DigiQ II USER GUIDE Rev. 0.96

1.DigiQ Features

- Digital high intensity “Blaze Red” LED display
- Rugged, armored high-temperature pit and food (meat) probes

- Controls your pit and monitors your food (meat) temperature
- All new full-time adaptive control algorithm learns your pit to control better stability / accuracy
- Open lid detect senses when the pit's lid is open to minimize the temperature disturbance and recover quickly to the setpoint, can be turned on /off (default is ON)
- Exclusive low and slow ramp down feature (cook and hold) ramps your pit down on rising food (meat) temperatures, so your food (meat) never overcooks
- Scrolling display messages tell you status and what has been selected
- Exclusive magnetic mount
- Audible alarm sounds on food (meat) done (default is ON, intensity = 4)
- Adjustable deviation alarm sounds when your pits temp goes either too high or low by a user settable value
- Real time blower status indication and blower display blink helps you to measure fuel use, like a fuel gauge
- Display in degrees F or C
- User adjustable beeper intensity setting
- 32 to 475 deg F range with +/- 2 deg F accuracy
- Runs on 100-240VAC (for worldwide use) or 12VDC for automotive supply use

2.Probes

The probes provided with your DigiQ are rugged stainless steel precision thermocouples. These are not low cost thermistors like inexpensive monitors. The thermocouple wires have an armor braid with fiberglass insulation for high temperatures (up to 1000 degrees F). The user can pass these thin wires under the lid of the grill or through a small hole opening without creating a large gap which would allow air to get through (air intrusion). Be careful not to kink these rugged yet small wires or let them come in contact with flames. Always store them by rolling them neatly and tying with the supplied Curleez. These probes are user-replaceable and are available at *www.thebbqguru.com;* we recommend having a spare set for unforeseen emergencies.

2.1.Food (meat) Probe

If you decide not to use the food probe, it should be unplugged before applying power to the DigiQ, not during operation. This will allow the DigiQ time to sense how you are trying to cook and configure its alarm operation to prevent false food alarms. You can also leave the food probe plugged in and just not use it.

3.Power Draft Blowers

All blowers are equipped with an adjustable damper and an aluminum nozzle. The blower housing is constructed of stainless steel for a clean, durable and long lasting finish.

3.1.Blower Size

The Standard 4 CFM blower is good for small or medium size grills and smokers.
The 10 CFM and 25 CFM blowers are good for medium and large grills and smokers.

3.2.Blower Damper Adjustment

The adjustable damper can be completely closed to kill the fire, or can be adjusted to a small opening for cold smoking (very low temps). This feature allows the user to make fine adjustments on their own grill or smoker due to natural drafts that effects cooking temperature during the blower's off cycle. Testing on different settings is recommended. Open damper fully for quick start up or grilling at high temperatures. Close 1/2 way for smaller cookers or low and slow cooking. Close ¾ of the way for cold smoking.

4.Key Operation

FOOD [F] – Shows the food temp when pressed.

PIT [P] – Shows the pit temp when pressed.

UP [▲] – Indexes the setpoint up.

DOWN [▼] – Indexes the setpoint down.

FOOD & PIT [P] + [F] **–** Powers the unit up/down when both are held down.

UP & DOWN [▲] + [▼] **–** Enters the setup menu when both are held down.

4.1.Keypress Chirp

When the beeper intensity is set to above 0, any keypress will cause an acknowledge chirp. You can turn this off by setting the Beeper Intensity in the menu to zero.

4.2.Silencing the Beeper with any Keypress

Anytime the beeper is sounding, pressing any key will silence it and clear the alarm condition. To turn the beeper off, set the Beeper Intensity in the menu to zero.

5.Powering up

Upon applying power to the DigiQ the it will show  , to test the display and then shows the version number  .

