

**Solid State Control Calibration Procedure**  
MKG Solid State Griddles - All Options



The following procedure describes the steps to calibrate the Solid State Temperature Control for any of the MKG-ST Griddle Models.

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Figure 1: Verify that the unit is plugged in to the proper voltage outlet and is connected to the correct gas type.



Figure 2: To validate that the unit is operational, turn on one set of burners by pushing the button (circled above). Pilot should light and indicator light should illuminate (indicated by the arrow).

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Figure 3: To gain proper access to the Thermostat wires, some disassembly of the unit is required. Start by removing the grease pan, indicated above.



Figure 4: Next remove the four (qty. 4) Philips head screws, which will allow you to remove the front Left and front Right panels.

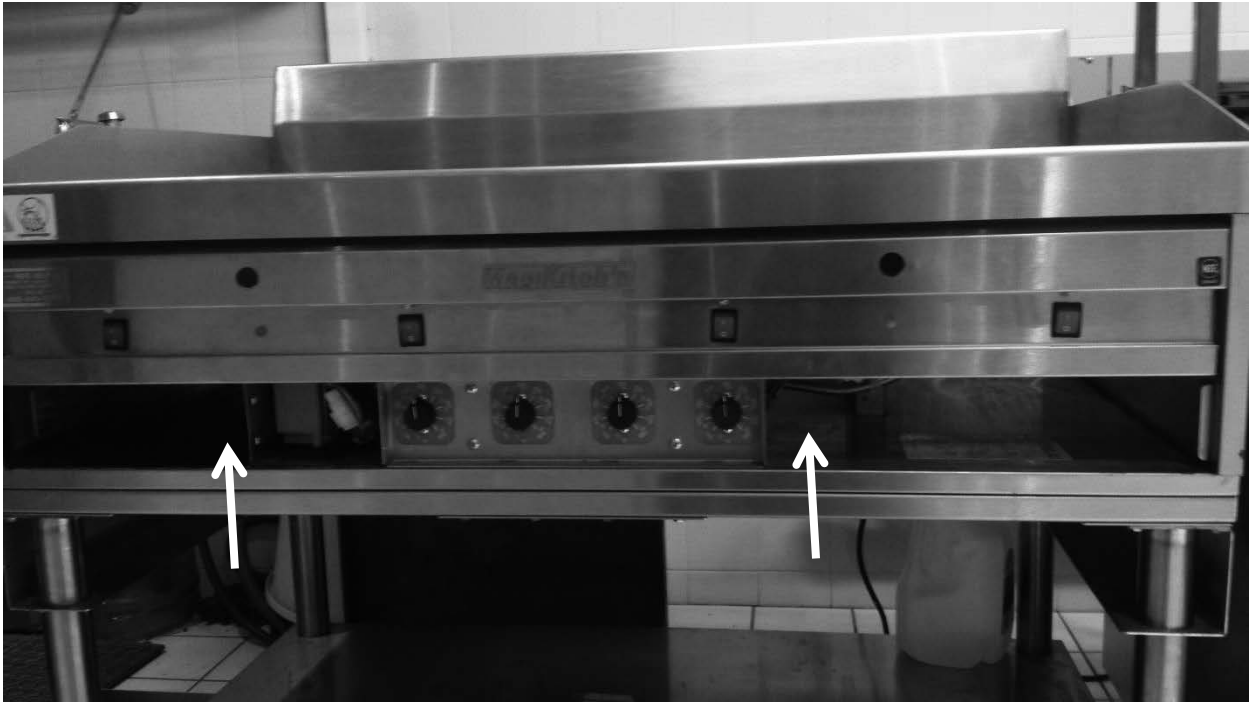


Figure 5: Remove front Left and Front Right panels.

