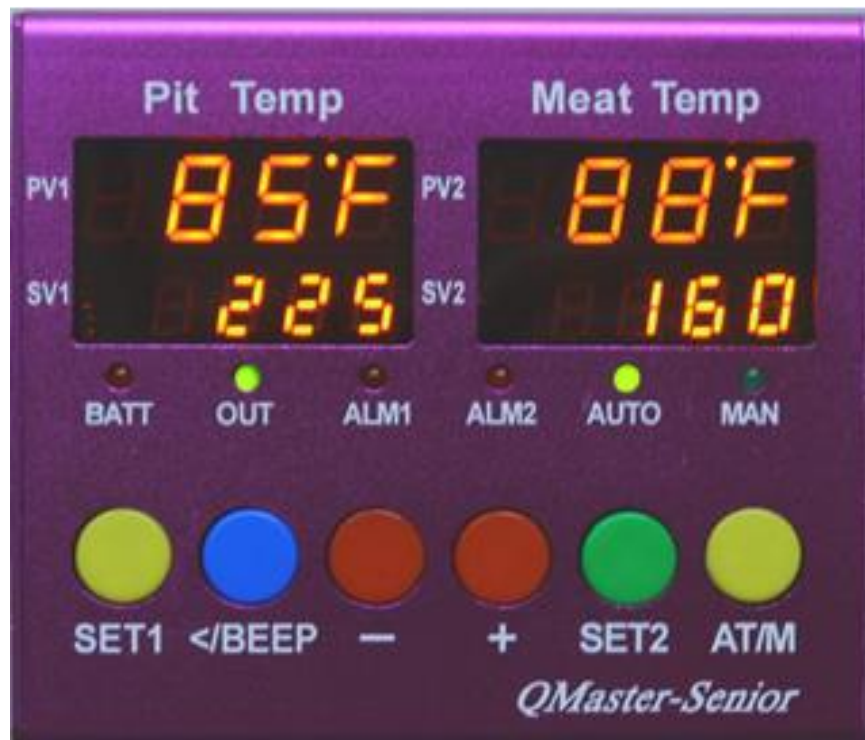


QMaster SENIOR (ATC) ATOMATIC TEMPERATURE CONTROLLER



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QMASTER SENIOR USER'S MANUAL

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1.0 GENERAL INFORMATION

The QMaster Senior is an Automatic Temperature Controller for BBQ Smokers and Grills.

They are used to maintain pit temperature within a few degrees of the set temperature. It also has a meat probe to sense the meat temperature. Once the meat is done cooking the meat probe will control the pit temperature so the meat maintains the desired meat temperature. This way the meat will stay warm and not burn.

Summary:

The QMaster Senior is designed to maintain the Pit Temperature (SV1) until the Meat Temperature (SV2) is reached.

The controller starts off by using the Pit Probe to monitor and maintain the Pit Temperature (SV1).

Once the Meat Temperature (SV2) is reached the controllers switches over so the Meat Probe is controlling the pits fan and regulating the temperature of the smoker or grill.

2.0 DISPLAYS

There are (4) Displays. The (2) large display are the current Pit and Meat temperatures. The (2) smaller displays are the target Pit and Meat temperatures

Display PV1 (large) is the **current** Pit Probe temperature.

Display SV1 (smaller) is the **target or set** Pit temperature

Display PV2 (large) is the **current** Meat Probe temperature.

Display SV2 (smaller) is the **target or set** Meat temperature.

NOTE: If a digit is flashing that means you are in edit mode.

3.0 L.E.D's

There are a total of 6 LED's. The LED indicate if the controller function is active or on.

The LED's are as follow.

- BATT (Red)
- OUT (Green)
- ALM1 (Red)
- ALM2 (Red)
- AUTO (Green)
- MAN (Green)

BATT (Red) – Low voltage. The Controller runs on 12Volts DC. If the controller Senses the input voltage falls below 12 Volts the LED will turn on.