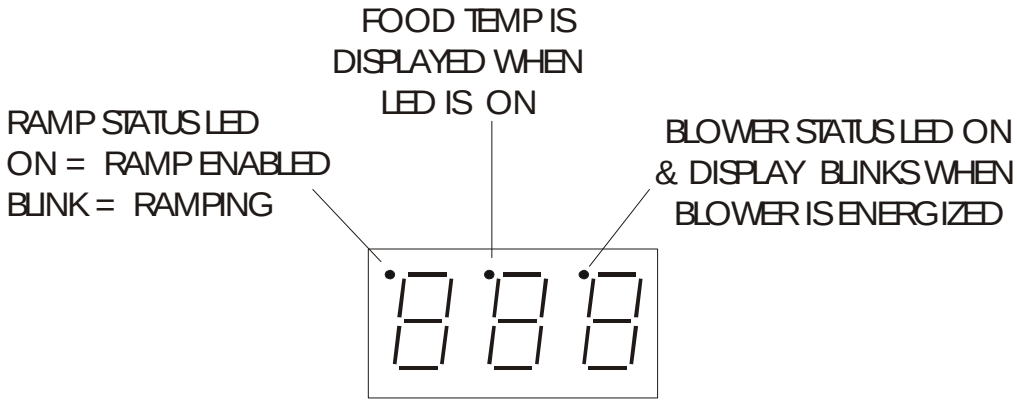
5.1.Power Interruption Recovery Feature with Internal Memory

Because of the internal memory, if there is a brief or sustained power interruption at any time while cooking with your DigiQ, the unit will automatically restart and continue to control your grill/smoker at the same settings you originally set once power is restored.

6.The Display

6.1.Status Indicators

The DigiQ's 3 digit LED display has 3 status indicators as follows:



6.2.Blower Status Indicator

As you gain experience cooking with your DigiQ, you will learn to rely on the Blower Status Indicator and the Blower Display Warble to tell you how it's controlling. When all is going well and there is plenty of charcoal in your pit, the blower will just gently puff the fire (feeding it little bursts of oxygen). Whenever the blower is energized, the display will blink about once per second (blower warble) and the blower status indicator will turn on. When you start to run out of charcoal you may notice the blower running almost all of the time. The blower display warble will allow you to see how long the blower is running from a long distance away from your pit or from inside your house on a cold day.

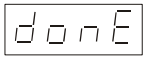
6.2.1.Determining the Output % from the Blower Warble

The Blower Warble is designed so that you can determine the output percentage of the fan by counting how many display blinks (warbles) occur in a given cycle as per the table below:

Blink Pattern	Output %
None	0
…(1 Blink) → (Pause) → (1 Blink) → (Pause)…	10
…(2 Blinks) → (Pause) → (2 Blinks) → (Pause)…	20
…(3 Blinks) → (Pause) → (3 Blinks) → (Pause)…	30
…(4 Blinks) → (Pause) → (4 Blinks) → (Pause)…	40
…(5 Blinks) → (Pause) → (5 Blinks) → (Pause)…	50
…(6 Blinks) → (Pause) → (6 Blinks) → (Pause)…	60
…(7 Blinks) → (Pause) → (7 Blinks) → (Pause)…	70
…(8 Blinks) → (Pause) → (8 Blinks) → (Pause)…	80
…(9 Blinks) → (Pause) → (9 Blinks) → (Pause)…	90
Continuously Blinking	100

TIP: During your cook if you notice the output percentage hanging around 80-100% for a long time, you may be running out of charcoal. If you notice the output % hanging around 10-20% for a long time you may want to close the blower damper adjustment slightly for better control.