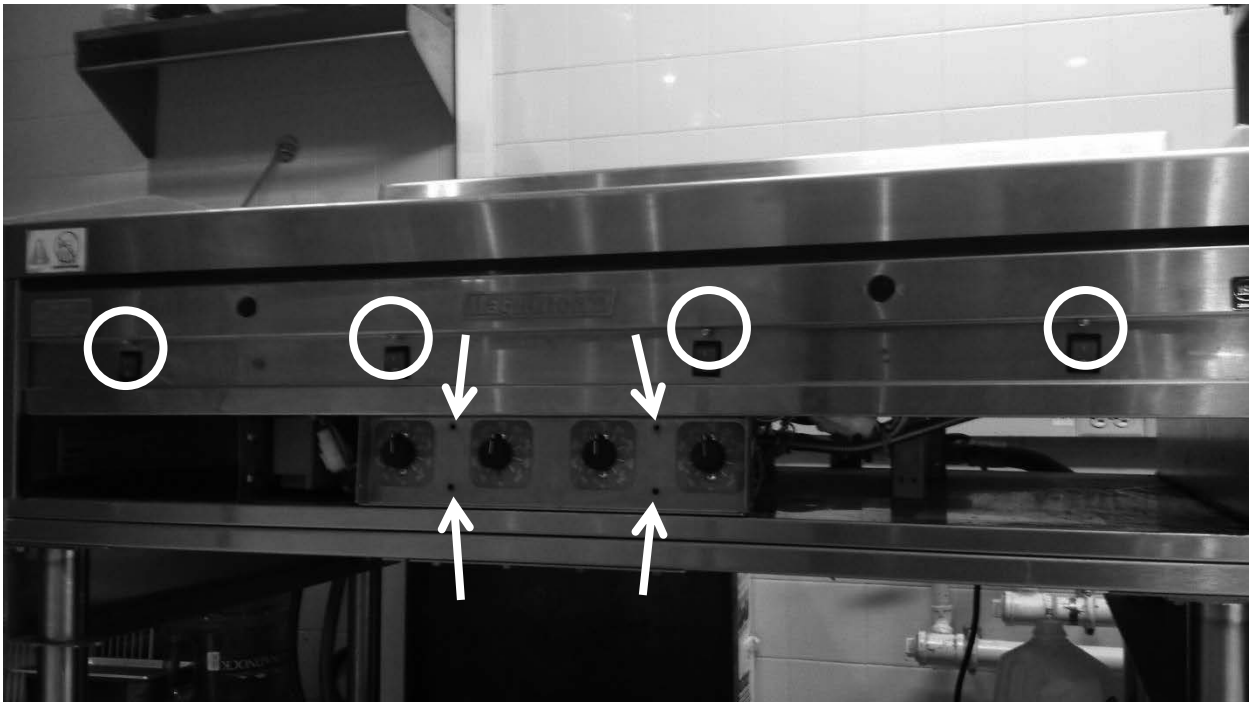


Figure 6: Remove four (qty. 4) Phillips head screws from the front the Solid State Control Panel, indicated with arrows, as well as four (qty. 4) 3/8" hex head self-tapping screws from front panel (indicated with circles).

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Figure 7: The front panel (indicated with arrow) will need to be removed to be able to lower the Solid State Thermostat Control Panel, as shown above. Once removed, replace two (qty. 2) 3/8" hex head self-tapping screws for ease of testing.