OUT (Green) – Blower output. When the fan is sensing voltage the LED will turn on. This indicates the fan is running.

ALM1 (Red) – Alarm Low. When the current temperature falls below the Alarm Low temperature the alarm begins to beep.

ALM2 (Red) - Alarm High. When the current temperature climbs above the Alarm High temperature the alarm begins to beep

AUTO (Green) – Automatic Mode. When the controller is in the Automatic mode the LED will light up.

MAN (Green) – Manuel Mode. When the controller is in Manuel mode the fan will be spinning and the LED will light up.

4.0 INPUT JACKS

There are 4 input jacks. The input jacks are as follow.

DC 12V – On the right side of the controller there is a 12V jack. That is the AC/DC power jack.

Motor – On the left side of the controller there is a Motor jack. That is where the fan plugs into.

Meat – On the left side of the controller there is a Meat jack. That is where the Meat probe plugs into.

Pit – On the left side of the controller there is a Pit jack. That is where the Pit probe plugs into.

NOTE: Make sure the Pit Probe and Meat Probe are fully inserted all the way.

5.0 BLOWER FAN

The QMaster Senior is sold with the 10 CFM fan. The fan is inserted into the fan adapter. The fan fits all QMaster fan adapters.

The QMaster Senior can be programmed to control the Output speed of the fan. By programming the controller you can change the fans CFM. The larger 50 CFM fan can be programmed anywhere from 5 CFM to 50 CFM.

For more information on programming or controlling the fans output speed or idle speed [refer to the Menu Options Section 12 UdC and HdC settings.](#)

6.0 BUTTONS

There are 6 buttons on the face of the QMaster Senior. The buttons allows the user to navigate through the menu mode and with the other buttons allows you to change the settings. Once the desired setting is entered, you save the setting by pressing the opposite **SET** Button.

Example: In **SET1** menu saves settings by pressing **SET2** Button.

In **SET2** menu save settings by pressing **SET1** Button.

SET1 (Yellow) – Allows the user to navigate through a range of settings. It will also save changes you make in SET2 Mode.

</BEEP (Blue) – Turns the sound on or off. Also navigates through the digits when in edit mode.

– **(Red)** – Decrease the value

+ **(Red)** – Increases the value

SET2 (Green) – Allows the user to navigate through a range of settings. It will also save changes you make in SET1 Mode.

ATM (Yellow) – Switch between automatic or manual mode.

BUTTONS IN MORE DETAIL

SET 1 BUTTON

SET1 (Yellow) – Allows the user to navigate through a range of settings. You can continue pressing SET1 multiple times to navigate through the menu options. To save your **SET1** settings press **SET2**.

Target PIT Temperature



Press SET1 once = Target PIT Temperature.

PV1= (SC1) Pit Temperature

SV1= (0225) Digit flashes when in edit mode.

First digit will be flashing on the lower display SV1 when in edit mode. The lower display is your desired pit temperature.

You can change the temperature by pressing the –or+ button. You can also press the (</BEEP) button the toggle left to the next digits.

Press SET2 to save your changes OR press SET 1 to go to the next menu.

Time in Minutes



Press SET1 again 2nd time, Time in Minutes.

PV1= (TC1) Time for Controller

SV1= (0999) Digit flashes when in edit mode

First digit will be flashing on the lower display SV1 when in edit mode. The lower display is your desired Time.

You can change the time by pressing the – or + button. You can also press the (</BEEP) button the toggle left to the next digits. Default is 999 minutes.

Press SET2 to save your changes OR press SET 1 to go to the next menu.

NOTE: Recommend leaving it at 0999. This will avoid you from running out of time while you are cooking.

Alarm Low



Press SET1 again 3rd time, Alarm Low.

PV1= (AL1) Temperature for Controller Low Temp. Alarm for Stage I.

SV1= (0235) Digit flashes when in edit mode

This is the Low Temperature Alarm.

When the set temperature falls below this setting the Low Temperature Alarm will sound. The **ALM1** LED will begin to flash also.

