



**Handcrafted Wood Pellet Grills**

**(BAC227)**

**Digital Thermostat Kit  
Installation Manual**



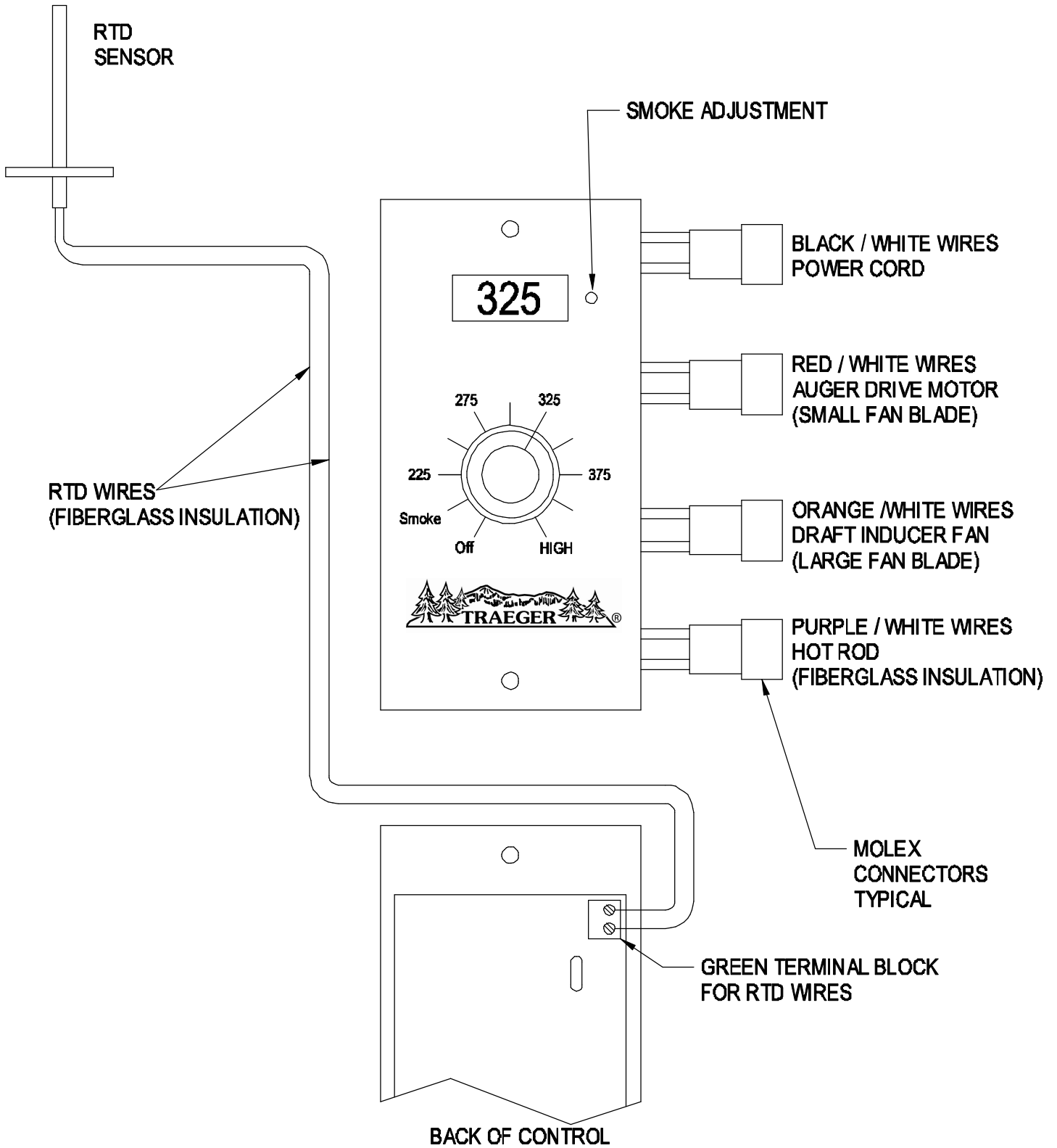
**Step-By-Step Instructions  
for  
Installing Digital Thermostat Kits  
in  
Traeger Wood Pellet Grills**

