The BBQ GURU Users Manual – Rev. 3

Models

0405 and 0504 (The Competitor)

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Congratulations! You have moved away from the world of natural draft and control by guess and by golly into the wonderful world of The BBQ GURU's power draft and the precise control it provides. It's unlikely that you will ever want to go back as you realize the many benefits of the BBQ GURU.

1. Getting Started

Unpack The BBQ GURU and accessories.
You should have the following:

1. The BBQ GURU with attached thermocouple probes
2. 12VDC wall power supply
3. Power draft blower
4. Pit adaptor hardware
5. Kill plug, for sealing the draft door and killing the fire at the end of the cook.

1.1. Overview – How The BBQ GURU Works

The BBQ GURU is a microprocessor-controlled draft system that monitors and controls the temperature of your BBQ pit through the use of a small power draft fan. The BBQ GURU is actually four instruments in one box. It contains two temperature controllers and two temperature indicators coordinated by a microprocessor. The temperature of the pit and the meat is measured through two precision thermocouple probes. The ever-vigilant GURU "checks" the temperature of both meat and pit many times every second, and is programmed to provide the proper amount of draft air needed to raise or lower the pit temperature to precisely the point you have set.

The BBQ GURU does what you would do if you were to stand beside your pit for hours on end, making adjustments every second and blowing on the fire as needed to keep it burning at precisely the correct level. Using the BBQ GURU assures you of the even temperatures needed to consistently produce superior results, particularly in "low-and-slow" cooking (i.e. true BBQ, as opposed to grilling). While the GURU can be used for medium temperature grilling, its highest and best use is providing the steady, low temperatures for low-and-slow cooking.

The BBQ GURU has two basic modes of operation, *low-and-slow ramp* and *meat monitor.*

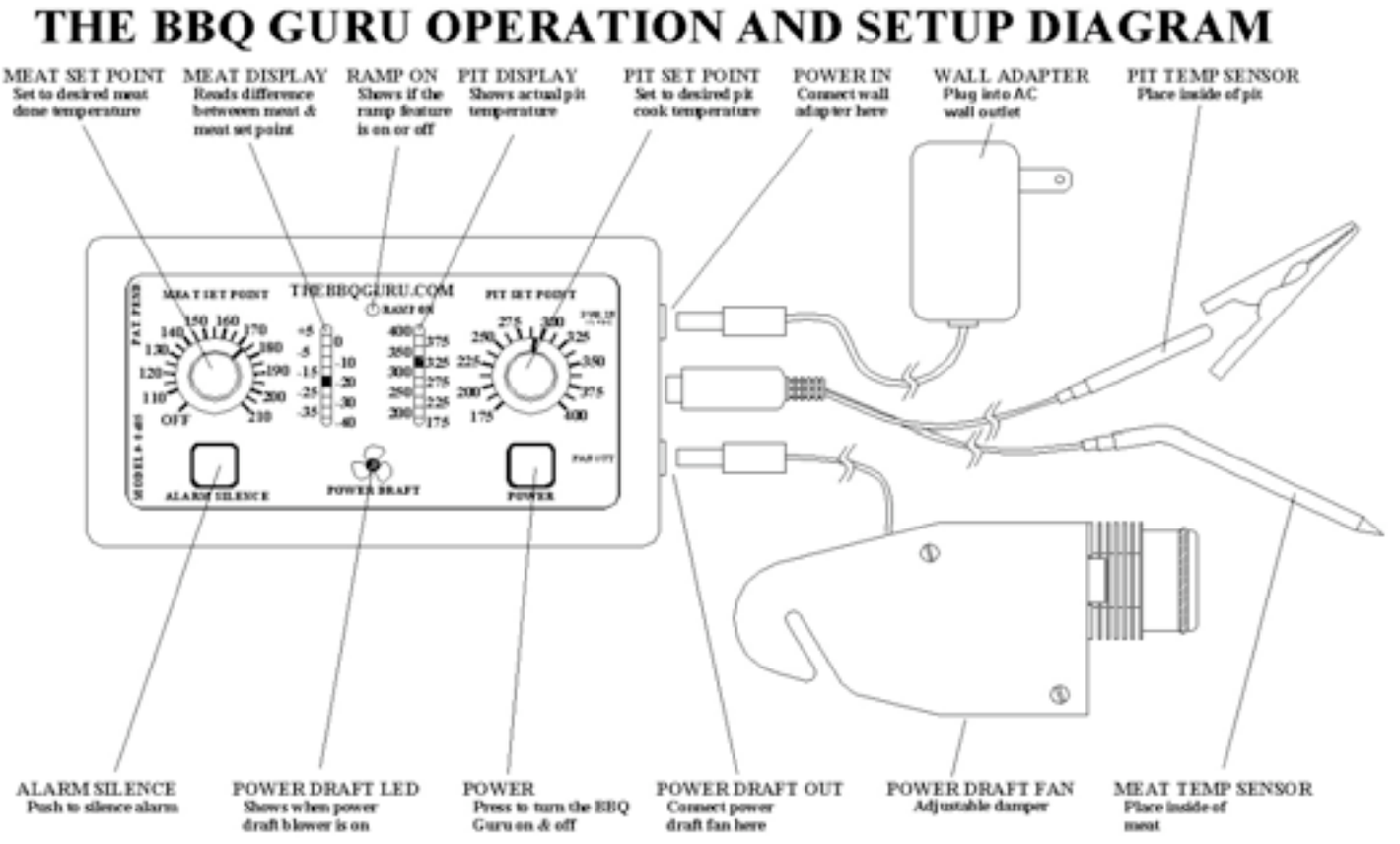
In low-and-slow ramp, The BBQ GURU is told what the endpoint temperature should be for the meat. It then controls the pit temperature, by starting at your desired pit setpoint and gradually lowering it as the target temperature is reached in the meat. Ramp mode is ideal when you are doing meats that require long, slow cooking such as brisket and pork butt. Ramp mode can also be engaged to maintain the very low pit temperatures needed for smoking.