6.3.Food Done Message

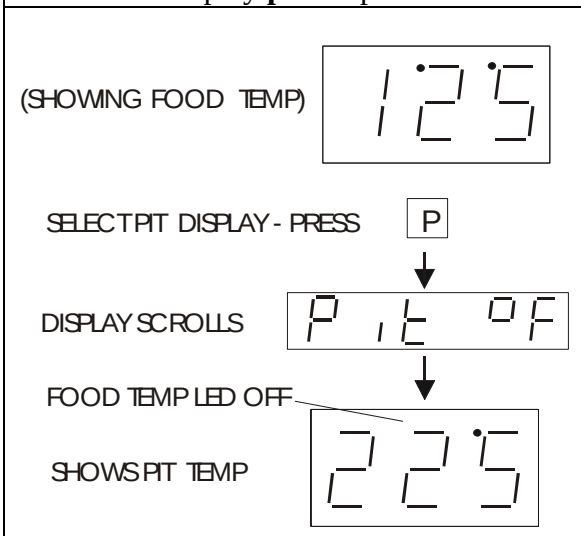
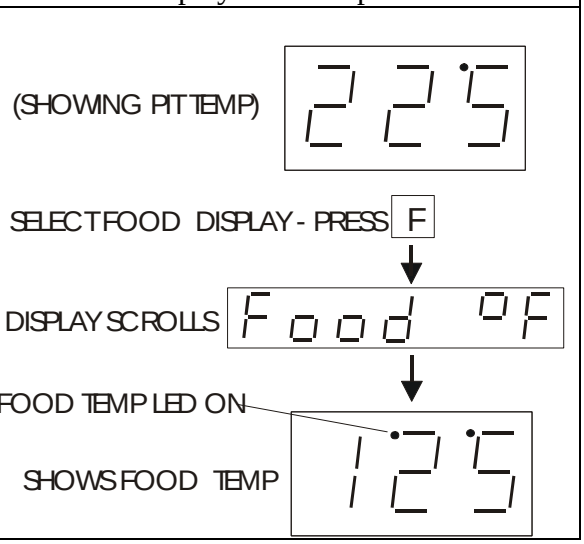
When the food temperature reaches or exceeds the food setpoint, the display will scroll  and the beeper will sound.

6.4.Over / Under Range Temperatures

If the temperature goes below 32 degrees or above 485 degrees on the food or pit probe, the display will show  .

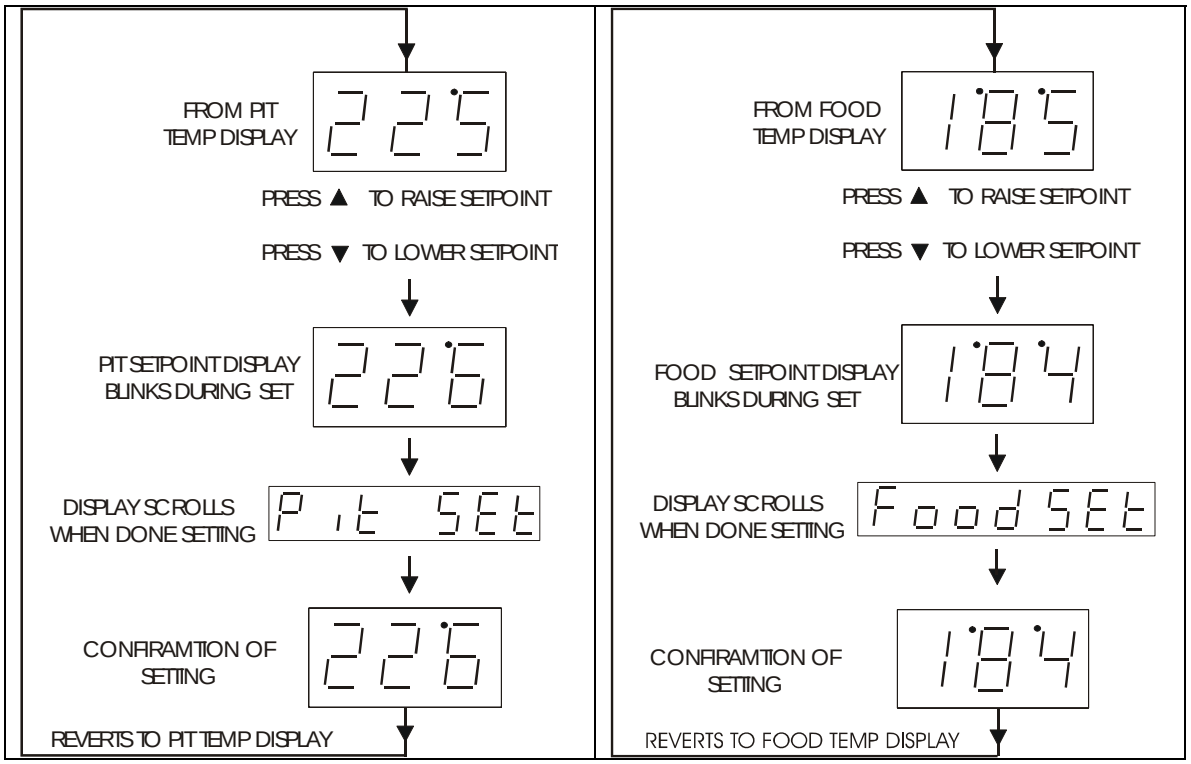
6.5.To Select the Display of Food or Pit Temp