You can change the Low Temperature by pressing the – or + button. You can also press the (</BEEP) button the toggle left to the next digits.

Press **SET2** to save your changes OR press SET 1 again to go to the next menu.

Alarm High



Press SET1 again 4th time, Alarm High.

PV1= (AH1) Temperature for Controller High Temp. Alarm for Temp. Stage I

SV1= (0270) Digit flashes when in edit mode

This is the High Temperature Alarm.

When the set temperature rises above this setting the High Temperature Alarm will sound. The **ALM2** LED will begin to flash also.

You can change the High Temperature by pressing the –or+ button. You can also press the (</BEEP) button the toggle left to the next digits.

Press **SET2** to save your changes OR press SET 1 to go to the next menu.

Activate Cooking Stages 2-X



Press **SET1** again 5th time, Best described as Cook Stages. 0000=Single Stage.

PV1= (SC2) Stage 2-4 Option

SV1= (0000) Digit flashes when in edit mode. Currently set to ignore 2nd Stage.

This is the Cook Stage.

When the (SC2) =0000, it is set to stop at a single stage and ignores 2-4 stages.

When the (SC2) =0001, or 0xxx say 0225 it is set to continue cooking stages 2-4.

You can change the Cook Stages by pressing the – or + button.

Press **SET2** to save your changes.

When in this setting your have all the options above for all (4) stages.

STAGE 2 COOK - SC2, tC2, AL2, AH2

STAGE 3 COOK – SC3, tC3, AL3, AH3

STAGE 4 COOK – SC4, tC4, AL4, AH4

Pit Temperature Stages: (Factory default settings)

Single Stage

Stage 1, 225F, 999 Minutes, low temperature Alarm 215F, high temperature alarm 235F

Stage 2 to 4, (SC2=0000) Disabled

Stage 2 to 4, (SC2=0xxx) Enabled

Multiple Stages

Stage 1, 140F , 240 Minutes, low temperature Alarm 130F, high temperature alarm 150F

Stage 2, 160F, 120 Minutes, low temperature Alarm 150F, high temperature alarm 170F

Stage 3, 170F, 60 Minutes, low temperature Alarm 160F, high temperature alarm 180F

Stage 4, 200F, 30 Minutes, low temperature Alarm 190F, high temperature alarm 210F

Meat Temperature Stages:

Single Stage

P1=160, T=60, P2=140, P3=225

Multiple Stage

Stage 1, 160F , 60 Minutes

Stage 2, 140F, 240 Minutes

Stage 3, 180F, 30 Minutes
Stage 4, 130F, 600 Minutes

Whenever the meat reaches 160F the meat probe will take over and control of fan. It will keep meat at 130F for 60 minutes.

Then after 60 minutes it will increase meat temperature to 140F for 240 minutes.

Then it will increase the temperature to 180F for 30 minutes.

Then it will finally lower the temperature to 140F forever to maintaining meat temperature during full duration. The Maximum PIT Temperature will be limited below 225F. You will never have to worry about over cooking your meat

BUTTONS IN MORE DETAIL

SET 2 BUTTON

SET2 (Green) – Allows the user to navigate through a range of settings. It will also save changes you make in SET1 Mode.

Target Meat Temperature



Press SET2 once = Desired or Target Meat Temperature.

Meat Temperature

PV2= (P1) Meat Probe (Default Meat Temp)

SV2= (0160) Target Meat Temperature Setting

First digit will be flashing on the lower display SV2 when in edit mode.

The lower display is your desired Meat Probe temperature.

You can change the temperature by pressing the –or+ button. You can also press the (</BEEP) button the toggle left to the next digits.

Press SET1 to save your changes OR press SET 2 to go to the next menu.

Meat Probe Time (minutes)



Press SET2 again 2nd time Maintain Meat Temperature Time

PV2= T is Time

SV2= 0060 Time in Minutes

This is the amount of time in minutes you wish to maintain the meat at the set temperature.

The lower display is your desired Meat Time in minutes.