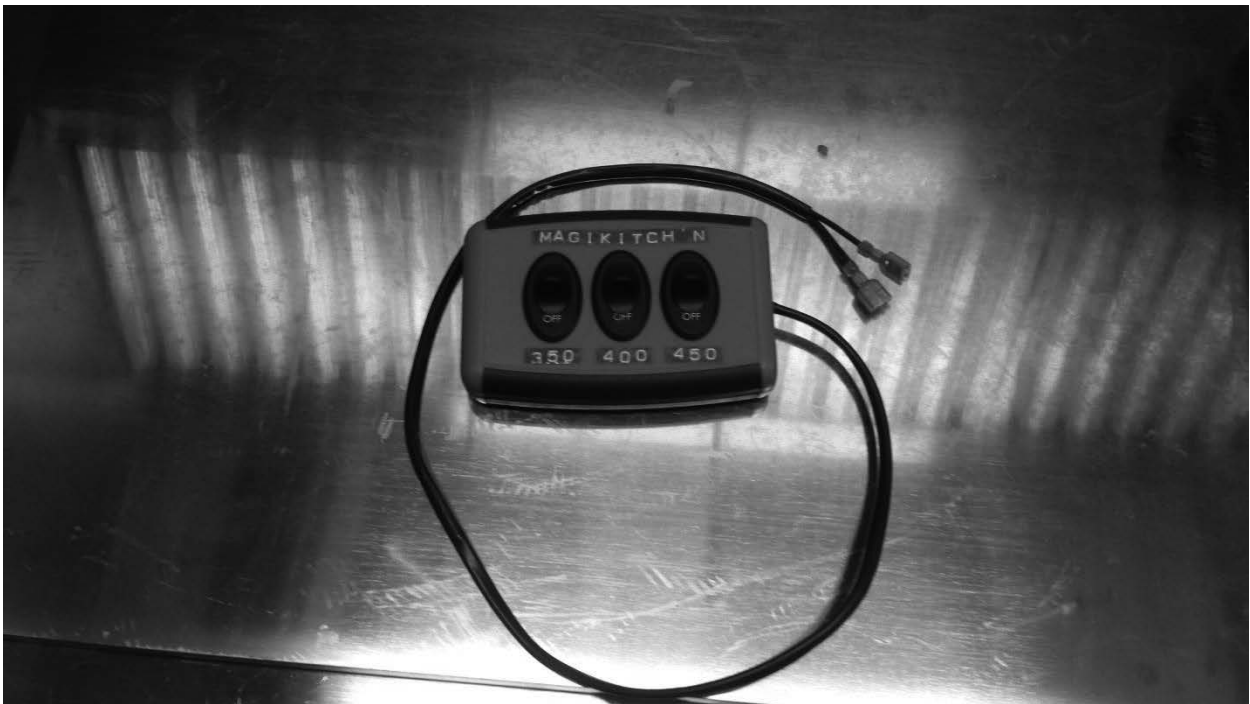


Figure 8: Now that the panel is lowered you can use the MagiKitch'n Solid State Thermostat Calibration Tool to calibrate the controls. Verify that all switches are in the 'OFF' position.

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Figure 9: Unplug the T-Stat wires from the first controller and replace it with the leads from the Calibration test tool, as shown above (leads do not have to be in any certain order/position).



Figure 10: Flipping up the front panel to show the control knobs, switch the 350°F toggle into the 'ON' position. Burners should not ignite until 350°F is reach on the control knob.

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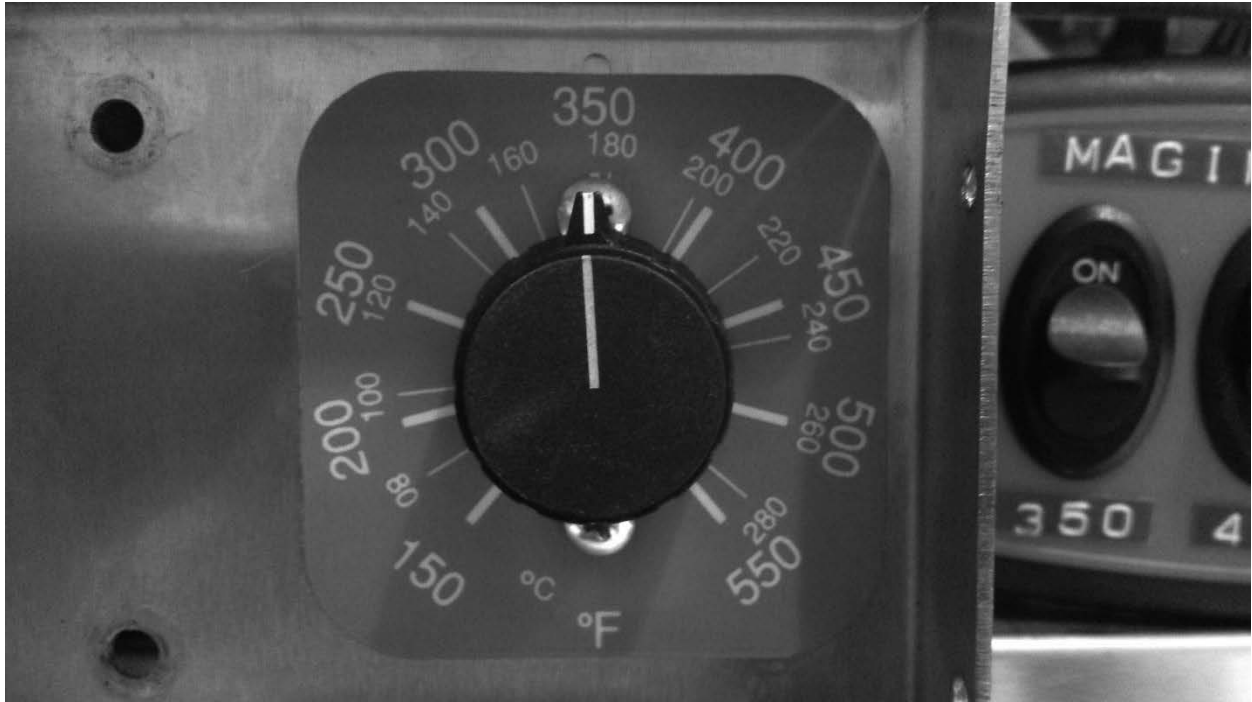


Figure 11: With the 350°F Test Switch in the 'ON' position, as well as the units 'ON/OFF' switch in the 'ON' position turn the control knob until the unit turns on and burners ignite. Go beyond the temperature indicated on the test controller, and then slowly back to the temperature on the switch. When the control knob is on the left side of the line, as shown above, the unit should be off, indicating that the unit is at the indicated temperature already. When the control knob is on the line of the indicated temperature or to the right of the desired temperature, the unit should re-ignite the burners and come to the proper temperature.