The DigiQ allows you to select either display of food or pit temp. The default is pit.

To display **pit** temperature	To display **food** temperature
	

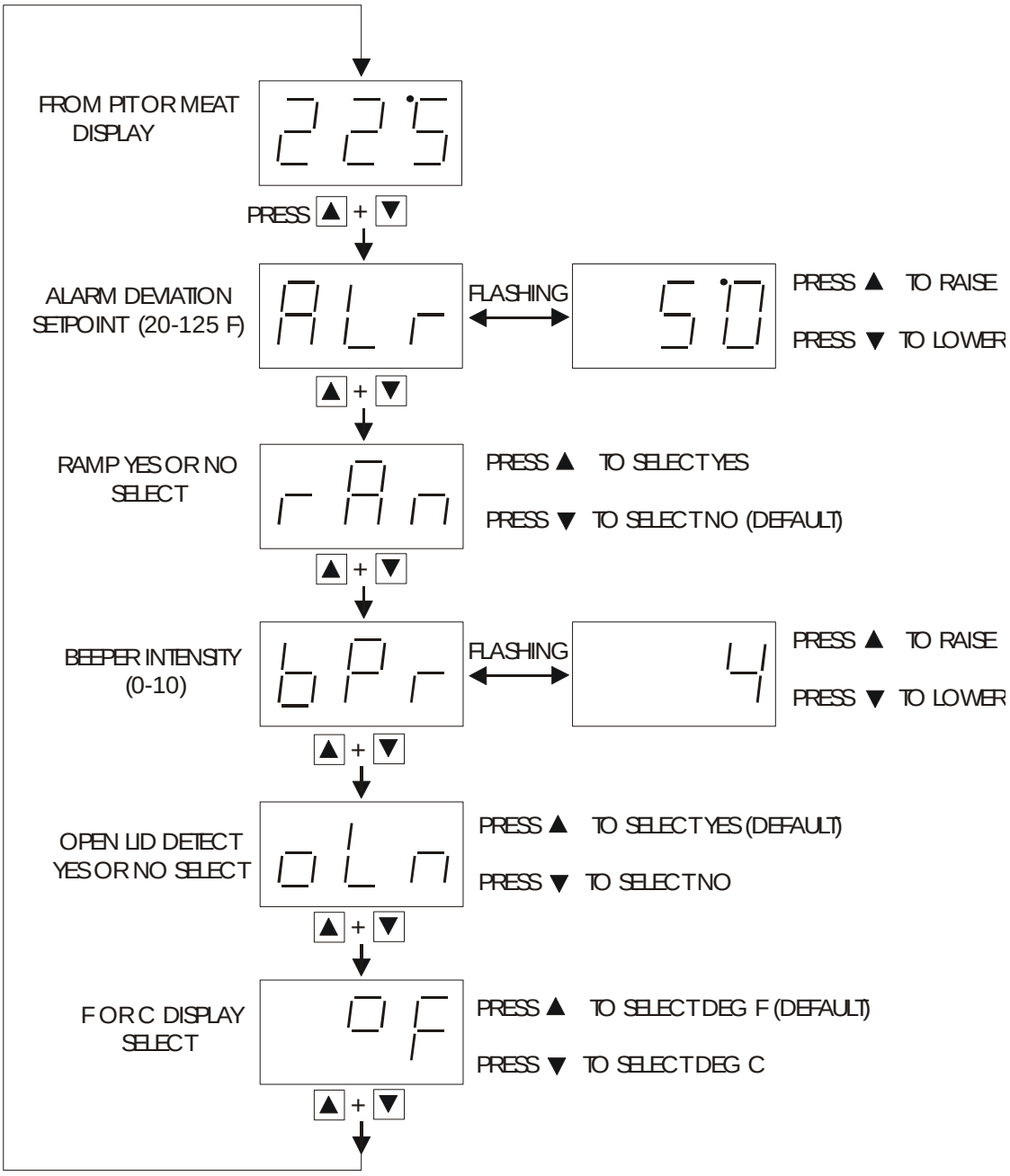
7.Setting the Setpoints

To display the **pit** setpoint temperature, just lightly tap the ▲ or ▼ key while displaying the pit temperature. To set the **pit** setpoint simply press the ▲ or ▼ key.	To display the **food** setpoint temperature, just lightly tap the ▲ or ▼ key while displaying the food temperature. To set the **food** setpoint simply press the ▲ or ▼ key.


FROM PIT TEMP DISPLAY
225°
PRESS ▲ TO RAISE SETPOINT
PRESS ▼ TO LOWER SETPOINT
PIT SETPOINT DISPLAY BLINKS DURING SET
226°
DISPLAY SCROLLS WHEN DONE SETTING
Pit SEt
CONFIRAMTION OF SETTING
226°
REVERTS TO PIT TEMP DISPLAY
FROM FOOD TEMP DISPLAY
185°
PRESS ▲ TO RAISE SETPOINT
PRESS ▼ TO LOWER SETPOINT