You can change the Time by pressing the –or+ button. You can also press the (</BEEP) button the toggle left to the next digits.

Press SET1 to save your changes OR press SET 2 to go to the next menu.

Resting Meat Temperature



Press SET2 again 3rd Time Maintain Meat Temperature

PV2= P2

SV2= 0140

The controller will maintain the meat at this temperature forever.

After the meat has reached your target temperature the Senior will maintain the meat at this P2 temperature forever.

First digit will be flashing on the lower display SV2 when in edit mode.

The lower display is your desired Meat Probe temperature. The controller will maintain the meat at this temperature once the meat has reached its target temperature. The meat will rest at this set temperature

You can change the temperature by pressing the –or+ button. You can also press the (</BEEP) button the toggle left to the next digits. Press SET1 to save your changes OR press SET 2 to go to the next menu.

Pit Temperature Limit



Press SET2 again 4rd Pit Temperature Limit

PV2= P3

SV2= 0225

First digit will be flashing on the lower display SV2 when in edit mode.

The lower display is your Maximum PIT TEMP not to exceed temperature when P1 and P2 temperatures are reached or active.

You can change the temperature by pressing the –or+ button. You can also press the (</BEEP) button the toggle left to the next digits.

Press SET1 to save your changes.

Example:

Say P1=190, P2=160, P3=225

When the fan tries to keep the meat at 190F, the pit temp. Cannot be over 225F.

If the pit is 230F, even the meat is 180F, the fan remains off...

7.0 FAN ADAPTERS

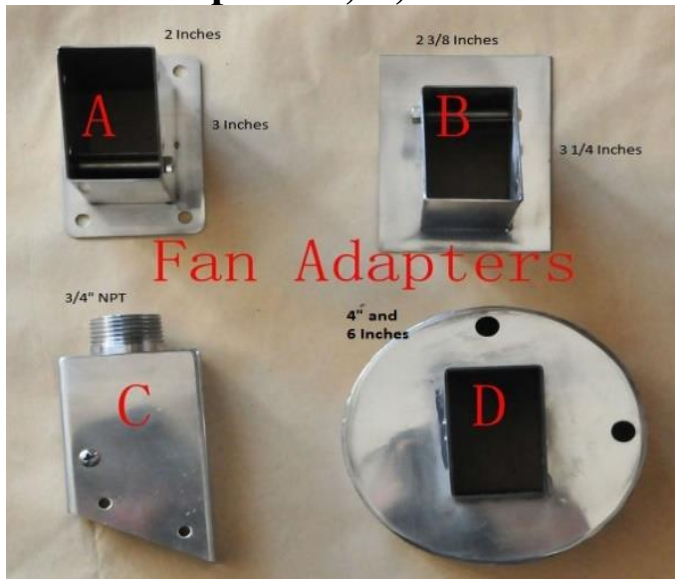
There are so many BBQ grills and Smokers on the market today that it's impossible to make one for each unit. So what we did was make some Fan Adapter for the most common Intake Vents and Fire Boxes. We currently have six (6) Fan Adapters to fit a majority of the intake vents on the market today. We also have a Universal Fan Adapter that can be modified to fit a wide variety of Grills and smokers.

The Universal Fan Adapter: It comes with a ½” NPT fitting. It also comes with a Stainless Steel plate with two nuts so it can be mounted to the pipe nipple. The Stainless Steel plate can be trimmed to fit various intake vents.