**Models**

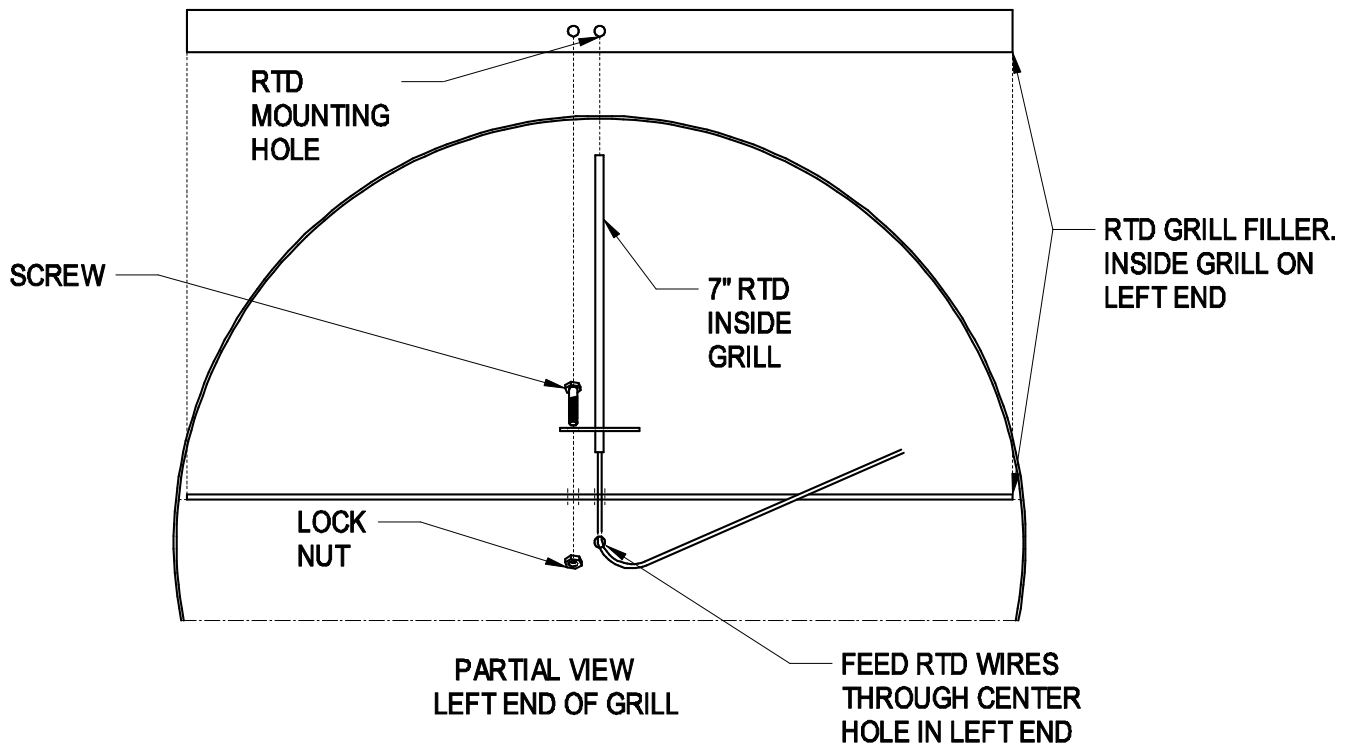
**BBQ055, BBQ070, BBQ07E, BBQ075**

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# DIGITAL THERMOSTAT CONTROL WIRING DIAGRAM



## RTD INSTALLATION DIAGRAM



## INTRODUCTION

Congratulations on your purchase of this Traeger Digital Thermostat Kit, BAC227. Once installed, the Digital Thermostat Kit will add a new level of control to your Grill and provide you with delicious food and years of cooking enjoyment.

When you un-box the Digital Thermostat Kit, make sure you have, and can identify all of the following parts:

- (1) Digital Thermostat Control (P/N BAC200)
- (1) 7" RTD - Temperature Sensor Rod (P/N BAC194)
- (1) Screw (1/2" long)
- (1) Lock Nut

The easy installation process includes:

- 1) Removing the existing 3-Speed Smoker Control.
- 2) Installing the RTD.
- 3) Wiring and Mounting the Digital Thermostat Control.

