

Instructions for Sentry 3.0 with Power Ratio Heating Elements

Your Sentry 3.0 controller includes a special Power Ratio feature not mentioned in the Sentry instruction booklet.

Three Display Lights

The Sentry turns on the heating elements intermittently through relays. Power output lights appear in the right side of the display when the Sentry sends a signal to turn on the relays.

The top of the three appears when the controller is sending a signal for the top elements to be ON. The bottom light appears when the controller is sending a signal for the bottom/side elements to be ON.

The center light does not come on during a Power Ratio firing.

If the **BAL** is set to 100 (see instructions, next column), where top and side elements are ON for equal time, the lights will be ON for the same amount of time. If the ratio is not set to 100, the top and bottom lights should be ON or OFF in proportion to the balance setting.

During a rate of FULL, the controller will send the signal to all the relays to have all the elements ON constantly, thereby disregarding any balance ratio in the Options during the firing of that segment.

Adjusting Ratio Between Top and Side Heat

The heating elements of your kiln are divided into two types: top (or roof) elements and side elements. (Door elements are also considered side elements.) The controller can vary the ratio of heat produced from these two directions.



1. Press the Options key until **BAL** (Balance) appears.

2. Press the Enter key.

3. Use the 1 and 2 keys to adjust the percentage of heat for the top and side elements. Think of the setting as a switch knob that is numbered from 0 to 200:

0 setting: All heat comes from the side elements. The top elements are turned off.

100 setting: This is the mid-point. The heat is balanced evenly between the top and sides. All elements are on at the same time. 100 is the factory default and the setting that we suggest for general purpose firings.

200 setting: All heat comes from the top elements. The side elements are turned off.

Use a lower setting for more heat from the side elements. Use a higher setting for more heat from the top elements.

4. After changing the setting with the 1 and 2 keys, press the Enter key.

5. **BAL** will appear again. Press the Stop key to get back to **IDLE**.

The reverse side of this sheet has the exact power ratio settings.

Full Rate: All side and top elements will stay on continuously at full power during a segment that has a full rate. The kiln uses the power ratio that you programmed for segments that have slower rates than full.

Multiple Zone Kilns

When using multiple-zone control, set the TOP heat to 0000. This will turn off the heat from the top. Using top heat will turn off the multiple-zone feature.

Power Ratio Settings

0	Top Power 0%	Side Power 200%
10	Top Power 10%	Side Power 190%
20	Top Power 20%	Side Power 180%
30	Top Power 30%	Side Power 170%
40	Top Power 40%	Side Power 160%
50	Top Power 50%	Side Power 150%
60	Top Power 60%	Side Power 140%
70	Top Power 70%	Side Power 130%
80	Top Power 80%	Side Power 120%
90	Top Power 90%	Side Power 110%
100	Top Power 100%	Side Power 100%
110	Top Power 110%	Side Power 90%
120	Top Power 120%	Side Power 80%
130	Top Power 130%	Side Power 70%
140	Top Power 140%	Side Power 60%
150	Top Power 150%	Side Power 50%
160	Top Power 160%	Side Power 40%
170	Top Power 170%	Side Power 30%
180	Top Power 180%	Side Power 20%
190	Top Power 190%	Side Power 10%
200	Top Power 200%	Side Power 0%