In meat monitor mode, you set the pit temperature and The BBQ GURU maintains that temperature constant to within a few degrees, as long as there is charcoal to burn. Some people prefer having a totally stable pit temperature at all times, and others opt for meat monitor mode when preparing cuts of meat that cook relatively quickly. With The BBQ GURU, the choice (and total control) is yours.

2. Installation

The adaptor/door mount (if ordered) will come with its own installation instructions detailed to the pit specified in your order. Please refer to these instructions for installation.

2.1. Wiring, Setup and Operation Diagram (0405 & 0504 Model)



2.2. Preparing Your Pit For Use With The BBQ GURU

2.2.1. Air Leaks

The most important step to prepare your pit for use with The BBQ GURU is to seal all of the AIR LEAKS. Smaller pits need to be even tighter than larger pits. To see if your pit is tight, after running at 200-300° F, turn off The BBQ GURU and either close the damper fully or remove the blower and use the supplied Kill Plug. The pit should go almost completely out in 30-45 minutes. During a cook if your display is reading higher than the set temperature, there is only one thing it can be: AIR LEAKS. This is not a calibration problem. The only way the GURU can lower pit temperature is by stopping the blower fan. When the fan stops the fire must try to go out. If you have an air leak the fire is maintained at whatever temperature can be supported by this much natural draft. AIR LEAKS= NATURAL DRAFT. If you turn your controller setpoint up, then the same air leak just becomes background NATURAL DRAFT. The temperature is controlled at the higher set point because X amount of air = Y temperature.

2.2.2. Finding and Fixing Air Leaks

To find the air leaks, put wood chips directly on hot charcoal embers, and close the lid on the pit. Leave both Guru probes out of the pit. Set the pit setpoint knob to 400° and the meat setpoint knob to 210°, which will force the Guru's power blower to run continuously. The pressure created inside the pit will cause smoke to pour out of the leak sites. In order to maintain low temperatures, these leaks must be plugged to prevent unwanted airflow. Use gaskets or foil tape to "tighten up" your pit. Remember to follow the End of Cook Safety Procedure for shutting down a hot pit, as described in section 4.