FOOD SETPOINT DISPLAY BLINKS DURING SET
184°
DISPLAY SCROLLS WHEN DONE SETTING
Food SEt
CONFIRAMTION OF SETTING
184°
REVERTS TO FOOD TEMP DISPLAY

8. Setup Menu

Press the UP & DOWN keys ▲ + ▼ simultaneously to enter the setup menu. The screens below are shown in the order they appear as the UP & DOWN ▲ + ▼ keys are pressed again. When the F / C select is reached and the UP & DOWN ▲ + ▼ keys are pressed again, the setup menu loops around, so the pit temperature will be displayed again.



8.1. Alarm Deviation Setpoint

If the temperature of the pit deviates above the setpoint by the alarm deviation setpoint, the alarm will sound and the display will blink 

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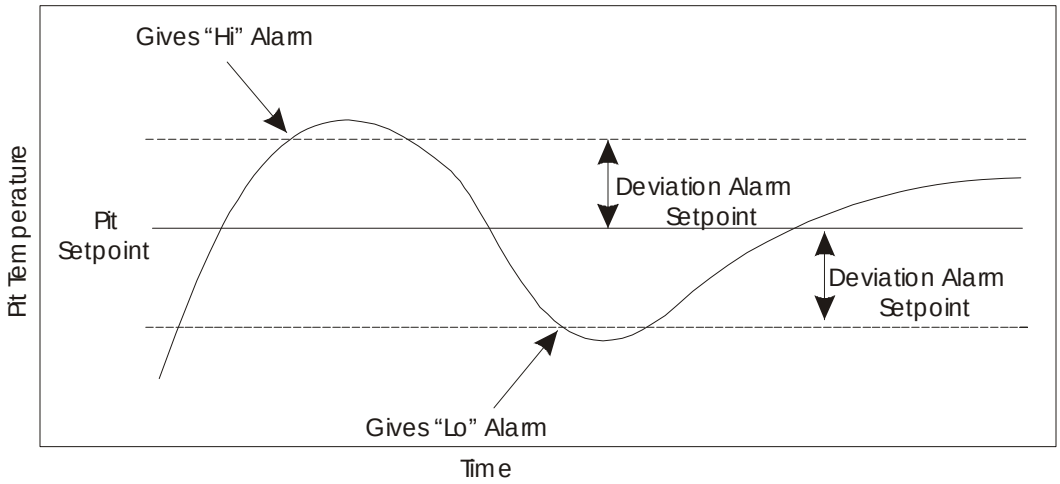
If the temperature of the pit deviates below the setpoint by the alarm deviation setpoint, the alarm will sound and the display will blink 

.

