PROFIRE Operator Guide

FARC

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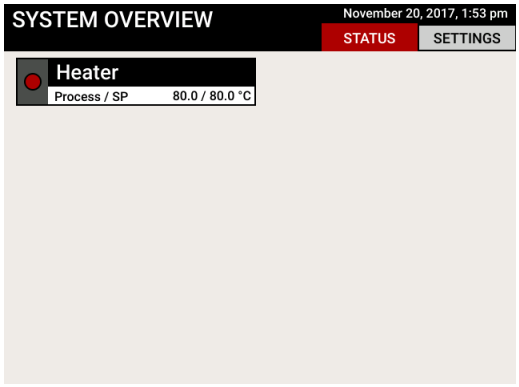
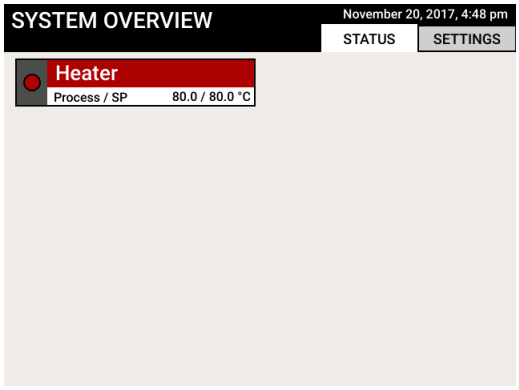
1. Starting the System

Pressing any key on the PF3100 keypad will wake the UI from sleep and should display the **System Overview** screen.

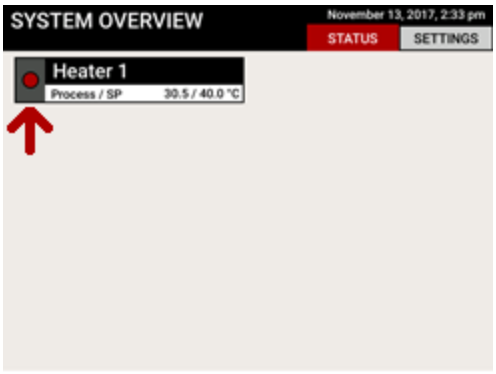


From here, use the arrow keys to navigate to the appliance in question (in this example, **Heater 1**).



Determining Run Status

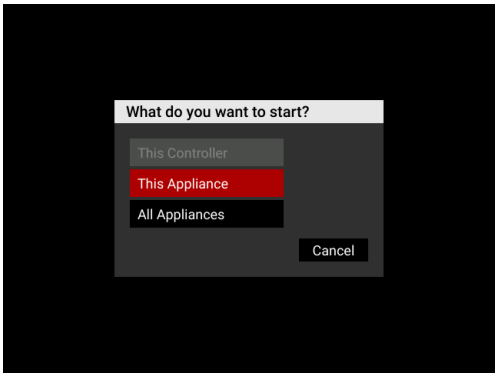
If the UI is not running, the status light of the BMS (located in the top left corner of the enclosure) will be red. Upon waking the system, the appliance (in this case **Heater 1**) on the **System Overview** page will have a red indicator light as seen below.



Starting an appliance

Select the appliance using the OK key. From the appliance **Status** screen, check that there is no asterisk next to the **Alerts** tab (as pictured here: ALERTS*). If there is an asterisk, navigate to the **Alerts** tab and refer to the Troubleshooting Guide or contact your supervisor.

Once it has been determined that the system is safe to run press the START key.



The dialog pictured here allows an operator to start one particular appliance, or all appliances.

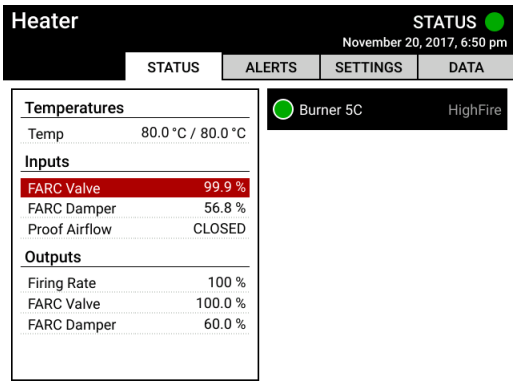
After selecting **This Appliance** or **All Appliances**, the system will attempt to start.