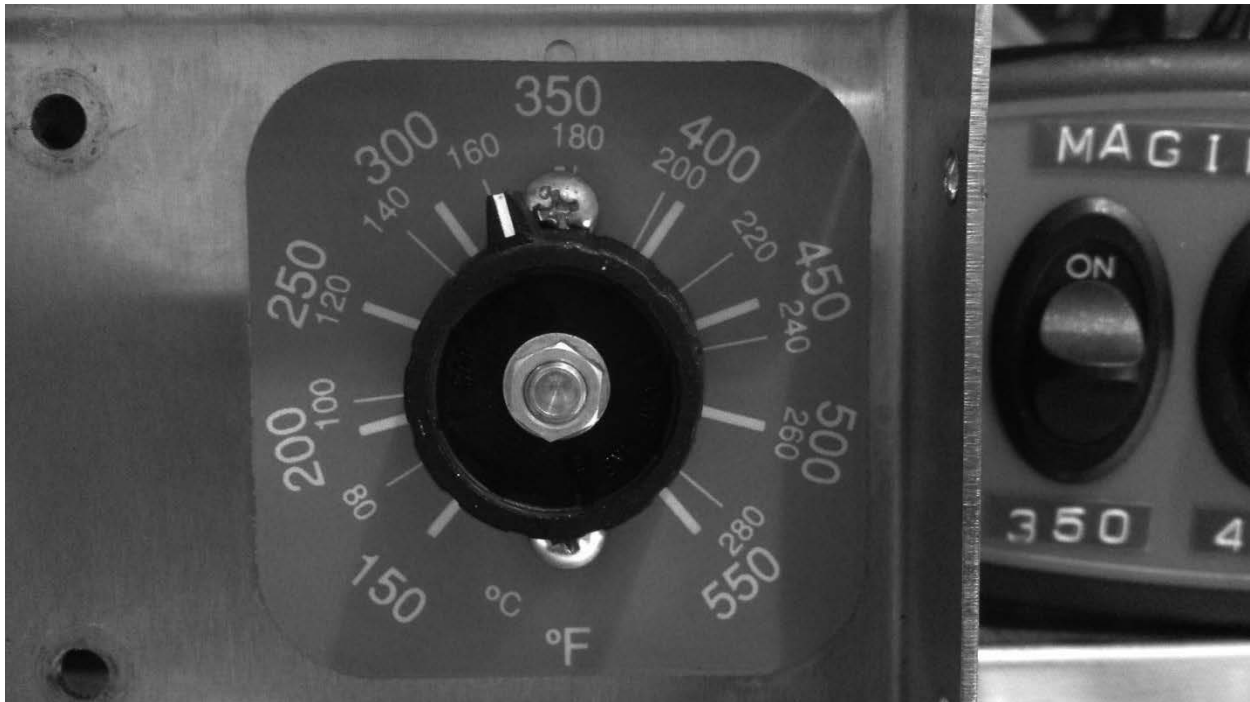
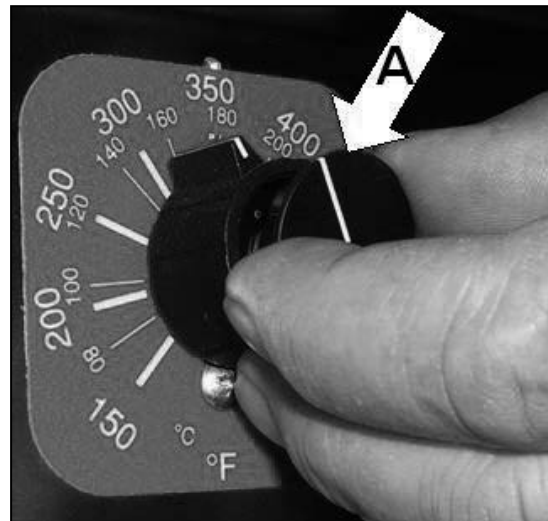
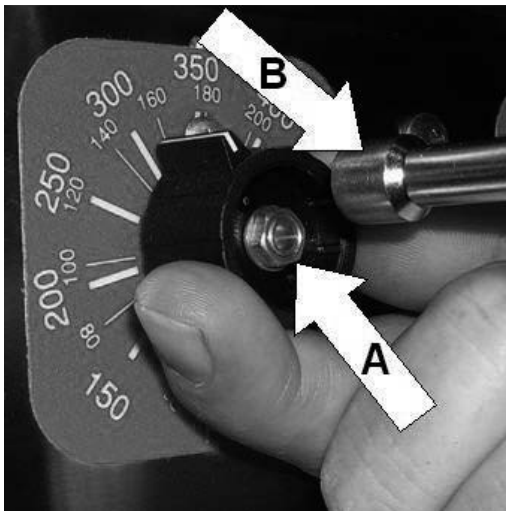


