on the red temperature or moisture values on the Dashboard 5 times within 5 seconds. This will unlock the Dryer Config menu.

- (2) Pulling Wire #7 of the "TB-B" group on the Red Board. The wire is labeled "QPM INPUT HIGH (+)".

*For Dryers with a Dwyer Pressure Gauge module...*

This can be accomplished by adjusting the “zero point” line (black) of the Dwyer Pressure Gauge such that it is between the lower limit line (red) and the upper limit line (red).

**Note:** Be sure to set the Dwyer Pressure Gauge back to its original “zero” settings after Dry Firing.

#### Setting the Plenum Temperature to a low value

This can be set at Settings → Burner → Manual Plenum Temperature. It is suggested to keep this value as low as possible (such as 120 °F) to avoid damaging anything during the Dry Fire.

#### Starting the Dryer in Manual Mode

- (1) Set the Dryer to run in Manual Mode by selecting “Manual” at Settings → Grain Type / Drying Mode → Manual or Automatic.
- (2) Start the Dryer per normal.
- (3) Only let the Dryer run long enough to determine that the mod valve is moving in the correct direction.
- (4) Shut the Dryer off and re-attach the wiring. Also reset any Red Board System settings that were changed for the purpose of this Dry Fire.