If you want to operate at low temperatures, then you must eliminate all air leaks. Usually a PIT that is not bent will seal tight enough to achieve low temperature control. If you are experiencing leakage at the pot to cylinder joint you can create a soft seal. A simple way to seal any Kettle PIT is to cut the bottom 2" off of and old T-shirt and wet the ring. Now stretch the wet ring around the bottom half of the pot and place the lid or cylinder back on top. The T-shirt will not burn even after it is dry.

3. Operation

3.1. Temperature Displays

The BBQ GURU has two temperature displays, one for the meat temperature and one for the pit temperature. The pit display reads the temperature of the pit probe (175 to 400° F). The meat display shows the *difference* between your meat setpoint and the temperature on the meat probe (-40° to +5° F).

You can determine the current temperature of the meat at anytime during a cooking cycle by simply turning the meat setpoint knob until the meat bar graph reads 0 (zero). The temperature of the setpoint dial is the exact internal temperature of the meat at that moment. After the measurement is made, return the knob to the desired setpoint and continue cooking. It is important to note that when the low-and-slow ramp function is enabled, the pit setpoint knob may be different than the internal setpoint The BBQ GURU is using to control the pit.

3.1.1. Out of Range Temperature Readings

If the temperature is too high or too low on either the pit or the meat probe, the display will blink at either the highest or lowest temperature value on the corresponding display.

It is normal for both displays to blink on startup, when the pit and meat are cold. Once the pit is over 175° F., the pit display will show steady. Once you have been cooking a while and the meat is within 40° F of the setpoint temperature, the meat display will show steady. A blinking LED not at the max or min ends of the pit display is an indication that The BBQ GURU's low-and-slow ramp down mode is active. See the Low-and-Slow Ramp Mode Section for more detail.

3.2. Temperature Probe

The BBQ GURU's temperature probes are made of high quality, high temperature material that can withstand in excess of 400 ° F, but it is important to avoid exposing these thermocouple wires to direct flames or extremely high temperatures which can exceed their temperature ratings. Your pit probe should always be placed so that it is not in a direct line with the fire. Not only can this damage the probe, but it can cause the sensor to fool the GURU into thinking that the pit temperature is higher than it really is on average, causing slower cooking and false readings on the pit bar graph display. Although the temperatures inside of any pit can vary significantly from location to location, the BBQ GURU's power draft blower helps even this out by stirring the air and eliminating hot spots.

3.2.1. Temperature Probe Placement

Temperature probe placement is important. The meat probe (the longer of the two probes) should be inserted into the meat so that the tip is located in the thickest portion of meat. The meat should be oriented so that the probe wires exit the grill/smoker on the opposite side from the fire when possible. Always keep the probes away from direct heat.

There are several areas in your cooker to place the pit probe (the shorter probe) for controlling the temperature of the cook. Keep in mind that stratification occurs inside all cookers unless there is a convection fan stirring air to help even the temperature throughout the cooker. By clipping the pit probe to the meat probe, you are controlling the heat closest to the meat you are cooking without worrying about the probe touching another piece of meat. Clipping the probe to the cooking grate is fine as long as your probe does not come into contact with any of the food you are cooking or in a location where meat drippings can drip on the probe. Drippings can cool the probe, which causes the control to call for "More Heat". This can cause temperature spikes. If the probe comes in contact with a piece of meat or a hot pan for example, it will throw off the temperature and give false readings. Place probe at least 2" from the food. Clipping the probe to the dome thermometer is another popular spot for pit probe placement. People do this so that their Guru and dome/lid thermometer agree with one another. This is fine also as long as you are aware that the

dome temperature will most likely be different than the temperature around the meat. (Note: Calibrate dome/lid thermometer for accuracy).

Heat can be concentrated between the wall of a ceramic cooker and a plate setter or pizza stone. The temperature in this space can be much higher than the temperature indicated by a dome thermometer or the BBQ Guru Pit Probe.