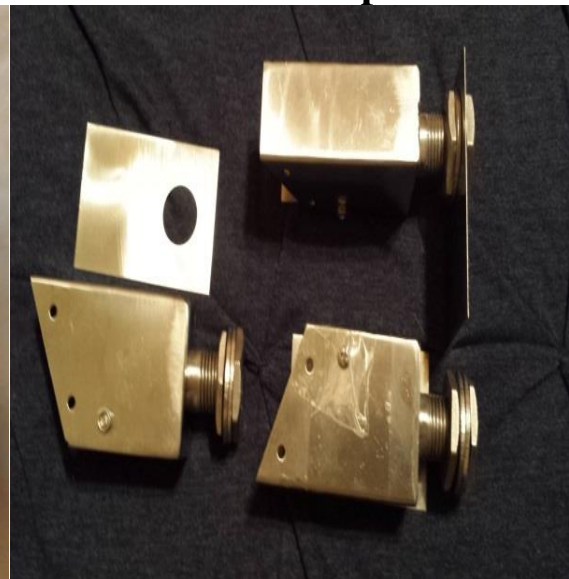
- A Adapter Measurements 3” X 2” with 4- ¼ inch holes

- B Adapter Measurements 3 1/4" X 2 3/8"
- C Adapter Measures 3/4 " NPT
- D Adapter Measures 4" Inches in Diameter
- D1 Adapters Measures 6" Inches in Diameter
- E Adapter Universal Adapter 1/2" NPT also has a plates that measure 3"X 2"
You can also make plates to fit any size vents.

Adapters A, B, C and D



Universal Fan Adapter E



8.0 PROBE CALIBRATION

The QMaster Senior comes with 2 Probes one is for the PIT Probe (Pb1) and the second one is the MEAT Probe (Pb2).

- Pb1 – is the Pit Probe menu
- Pb2 – is the Meat Probe menu

The probes are calibrated at the factory. It's always a good idea to verify your probes. If you have to calibrate the probes this is how you would perform this task.

Press and hold **SET1** button for approximately 6 seconds or until you see the (P) displayed on **PV1** window.

Continue pressing **SET1** until **Pb1** appears in the **PV1** display.

This is the PIT Probe menu.

PIT PROBE (Pb1) CALIBRATION



The Pb1 is the PIT Probe calibration menu.

For each push of the button "+" or "-" button will adjust the probe temperature by 1 degree.

- If you want to increase the temperature you press the + button.
- If you want to decrease the temperature you press the – button.
- Remember each push of the button "+" or "-" will adjust the probe temperature by 1 degree.
- Press **SET2** to save your changes Or press SET 1 to continue to Pb2 probe setting.
- Press **SET2** to save your changes.

Calibrate Meat Probe:

Press and hold **SET1** button for approximately 6 seconds or until you see the (P) displayed on **PV1** window.

Continue pressing **SET1** until **Pb2** appears in the **PV1** display.

This is the MEAT Probe menu.

MEAT PROBE (Pb2)



The Pb2 is the MEAT Probe calibration menu.

For each push of the "+" or "-" button will adjust the probe temperature by 1 degree.

- If you want to increase the temperature you press the + button.
- If you want to decrease the temperature you press the – button.

- Remember each push of the button "+" or "-" will adjust the probe temperature by 1 degree. Press **SET2** to save your changes.

Example1: If you want to **increase** the probe temperature 2 degrees press the + button 2 times.

Example2: If you want to **decrease** the probe temperature 2 degrees press the – button 2 times.

NOTE:

At sea level water usually boils around 212 degrees. Boiling point may vary according to your city’s elevation from sea level. You should research your city’s boiling point compared to sea level.

For example: I live in North Hollywood, CA and my boiling point is 210 degrees.

The most reliable and accurate way to test and calibrate the probes is in boiling water and in hot water. Use an external thermometer to verify the temperatures.

DO NOT FULLY SUBMURGE THE PROBES ALL THE WAY PAST THE METAL PROBE HOUSING. Only submerge the probe half ½ way into the water. **DO NOT LET THE END OF THE PROBE HOUSING AND THE WIRES TOUCH THE WATER. THEY ARE NOT WATER PROOF.**

Keep the probes in the hot and boiling water for a couple of minutes to get an accurate reading.

9.0 IV STAGE COOKING PROCESS and Settings

Following is a real case scenario.

As there are too many data to input, better to write down on paper.