2. FARC

A Fuel Air Ratio Controller allows precise control over the fuel to air mixture supplied to a burner. When combined with a high-quality burner, it can help attain low emissions and higher efficiency.

Typical Usage

When first approaching the PF3100 the important things to note are the various inputs and outputs. A properly running systems output positions will match the position feedback from the actuators (within an acceptable tolerance) and the Proof of Airflow contact will read CLOSED.



The appliance **Status** screen displays the core data vital to the system such as the operating temperatures, inputs, outputs, and the state of the burner(s) connected to the appliance.

Key Points

These are some of the key things to look for from the appliance **Status** screen:

State of the Controller(s)

Ensure that all controllers are running in a steady state. In the example above (**Burner 5C**), the state of the controller is listed as **High Fire** which is a steady state. **Low Fire** and **Pilot** can also be acceptable steady states.

Outlet Temperature

The outlet temperature should be stable (not fluctuating) and reading at the established setpoint. In the screenshot above, the process temperature is shown over the desired setpoint (e.g. – Temp: Process Temp/Setpoint).

Firing Rate

The **Firing Rate** should be stable, not fluctuating. If it is fluctuating, it is likely due to the PID tuning. Please see the PROFIRE PID Tuning Guide for details.

Alerts Tab

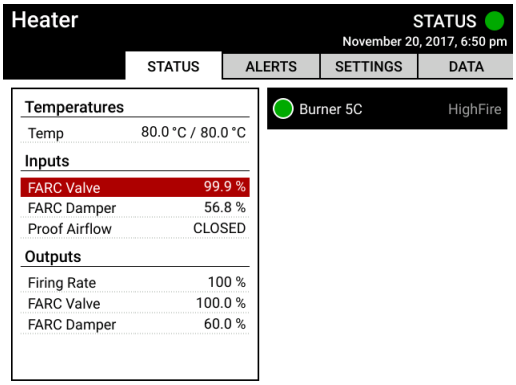
There should be **no** asterisk next to the **Alerts** tab. If there is an asterisk (as pictured here: 

), then navigate to the **Alerts** tab and refer to the PF3100 Product Manual or contact your supervisor.

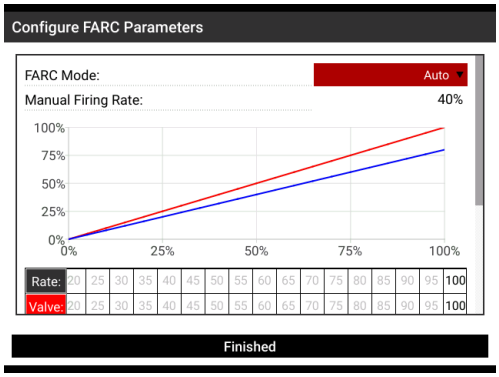
3. FARC Performance

Selecting a FARC Input or Output will direct you to the FARC Parameters Menu.

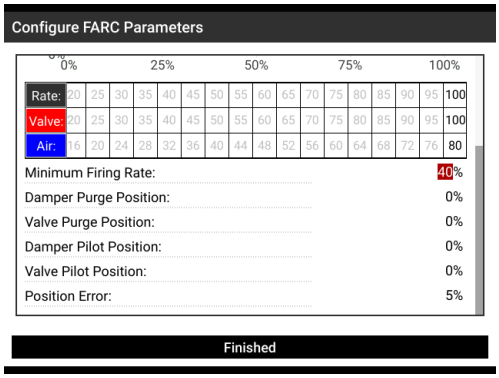
Another feature present in the PF3100 system is the ability to select a FARC Input or Output and be directed to the FARC Parameters Menu



Once highlighted, press the OK key to access the appliance **Status** screen



This graph shows the FARC Valve positions as it ramps up to High Fire. As seen the Valve and Damper positions directly correlates to the Firing Rate.



Here, the setpoints for the state positions can be noted and modified (When the FARC Mode is set to Manual)

4. PROFIRE Contact Information

If you have any concerns or questions about this information, please contact PROFIRE as follows:

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