To help prevent unnecessary damage to the probe wires from the intense heat while cooking a piece of aluminum foil can be used as a bridge to **deflect** the intense heat from the fire. Start by tearing off a piece of aluminum foil long enough to go from the edge of the pit to the within 1-2 inches of the pit probe placement. Fold the aluminum foil over so that it makes a 2-3 inch wide strip. This strip can be placed on the cooking grate under the probe wires to deflect the intense heat that comes around a plate setter or pizza stone. ***DO NOT wrap the probe wires with foil****. (The probe wires are Teflon insulated therefore smoke wipes off easily).* Many users report hundreds of cooks with no protection of the lead wires, just be aware of the potential.

3.3. Power Draft

The power draft LED lights when The BBQ GURU turns on the power draft blower to raise the pit temperature. The power draft blower stokes the fire, by increasing the fire's oxygen supply. Once the temperature has become stable, it is normal for The BBQ GURU to "puff" the fire about every six seconds.

3.3.1 Adjustable Damper

The power draft blower cycles on and off when the grill/smoker is at your desired temperature, while the Guru's blower is in the "off" cycle "natural draft" airflow is still able to enter the blower and feed the fire. This natural draft airflow is minimal with smaller blowers but with larger blowers the natural draft is increased. The damper feature allows the user to make adjustments for their own grill or smoker due to natural drafts that effects cooking temperature during the blower fans off cycle. Testing on different settings is highly recommended. The damper can be set full open for quick start up or grilling at high temperatures or it can be adjusted between full open and full closed to control the natural draft depending on pit size and type of cooking. Listed below are guidelines that can be used as a starting point.

Pit Runner (4CFM): For use on small and medium grills/smokers.

1. Open all the way for high temperature cooking/grilling.
2. Close ½ way for cold smoking at very low temperatures.
3. Close completely to extinguish the fire.

Pit Viper (10CFM): For use on small, medium and large grills/smokers.

1. Open all the way for large cookers/grills and high temperature cooking.
2. Close ½ way for medium cookers/grills and slow cooking.
3. Close ¾ of the way for small grills and cold smoking.
4. Close completely to extinguish the fire.

Pit Bull (25CFM): For use mostly on large cookers. Can also be used on smaller cookers.

1. Open all the way for high temperature grilling.
2. Close ¼ of the way for slow cooks on large cookers.
3. Close ½ way for high temperature on medium cookers/grills.
4. Close ¾ of the way for small grills and low temperature cooking.
5. Close completely to extinguish the fire.

3.4. Alarms

There are three alarm conditions that will sound the BBQ GURU's beeper.

1. Pit over-temperature by 30°.
2. Pit under-temperature by 30° (only allowed to sound after setpoint temperature is achieved to prevent annoying beeping during startup).
3. Meat done (meat deviation from setpoint is 0° or greater).

3.4.1. Power Draft Blower Beep - Remote Monitoring with a Baby Monitor

The BBQ GURU can be used with a baby monitor to provide remote feedback while cooking. The BBQ GURU can be put in the baby monitor mode by pressing the Alarm Silence key for 10 seconds. This enables a constant tone to beep whenever the blower turns on. Using a baby monitor, this can tell you that the BBQ GURU and pit are "breathing" by the sound or by triggering the vibration mode of most baby monitors. If you decide that you don't need constant feedback, any alarm condition will trigger the baby monitor as well. Holding the Alarm Silence key down for an additional 10 seconds will disable the baby monitor mode.

3.4.2. Silencing an Alarm

Press the **Alarm Silence** button to stop the beeper from beeping during an alarm condition. The beeper will not beep again unless a new alarm occurs, or the previous alarm condition is fixed and then recurs.

3.4.3. Good Neighbor Feature

The Good Neighbor feature disables all alarms. To set this feature you must turn the *Competitor* off first, then power back on by pressing the power button, upon release of the power button (immediately/within one second) quickly press and hold the alarm silence button for 2 seconds or more then release. **Important**: Upon release of the "alarm silence" button your control will "light up" letting you know it has been set. If your *Competitor* "lights up" before releasing the alarm silence button it did not set and you'll need to repeat this step. *Note: A power failure/interruption will deactivate this feature when the power is restored. This will let you know you had a power failure/interruption.