The 

alarm will not sound when your control is first powered up and your pit is cold. The alarm is only allowed once the temperature gets close to the pit temperature setpoint. The alarm deviation is settable from 20 to 125 degF and the factory default is 50 degF.



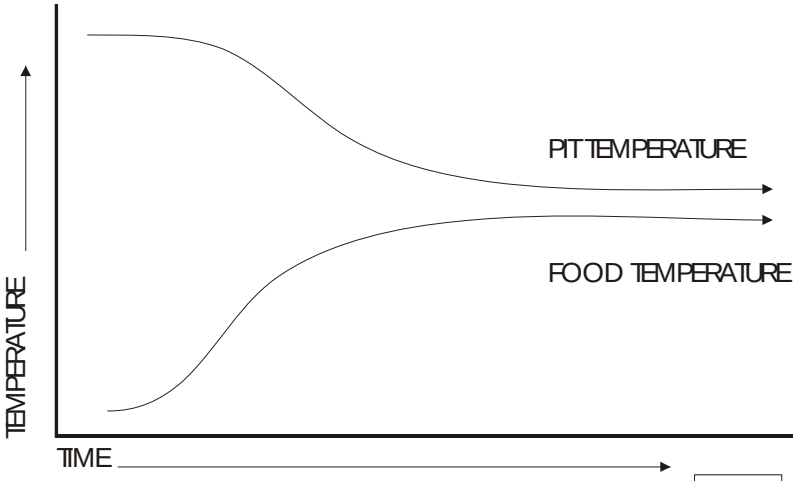
8.2. Ramp (Cook and Hold)

When the ramp is set to 

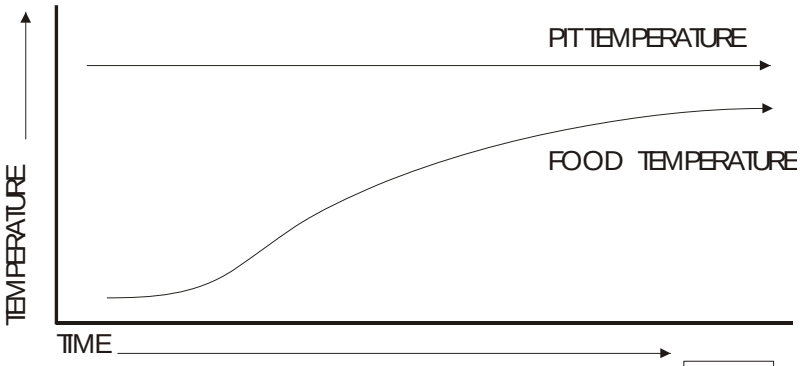
(ramp yes), the low and slow ramp mode is enabled. This mode is used for slow cooks so your food (meat) never over-cooks. This feature will gradually lower the pit temperature to the food set point temperature when the food is within 30° of being done. The controller will hold the pit temperature slightly above your food set point as long as there is fuel. This feature is similar to cook and hold, but the control calculates everything for you.

The factory default setting is 

(ramp no), so you must enable this feature to use it. Note when using this feature, you may want to start your pit temperature a little higher than normal to reduce cook time and not overcook your food .



Food /Pit plot with Ramp Set to Yes rAy



Food /Pit plot with Ramp Set to No rAn

8.3. Beeper Intensity

bPr

The beeper intensity can be adjusted from 0-10. 0 is off, 1 is a small infrequent chirp and 10 is a frequent, loud beep. The factory default is 4. During BBQ Competitions, this feature is useful to distinguish one pit from another, by giving them a unique beep duration.