Figure 12: If the control knob does not function as the previous steps indicate, remove the cap to reveal the 5/16" ferrule nut. This will allow you to fine tune the control knob to the proper level.



To calibrate the Knob, grab the knob firmly with one hand, using a 5/16" nutdriver or socket (B), loosen the ferrule nut (A) on the control shaft. Make sure to limit the movement of the knob. This will allow the knob to move freely, see above left. Once the knob is loose, rotate the knob so the indicator line is pointing at the temperature where the heat was coming on. Once the knob is in place, snug the ferrule nut while holding the knob firmly. Then reset the knob indicator line to the desired set point. Monitor when the heat comes on for 3-4 times, repeat procedure as needed until temperature is at the desired set point. When the calibration of the control is satisfactory, tighten the ferrule nut completely. Replace the knob cap so that the indicator lines are aligned with each other.



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Figure 13: Once the control knob is in the correct spot, using the Calibration tool, verify that the control knob works in the other two temperature locations.

Make sure to follow the same process as for verify at the 350°F temperature. Go beyond the temperature, indicated by the switch in the 'ON' position, then back to the temperature on the switch. When the control knob is on the line, as shown above, the unit should be off, indicating that the unit is to at the indicated temperature already. Test again at the third and final test point.



**NOTE: Make sure that all of the switches are in the off position before moving on to the next temperature. If any of the switches are left on, meaning if there is more than one switch on at a time, the unit will not turn on at any temperature.**



Figure 14: Repeat all of the above steps for each of the Solid State Thermostat controls. Making sure to re-install the units Thermostat plugs when complete with each controller (Thermostat wires do not have to be in any particular order/position).

Once all of the controllers have been calibrated, the unit is ready for use. Follow the reverse procedure to close the unit back up and re-install all of the correct components, screws, and pieces. Make sure to verify that all electronic components are properly connected and snug.

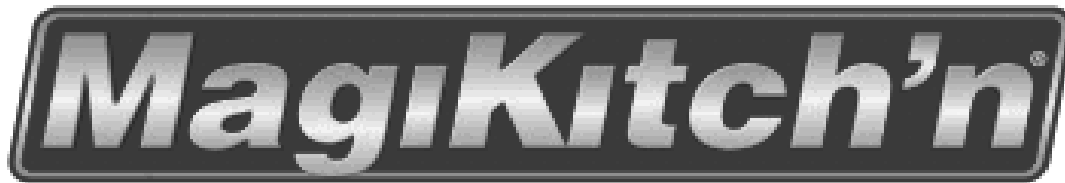
## Test Box Calibration/Verification Procedure:



Figure 15: To verify the calibration device, connect your multi meter/ohm reader as shown above.

1. Verify that when all switches are in the 'OFF' position that the device reads 0 Ohms (shown above).
2. Turn the first switch, 350°F switch, into the 'ON' position and refer to table below.
3. Turn the first switch, 350°F switch, into the 'OFF' position and the second switch, 400°F switch, to the 'ON' position. Refer to table for proper Ohm reading.
4. Repeat step three (3) for the 400°F switch and the 450°F switch. Refer to table.
5. If all values are within the allowed tolerance, device is accurate within 1% of actual temperature and can be used to calibrate the Solid State Thermostat Controller Knob.

Switch Order (Temperature, °F)	Designed Ohm Reading (Ohm)	Allowable Range (Ohm)
First (350°)	1673	1670 – 1685
Second (400°)	1775	1772 – 1787
Third (450°)	1876	1874 - 1889



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(603) 225-6684 World Wide  
[www.magikitchn.com](http://www.magikitchn.com)

In the event of problems with or questions about your equipment, please contact the MagiKitch'n Authorized Service and Parts representative (ASAP) covering your area, or contact MagiKitch'n at the numbers listed to the left.

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