Pit Temperature Stages: I

Stage I, 140F, 240 Minutes, low temperature Alarm 130F, high temperature alarm 150F

Meat Temperature Stages: I

Stage I, 130F, 60 Minutes

Pit Temperature Stages: II

Stage II, 160F, 120 Minutes, low temperature Alarm 150F, high temperature alarm 170F

Meat Temperature Stages: II

Stage II, 140F, 240 Minutes

Pit Temperature Stages: III

Stage III, 170F, 60 Minutes, low temperature Alarm 160F, high temperature alarm 180F

Meat Temperature Stages: III

Stage III, 180F, 30 Minutes

Pit Temperature Stages: IV

Stage IV, 200F, 30 Minutes, low temperature Alarm 190F, high temperature alarm 210F

Meat Temperature Stages: IV

Stage IV, 130F, 600 Minutes

Set Meat P1=160, T=60, P2=140, P3=225

Whenever meat reaches 160F, the meat probe will take over controlling the fan. It will keep meat at 160F for 60 minutes. After 60 minutes, it will keep meat temp. At 140F forever

Whenever meat reaches 130F, the meat probe will take over controlling the fan. It will keep meat at 130F for 60 minutes.

Then it goes into Stage II raising pit temp to 160F and keep meat temperature at 140F for 240 minutes.

Then it goes into Stage III raising the pit Temp to around 170 and keeping Meat Temperature at 180F for 30 minutes.

And finally goes into Stage IV and lowers the meat to 130F for 600 Minutes keeping the meat at 130F temperature.

During the remaining Cook. The Pit temperature is limited under 225F .You will never have to worry about over cooking or burning your meat.

This type of cooking the meat probe controls the Meat temp and will not allowing the Pit to go above the PIT STAGE TEMPATURE OF Stage II 160*, Stage III 170* and Stage IV 200* degrees.

10.0 FACTORY RESET

To set the controller back to its original factory settings.

The Controller will return to its factory state. If you have it programed the controller will erase your settings.

1. Press and hold the blue </BEEP Button **NO NOT RELEASE.**

2. Turn the power switch on while **holding the blue </BEEP button** down for approximately 3 seconds.
3. You will hear a set of beeps and all display windows will show [8888].
RELEASE THE BLUE BUTTON.
4. The probes will read ambient Temperature or Temperature of location.
5. The Pit SV1 display will read 225 degrees
6. The Meat SV2 display will read 160 degrees.

If you do not see the default temperature settings Repeat the process.

11.0 PROBE MAINTAINENCE AND CARE

They are the most sensitive part of the controller kit.

Store the probes in a safe place and roll them back up when you are done using them. Similar to the way you received them.

- The best way to clean the probes is to use a **damp** wash cloth or scotch brite pad to clean the probes.
- If you have the cable sandwiched between the lid and cooker use caution when opening and closing the lid or door.
- DO NOT pull the cable from the sensor.
- DO NOT leave the probes in the pit when they are not being used.
- When you are done cooking remove the probes from the smoker to avoid excessive heat to the probes.

NOTES: DO NOT SUBMERGE THE PROBES IN WATER OR PLACE THEM IN THE DISH WASHER. AVOID EXCESSIVE HEAT. STORE IN A SAFE PLACE.

12.0 MENU OPTIONS

There are two (2) menu options on the QMaster Senior ATC.

Press and hold **SET1** button for approximately 3 seconds. That is one set of menus you can change.

Press and hold **SET1** button for approximately 9 seconds. That is the second set of menus you can change.

3 Second Menu: Allows the user to change the F-C Fahrenheit and Celsius, SL1, SL2, and the HdC Fan speed. To change the values in these options just press the - + buttons. Press SET2 to save any changes you made.

9 Second Menu: Allows the user to change the P, I, D, Ar, T, Pb1Pit Probe, Pb2 Meat Probe, UdC Fan Idle Speed and LyK. To change the values in these options just press the - + buttons. Press SET2 to save any changes you made.

13.0 Trouble Shooting

The majority of the time it's user error. The easiest way to clear errors or malfunctions is to perform a factory reset. This will solve the problem more than 90% of the time.