Follow these step by step instructions and you'll be cookin' in no time!

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**NOTE: Before attempting to remove or install the Control for any reason, it is important that the Switch/Dial is in the OFF position and the Power Cord is disconnected from the electrical outlet. Although the Switch/Dial is off, electricity is still present at the Control. Failure to disconnect the Power Cord from the electrical outlet could result in personal injury from electrical shock and/or irreparable damage to the Control.**

### **REMOVING THE EXISTING SMOKER CONTROL:**

- 1) Make sure the Switch/Dial is in the **OFF** position. Disconnect the Power Cord from the electrical outlet.
- 2) Review the Digital Control Wiring Diagram to familiarize yourself with the color coding of the wiring connections. Disconnect the wiring from the Smoker Control by separating the 4 Molex Connectors found on the underside of the Pellet hopper.
- 3) Remove the two screws securing the Smoker Control to the Pellet Hopper. Save these screws as they will be used to mount the Digital Control later.
- 4) Carefully remove the Smoker Control through the opening in the front of the Pellet Hopper. You may need to adjust the angle of the Smoker Control to allow the circuit board to pass through the opening. Save the Smoker Control in case you should have a problem with your Digital Control. It can be reinstalled until the problem with the Digital Control is resolved.

### **INSTALLING THE RTD:**

- 1) Open the Door and remove the Porcelain Grill and Grease Drain Pan to provide access to the left side of the Grill.
- 2) Carefully cut the cable tie securing the RTD Wires to the RTD. Remove the Screw and Lock Nut from the RTD mounting bracket if they are attached.
- 3) Thread the RTD Wires through the center hole of the RTD Grill Filler and then through the small hole in the left end of the Grill. Continue to feed the RTD wires through the Grill until the lower end of the RTD can be inserted into RTD Grill Filler. On new Grills there will be a "Digital Thermostat RTD Mounting Hole" label pointing to the holes in the RTD Grill Filler. Refer to the RTD Installation Diagram for additional information.
- 4) Mount the RTD to the RTD Grill Filler using the 1/2" long Screw and the Lock Nut as shown in the RTD installation Diagram. Tighten to secure the RTD.
- 5) Run the RTD Wires down through the space between the end of the Grill and the Pellet Hopper. Then feed the Wires up through the opening for the Control.

### **WIRING AND MOUNTING THE DIGITAL CONTROL:**

- 1) Locate the Green Terminal Block on the back of the Digital Control in the upper right corner. Using a small screwdriver, loosen the two screws to open the clamping jaws enough to insert the RTD Wire ends.
- 2) Insert a **bare** wire end on one of the RTD Wires into the clamping jaws on one post of the Terminal Block. Tighten the screw to securely attach the wire. Do not over tighten. Repeat this process on the remaining wire. **The RTD Wires may be connected to the Terminal Block in any combination.**
- 3) Along with the RTD Wires, feed the wiring from the Digital Control into the opening in the Pellet Hopper.
- 4) Carefully insert the Digital Control into the opening in the Pellet Hopper. Again, you may need to adjust the angle of the Digital Control to allow the circuit board to pass through the opening.
- 5) Using the two screws that mounted the Smoker Control, attach the Digital Control to the Pellet Hopper. Do not over tighten the screws.

- 6) Connect the Molex Connectors according to the color coding shown on the Digital Control Wiring Diagram. You may have some excess length for the RTD Wires. This additional wiring can be coiled and secured to the Digital Control Wiring with a cable tie or a twist tie. Make sure that none of the wires interfere with the fan blades on the Draft Inducer Fan or the Auger Drive Motor.

Replace the Grease Drain Pan and the Porcelain Grill, connect the Power Cord to an appropriate, grounded electrical outlet and you are ready to go.