8.4. Open Lid Detect

This feature will allow quick recovery to the setpoint temperature after you open your lid. When the open lid is set to oLy (open lid yes), open lid detect is enabled. When you open your pit's lid, the temperature will drop. This can cause the blower to over-fire the coals and cause overshoot when the lid is shut. This mode detects when the pit's lid is open and minimizes the blower running during that time. Some overshoot will always be present when your pit's lid is opened and closed even if the blower is off, because it still introduces oxygen to the fire. The factory default is oLy (open lid yes), so you must disable this feature if you have problems with excess air currents in your pit. To disable

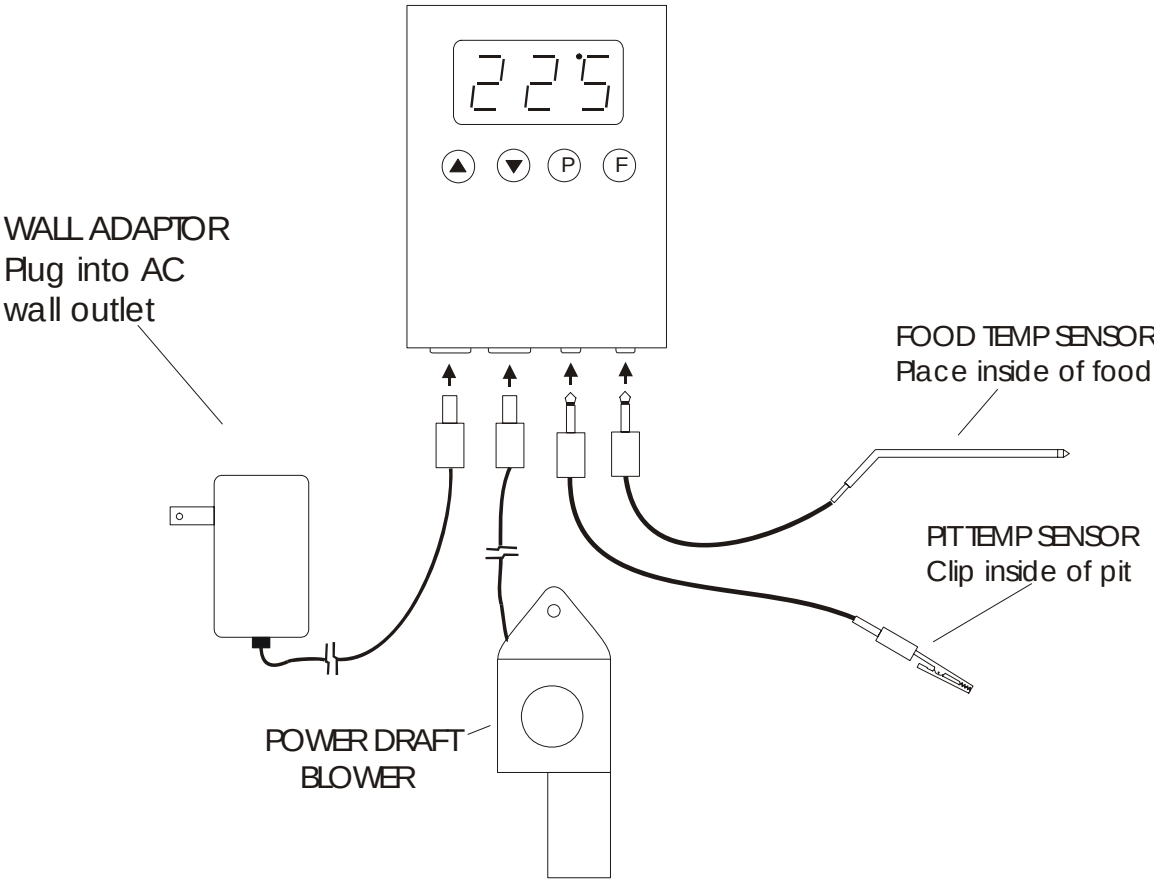
this feature set it to  (open lid no). To prevent false trips of the low alarm, it is not allowed when the temperature drops and your lid is open.