3.5. Low-and-Slow Ramp Mode

The low-and-slow *Ramp Mode* works by measuring the temperature inside the meat, comparing it to the meat setpoint and adjusting the pit temperature setpoint to make sure your meat doesn't get overdone. As the meat gets hotter, the pit temperature is ramped down to make sure that your meat is cooking low and slow. This is the perfect cooking strategy for large cuts of meat such as briskets, pork butts, roasts, etc. which should be cooked at low internal temperatures for long periods of time.

To activate the low-and-slow *Ramp Mode*, with The BBQ GURU powered off, set the meat setpoint to any temperature (other than off). Then press the power button.

The green low-and-slow ramp LED will light.

On the Low-and-Slow temperature plot below, notice that as the meat temperature rises, The BBQ GURU causes the pit temperature to fall. It is important to note that when the Low-and-Slow *Ramp Mode* is enabled, the pit setpoint knob may not agree with the pit display. This is because The BBQ GURU is automatically lowering the pit setpoint to keep your meat at the proper internal temperature. The temperature that you see flashing on the control's pit display is the actual pit temperature that has been calculated by the control. When the control senses that the meat has reached the target temperature, the alarm sounds. At this point you can silence the alarm and continue cooking or hold at this temperature. You can also turn the meat control down to hold at an even lower temperature, until guests arrive, etc. This is a great feature for slow cooks or completed rapid cooks.

While using the BBQ Guru in the Low-and-Slow *Ramp Mode,* it is possible to start your cook at a higher than normal temperature such as 275°F-300°F to accelerate your low-and-slow cook without compromising moisture, tenderness and flavor. The BBQ Guru will lower the pit temperature as needed to maintain and never exceed your meat done set point. This is a very effective cooking strategy when time is of the essence.

NOTE: Never hold meat at "done" temp. The meat will dry out eventually. To hold meat before serving, turn the meat temperature knob down to 140° F to 150° F. If the cooker you are using holds heat for long periods, it is best to pull the meat out of the cooker, wrap and let rest in an insulated cooler until you are ready to serve.

The BBQ GURU's Low-and-Slow Ramp Mode cooking response – This graph shows a higher than normal starting temperature being used. When in Ramp Mode The BBQ GURU allows a faster heat up of the meat without overshooting the desired internal meat temperature.

The BBQ GURU's *Meat Monitor Mode* cooking response - This graph shows a typical normal low starting temperature being used and held throughout the cook. This is a more traditional cooking approach. It takes considerably longer for the internal meat temperature to reach the target temperature this way.

3.6. Meat Monitor Mode

The meat monitor mode is ideal for cooking a relatively light cut of meat rapidly, with the meat probe inserted in the center of its mass. When the meat it is done to its proper internal set temperature (rare, medium, well) the meat done alarm will sound, allowing you to serve the cut at its peak of perfection.

To use The BBQ GURU in meat monitor mode, start with The BBQ GURU powered off. Set the meat setpoint to off, then press the power button. Once this mode is enabled, the meat temperature knob can be turned to the desired meat done alarm temperature.

In the Meat Monitor Mode, the pit control is still active, but is not affected by the meat temperature. The pit will remain at the temperature you have set for the duration of the cook.

3.6.1. Meat Monitor Mode Cooking Examples

The Meat Monitor Mode is ideal for cooking a chicken or turkey at a relatively high temperature (275°- 350° F) until the internal temperature in the breast under the wing and thigh reaches 162°-165°F. If this temperature is set on the control in the meat monitor mode, the pit will stay at 275-350° F and the alarm will sound sound to alert you to pull your bird off at just the right time. This is far more accurate and produces much more consistent results than cooking by time alone.

You can also use your BBQ GURU to charcoal grill light cuts of meat at high temperatures in the meat monitor mode. Just place your meat probe in one piece of meat you are grilling and power up the control in the OFF position. Set the meat temperature knob to the desired target temperature. LEAVE YOUR PIT

PROBE OUT OF THE PIT. This will cause The BBQ GURU's fan to run full time, rapidly bringing the pit to a very high temperature and maintaining that temperature. If you use your BBQ GURU in this way, it is especially important to follow the End of Cook Safety Procedure outlined in section 4.0

3.7. Setting Lower Temperatures for Cold Smoking and Drying

The lowest pit temperature you can set and maintain directly is 175 °F. There are occasions, however, such as cold smoking, making jerky, etc. when you may want a lower pit temperature. Using The BBQ GURU to get these lower temperatures involves a simple three-step process.