Problem	Troubleshoot / Suggestions	Results
Probe not reading correctly	Swap probes and see if problem follows. Pit probe in meat jack and meat probe in pit jack..	If the problem follows it's a bad probe
	Measure resistance on the probe tips. 1&2 110 ohms, 1&3 110 ohms, 2&3 .5 ohms.	If the measurements are off replace probe
	Make sure probe wire is fully seated on controller	
	Less than 90 days old	Return to seller for warranty
	Probe got wet when cleaning	Replace
Probes are off by a few degrees	Check to make sure they are not damaged	Calibrate probes. Use hot and boiling water.
Fan not spinning	Check the OUT LED should be on	Perform a factory reset
Alarm has no sound	Alarm is off press </BEEP button	</BEEP button turns the sound on and off
BATT LED	Input voltage is below 12 volts	Defective AC/DC Power Supply
	DC power supply is below 12 volts	Check Batteries
ALM1 LED on	Pit Temperature is below Alarm Low setting.	Calibrate Probes, Low fuel Charcoal or wood.
ALM2 LED on	Pit Temperature is above Alarm High setting	Check ALM2 setting Increase the range from the pit set temp
MAN LED on	Unit is in manual mode	Press ATM will go to automatic mode.
SV1 ---	In Manuel mode	Press ATM
	Possibly a bad probe	Check probe resistance
		Perform a factory reset

14.0 U.S. Sales Via PayPal

You can purchase your QMaster Automatic Temperature Controllers directly from us through PayPal. We stock all the accessories for the Senior and Junior Automatic Temperature Controllers. We ship Priority Mail 2 days
Email us for prices.

If you choose to buy directly through PayPal here are the instructions.

PayPal Instructions

Log into your PayPal Account.

- Select Send Money in the Tools
- Select (paying for goods or services).
- Enter my Email Address (javie4@roadrunner.com),
- Enter the amount you want to send
- Select USD. In the drop down menu
- Select Next
- Add your note or parts you are ordering **Example: (Senior ATC, 50 CFM fan and Fan Adapter D)**.

Press send and I will receive an email notifying me I have money in my PayPal account.

15.0 WARRANTY

All QMaster Automatic Temperature Controllers come with a warranty.

- **CONTROLLERS HAVE A 1 YEAR WARRANTY.**
- **50 CFM FANS HAVE A 6 MONTH WARRANTY.**
- **PROBES PIT AND MEAT 90 DAY WARRANTY.**

Customers are responsible for sending the defective item back to the seller with proof of purchase. Provide the mailing address, email and a contact number in case the technician has a question.

The seller will determine if the unit is warranted. If it is warranted the seller will repair or replace the defective product and return it to the customer.

If you feel that there is something wrong or defective and you are not sure. You can send the unit to the seller to be looked at. It will take approximately 7 – 14 working days before you receive your item back.

16.0 Technical Support

Email **Javier** to schedule an appointment. All appointments are scheduled during the evening between 4:00 – 8:00 PM PST.

When I call you please have the Controller plugged in and ready to go.

Technical Support English: Javie4@roadrunner.com

Technical Support Chinese: sale@allchinas.com

Quick Start Guide QMaster Senior

Target PIT Temperature



Press Set1 to program your PIT Temperature (SC1) Press –or+ button to change Temp.

Press Set1 again to view time (TC1) recommend leaving at this setting.

Press Set1 again to program you Alarm Low setting 10-15 degrees below Target Temp (AL1) –or+ button to change Temp.

Press Set1 again to program you Alarm High 10-15 degrees above Target Temp (AH1) –or+ button to change Temp.

Verify SC2 is 0000 (SC2) (**single stage cooking**)

Press SET2 to save your changes

Target Meat Temperature



Press Set2 to program your Meat Temperature (P1) –or+ button to change Temp.

Press Set2 again to view or Change time (T) –or+ button to change time in minutes.

Press SET1 to save your changes