8.4.1. Open Lid Detect – Overshoot Eliminator

When the open lid detect is enabled, the rate of temperature rise of your pit will be limited preventing over-firing. This will make a typical startup to a temperature of 250 deg F take a minimum of about 20minutes and will help to eliminate startup overshoot.

9. Connections

From left to right: Power Input, Blower Output, Food probe, Pit probe, per the diagram below.



10. Building a Proper Fire for Good Control

How you build the fire in your pit is critical for good control, especially at low temperatures. Stack the charcoal inside your pit so it's shaped like a pyramid, small at the top and large at the bottom. Light the fire by lighting a few coals at the top. Do not over-fire the charcoal or light it at the bottom, because this will only translate into startup overshoot and over-firing. Some overshoot is normal and it may take a while for the fire to stabilize.

10.1. Eliminating Large Fluctuations in the Pit Temperature

Normally the DigiQ will be able to adjust the airflow via the blower to deliver precise control and no damper adjustment will be required. If the pit has become over fired or if you built the fire too big, you may see large temperature swings (+/- 10 deg or more). To eliminate this you may need to restrict the airflow by adjusting the blower damper. A good rule of thumb is that if you see large temperature swings with the damper open full, try closing the damper to half; the pit should stabilize within 10-15 minutes after adjustment.

10.2. To Extinguish The Pit

If there is fuel left over from the cook, you can save this fuel by closing off any open dampers or removing the blower and plugging the inducer sleeve opening with the a kill plug. This should put the fire out in about 30-45 min.

11. Calibration

Your DigiQ is shipped to you already calibrated from the factory and should not require recalibration. The following calibration procedure is included if you should ever feel that your DigiQ requires recalibration. This procedure relies on the accurate phase change temperatures of water at the freezing (32 degF) and boiling points (212 degF).

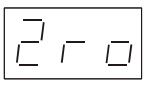
11.1. Calibration Setup

Some things you will need for calibration:

- Ice (crushed is best)
- Water
- Boiling Water
- Styrofoam cups (2)
- DigiQ Control
- DigiQ Food probe
- DigiQ Power Supply

Plug the food probe and power supply connector into the DigiQ, but do not apply power just yet. Have ice ready and have a small pot of boiling water ready.
Proceed to Calibrating the Zero

11.2. Calibration The Zero (Low end temperature)

1. Press and hold ▲ + ▼ and apply electrical power (plug in the wall wart to the control). After approx one second you should hear a chirp beep; you can then let go of the keys.
2. The display will now be flashing between  and the temperature of the food probe. Let the DigiQ warm up for about 15-20 minutes before proceeding.

3. In one of the Styrofoam cups make an ice / water slurry using about 75% ice and 25% water. Fill it to the top with the slurry. Place the food probe into the bottom of the cup and stir it using the probe.
4. Adjust the value shown on the display to show 33degF using the ▲ & ▼ keys. Remember that the display only updates every 3 seconds, so if you need to raise the value by 2, just press the up button twice (you will get 2 beeps). Give the probe a couple of minutes to settle in the cup.
5. Proceed to Calibrating the Span

11.3. Calibration The Span (High end temperature)

1. Press the ▲ + ▼ until the you hear a beep.
2. The Display will now be flashing between  and the temperature of the food probe.
3. Fill the second Styrofoam cup with some water that is at a rolling boil. Be careful not to get burned. Place the food probe into the bottom of the cup and stir it around gently.
4. Adjust the value shown on the display to show 211degF using the ▲ & ▼ keys. Remember that the display only updates every 3 seconds, so if you need to raise the value by 2, just press the up button twice (you will get 2 beeps).
5. Proceed to saving the calibration values.

11.4. Saving the Calibration Values

To save the calibration, press and hold the P + F. This will power the unit down and save the calibration to memory.
You DigiQ should now be calibrated!

12. Contact THE BBQ GURU

THE BBQ GURU
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