1. Set the pit setpoint knob to 175° (the minimum), and the meat setpoint knob to the desired pit temperature (between 110° F and 210° F)
2. Wrap the meat probe and pit probe together with a piece of foil, or use the split probe/dual probe adapter accessory to join the two probes, then place the bare probes in the cooking chamber.
3. Power up the unit. This puts The BBQ GURU in ramp mode, in which the temperature of the pit is never allowed to exceed the temperature set for the meat. You are fooling The BBQ GURU into thinking it is controlling the internal temperature of meat, and since the meat temperature is set to what you want to the pit to be, that's the temperature the GURU maintains. You can now make jerky, dry peppers, vegetables, do cold smoking, etc.

3.8. Power Interruption Recovery

If there is a brief or sustained power interruption at any time while cooking with your BBQ GURU *Competitor*, the unit will automatically restart and continue to control your grill/smoker at the same settings you originally set once power is restored. NOTE: This will enabled the ramp mode if both your meat and pit temperatures are set. The Good Neighbor feature will also be disabled if it was set. This lets you know you had a power interruption. This feature makes the unit turn “ON” as soon as it is plugged into a power outlet.

4. IMPORTANT – End of Cook Safety Procedure

When using The BBQ GURU to cook at high temperatures, extra caution is required.
Make sure to turn The BBQ GURU off when you are done cooking. Unplug the fan from the draft inducer sleeve and use the kill plug accessory to plug the draft inducer sleeve. This will cause your fire to die over some time and save charcoal.

CAUTION! Once you have started to shut down a hot pit, DO NOT RAISE THE LID! You could be severely burned. The heat energy left over in the charcoal continues to drive off flammable gases with no air present. If you raise the lid suddenly, air rushes in and instantly causes a violent flashback fire that can shoot out from the pit, causing severe injury. This happens so fast that you don't have time to react or avoid it. BE CAREFUL! If you decide you must open the lid, reopen the top damper and let the pit vent for a while. Then, while wearing long gauntlet gloves, crack the lid very slowly to complete the venting process before opening the lid wide. Any experienced BBQ cook always follows this procedure to the letter when dealing with a hot pit.

5. Troubleshooting

Symptom	Probable cause	Solution
Unit will not power up	Not plugged in properly Damaged cable connection, failed power supply or BBQ GURU controller	Check all connections on **The BBQ GURU 's** connectors and the AC power connector and press the power key again Call **800-288-GURU** to arrange for service/replacement
Unit powers up, but display is very dimly lit	Electrical short in blower power cable Failed power supply or **BBQ GURU** controller	Call **800-288-GURU** to arrange for service/replacement
Display flashing top segment	Over-temperature condition Break in thermocouple cable causing open circuit or failed thermocouple probe or **BBQ GURU** controller	Wait for temperature to come to within display range Go to www.thebbqguru.com to order replacement probes or Call **800-288-GURU** to arrange for service/replacement
Display flashing bottom segment	Under-temperature condition Short in thermocouple wiring or Failed thermocouple probe or **BBQ GURU** controller	Normal on startup, wait for temperature to come to within display range Call **800-288-GURU** to arrange for service/replacement
Display flashing bottom segment when pit is hot and blower will not turn off	Under-temperature condition Short in thermocouple wiring or Failed thermocouple probe or **BBQ GURU** controller	Normal on startup, wait for temperature to come to within display range, meat temperature will take longer to come within range Call **800-288-GURU** to arrange for service/replacement
Blower will not turn on	Blower not plugged in Failed blower or blower cable	Check blower power connector Call **800-288-GURU** to arrange for service/replacement
Blower will not stop running even though the pit is at the cooking temperature (Unit can be turned off but fan continues to run)	Power connection and the blower connection plugs are switched Failed **BBQ GURU** controller	See Section 2.1 for proper connection points Call **800-288-GURU** to arrange for service/replacement
Pit will not go to low temperature setpoint	Your pit has air leaks, providing natural draft even when the BBQ GURU's blower is not running	To find the leaks follow the steps in Section 2.2.2. Call **800-288-GURU** for assistance

6.Care and maintenance of The BBQ GURU.