## THERMOSTAT CONTROL FUNCTIONS

- 1) If your Grill is new, refer to the Initial Firing Instructions in your Owner's Manual or on a separate sheet in the Pellet Hopper for start-up instructions. If the Grill has been in service prior to installing the Digital Thermostat Kit, simply open the Door and turn the Dial to **Smoke**. In approximately 2 minutes you will notice whitish-gray smoke coming out of the Grill as the Pellets ignite. After assuring that the Pellets have ignited (the complete Start Cycle will last for approximately 4 minutes), close the Door and set the Temperature Dial to any cooking temperature desired.
- 2) After selecting your cooking temperature (with the exception of "SMOKE") the Auger will operate continuously until the selected temperature is reached. From that point forward, the Digital Control will cycle the Auger off and on to maintain the selected temperature until the Dial Temperature is changed.
- 3) When operating in "Smoke" mode, the Auger will cycle **on** for 15 seconds and **off** for 65 seconds. There is **NO** temperature control with the "Smoke" setting. This timed cycle setting for "Smoke" is a factory pre-set recommended by Traeger Pellet Grills to develop a "Smoking" temperature of 150 to 180 degrees F. However you can change this timed cycle to suit your particular needs.

Refer to the Digital Control Wiring Diagram and locate the Smoke Adjustment. It is a switch inside a small hole on the face of the Digital Control to the right of the Readout. While the Digital Control is **on**, use a very small screwdriver or other pointed object (a bent paper clip works well) to depress the switch. When you depress the switch, the Readout will change from a temperature display to "P" followed by a number. The factory pre-set mentioned earlier is P-2. The setting range is from P-0 to P-9. The "P" readout will change each time you depress the switch.

With all "P" settings, the Auger **on** time remains **constant** at 15 seconds while the **off** time is influenced by the "P" setting. For example: A P-3 setting will result in an Auger **on** time of 15 seconds and an Auger **off** time of 75 seconds, an increase in the **off** time of 10 seconds from the P-2 setting. Each change in the "P" number-up or down-results in an increase or decrease of 10 seconds for the Auger **off** time. Increasing the number decreases Smoking Temperature. Decreasing the number increases Smoking Temperature.

The Traeger Service Department recommends a setting no higher than P-4. Also, if you make a Smoke Adjustment, the temperature on the Readout should be monitored. If the temperature is consistently below 160 degrees F. while "Smoking", there is a risk of losing the fire in the Firepot. If your fire should go out while "Smoking", turn the Dial **OFF**. **DO NOT** attempt to restart the Grill until you complete the following procedure. Failure to do so could result in an "over firing" condition and cause **serious** damage to your Grill.

- 1) Make sure that the Grill is cool. Do not burn yourself.
- 2) Open the Door and remove the Porcelain Grill, Grease Drain Pan and the Heat Baffle.

- 3) **Important:** Remove all unburned Pellets and ash from inside and around the Firepot. A shop-vac is ideal for this task. **CAUTION!** Assure that the Grill is **cold** to avoid a fire from hot ash. Excess ash in the Firepot may be contributing to the problem.
- 4) Replace the Heat Baffle, Grease Drain Pan and the Porcelain Grill and initiate start-up procedure.
- 5) If this didn't remedy the problem, contact Traeger Technical Support for additional troubleshooting help.

## NOTE TO GRILL OWNERS

Now that your Traeger Pellet Grill is equipped with a Digital Thermostat Control, this handy conversion chart will help you determine where to set the Thermostat when the recipes call for "Smoke", "Medium" or "High" settings with the 3-Speed Smoker Control. **Remember:** Grill temperature is affected by conditions such as outside temperature, precipitation and wind as well as altitude. Please keep this in mind when determining how long it will take food to cook on your Grill.

3-Speed Smoker Control Settings	Digital Thermostat Suggested Settings
Smoke	Smoke (150-180 F.)
Medium	225-275 Degrees F.
High	350-400 Degrees F.

If your Grill has a Dome Thermometer, you will probably notice a difference in the temperature displayed on the Readout of the Digital Control and the reading on the Dome Thermometer. This difference is a result of the separate locations on the Grill at which each device takes its reading.

We highly recommend that every Traeger Grill Owner purchase a Traeger Pocket Thermometer (P/N BAC212) to help you cook more accurately and confidently. This Traeger accessory may be purchased on-line at [www.traegergrills.com](http://www.traegergrills.com) or through a Traeger Dealer in your area.

To order parts or accessories: Call, E-mail or write to your Traeger Dealer or Traeger Pellet Grills. Please provide your name, phone number, address, Model and Serial Number of the Grill (located on a label inside the Hopper Lid), along with the part identification.

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