The BBQ GURU's faceplate and knobs can be cleaned with Windex or glass cleaner and a soft towel. The probes and thermocouple wires can be cleaned with a soapy Scotch Bright pad or a kitchen scrubby. The probes can be sprayed with Pam or wiped with cooking oil before a cook to make them easier to clean up. The thermocouple wires should always be kink-free and rolled up in fairly large, loose coils. They should

always be tied up with the provided Curleez wraps. With proper care your GURU should give you many years of enjoyment and precision cooking.

7. BBQ GURU Calibration Check and Adjustment Procedure

7.1.Boiling Water Method

1. Heat a small pot of water to a rolling boil and then turn the heat down just until the boil is not rolling.
2. Place both thermocouple probes completely in the boiling water.
3. Set your GURU's Meat Setpoint Knob to 212° (fully clock wise) and its Pit Set Point Knob to 200°.
4. If the GURU's meat display reads zero and the pit display reads 200°, your GURU is properly calibrated. If the reading of the meat display is not correct, the factory calibration potentiometer can be adjusted as follows:

Calibration Adjustment Procedure

1. Keep both probes in the boiling water described above.
2. Locate the multi-turn calibration potentiometer through the hole in The BBQ GURU's back.
3. Using a small flat blade screwdriver, turn the calibration potentiometer either direction until the meat display shows -10°. Two turns of calibration potentiometer will move the display approximately one segment.
4. Slowly turn the calibration potentiometer counterclockwise until the meat display just reads zero. It is important to turn the potentiometer one additional turn counterclockwise as soon as the zero segment becomes lit. This makes the reading most accurate by centering the reading inside of one display segment.
5. If the GURU's meat display reads zero and the pit display reads 200° F, your GURU is now properly calibrated.

7.2.Temperature Agreement Between the BBQ GURU and Other Instruments

The temperature inside of the pit can vary 50-75° F from location to location. Even instruments calibrated together won't agree with each other when sensors are placed in different locations.

The real issue here is stratification. Heat rises and will cause heat to collect in a dome. Progressively cooler zones will be found lower in the column unless stirred as in a convection oven. As you move closer to the source of heat, the temperature you sense will rise due to radiation. This is not a bad thing but is a fact of life. You can sense the temperature wherever it suits your needs, just be aware that this variation is due to stratification and it can be 50° F or even 75° F in a tall cooking chamber. Also don't forget that what you place on the pit is absorbing lots of heat early on in the cooking cycle and will affect temperature readings in close proximity to their mass.

8.Technical Support and Contact Information

1 (800) 288 GURU (4878)
www.thebbqguru.com
techsupport@thebbqGURU.com Shotgun Fred and Barbeque Bob (Tech support, questions, concerns, etc.)
sales@thebbqGURU.com Linda Filimon, our delightful *Director of Sales*, will be happy to speak with you and offer you fast, efficient service.
recipes@thebbqGURU.com Share your recipes with us! We will be happy to post your recipes and give you the credit. Please specify how you would like your name to appear with your recipe. We are also looking for recipes using The BBQ GURU (include cooking temps. settings, cooking times, probe placements, etc.) We look forward to hearing from you.

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BBQ Guru Accessories and Other Products

Please visit our website to order

www.thebbqguru.com

Pit Runner 4 CFM Blower ($45.00)

Pit Viper 10 CFM blower ($52.00)

Thermocouple Meat/Pit Probes

12 VAC Adaptor Cord ($12.00)

Kill Plug ($4.95)

Cayman Clip (5 pk. $3.95)

6 or 12VDC Battery Jumper ($12.00)

Fan Splitter (For Using two Fans w/ one Unit ($12.00)

6 Ft. Fan Extension Cord ($12.00)

Dizzy Pig Brand BBQ Rubs ($6.99 ea.)

Silver Bullet Smoker Jacket
Designed for use with the BBQ Guru on the
Weber Smokey Mountain
($89.95)