Master Europe

# Qmaster Senior general description and user manual

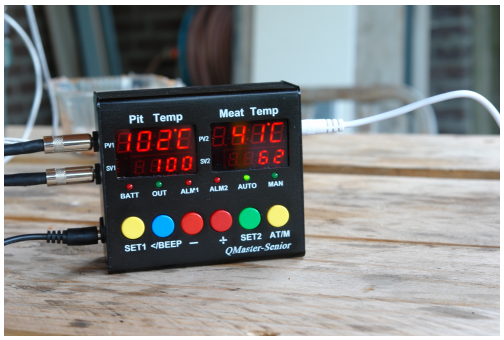
**Basic Description:**
The fan will be controlled by pit temperature first. There are 4 pit temperature stages that can be programmed for use.

Whenever the meat temperature reaches P1 (the first programmed desired meat temperature), the Meat temperature will take over control of the fan to keep the meat at the desired temperature (---- will appear in SV1 (desired pit temperature) to indicate it is no longer controlling).

There are 4 meat temperature stages that can be programmed as well.
When the meat temperature controls the fan, the pit temperature is limited by P5, to avoid overcooking the meat.

**Summary:**

| | |
|---|---|
| Working source | DC 12V, 2A (by supplied 100-240V AC to 12V DC adapter or optional rechargeable battery pack) |
| Probes: | PT100, temperature range 0-450°C |
| Temperature range | -50° to 400°C for controller, |
| Output: | PID 0 to 12V, or simple on/off |




**Qmaster Senior Control Panel description:**

| NO | Label | Description | | |
|---|---|---|---|---|
| 1 | PV1 | Pit Temp | Measured Data | (upper left window) |
| 2 | SV1 | Pit Temp | Set Data | (lower left window) |
| 3 | PV2 | Meat Temp | Measured Data | (upper right window) |
| 4 | SV2 | Meat Temp | Set Data | (lower right window) |
| 5 | BATT | Low Battery Voltage | | |
| 6 | OUT | Output Indication (lights up when fan is powered) | | |
| 7 | ALM1/ALM2 | Low/High temperature Alarm | | |
| 8 | AUTO | Automatic Mode | | |
| 9 | MAN | Manual Mode | | |
| 10 | SET1 | to set Pit Temp | | |
| 11 | < /BEEP | to move left or switch alarm sound On/Off | | |
| 12 | - | reduce value | | |
| 13 | + | increase value | | |
| 14 | SET2 | to set Meat Temp | | |
| 15 | AT/M | switch between automatic/manual mode | | |

## Setting Parameters

**Setting Minimum Fan Speed (UDC)**
Press "**SET1**" for 9 seconds, until "P" appears,
press "**SET1**" a few times "UdC" will appear,
press "+" or "-" until fan starts to spin,
press "**SET2**" to save.
This has already been set by us before shipping. A normal setting is 180, but we check it and set it at a safe value above the minimum value. It is best to leave the setting where it is, unless you notice the fan makes a high pitch noise, but doesn't spin up. Then increase this value to where the fan starts spinning and add another 5 units for safety.
**Important**: if UdC is set a setting at which it does not start spinning, you will burn your fan!!

**You can now set your temperatures to Start Cooking!**
If you have set the Minimum Fan Speed (as described above), you can start your cook. Here's how to adjust the temperature settings and let the Qmaster Senior do the rest.

**Setting PIT temperature(s):**
Press "**SET1**", PV1 window will show "SC, TC, AL, AH," for each of up to 4 phases as described below.
press "< and + or -" to adjust data in SV1 Window.
Press "**SET2**" to save above changes

**Setting temperatures and times before cooking/smoking**

| | |
|---|---|
| Phase I | |
| SC1 | Pit Temp |
| TC1 | Time desired at selected Temp |
| AL1 | Low temp.alarm |
| AH1 | High Temp. Alarm |

**When you set SC2=0 or SC3=0 or SC4=0, That phase and the following phase(s) will be ignored.**

| | |
|---|---|
| Phase II | |
| SC2 | Pit Temp |
| TC2 | Time desired at selected Temp |
| AL2 | Low temp.alarm |
| AH2 | High Temp. Alarm |
| Phase III | |
| SC3 | Pit Temp |
| TC3 | Time desired at selected Temp |
| AL3 | Low temp.alarm |
| AH3 | High Temp. Alarm |
| Phase IV | |
| SC4 | Pit Temp |
| TC4 | Time desired at selected Temp |
| AL4 | Low temp.alarm |
| AH4 | High Temp. Alarm |

When, during any of your programmed Phases, your target meat temperature (P1 described hereafter) is reached, that pit phase is aborted and Qmaster will control the pit temperature according your settings on the meat side (explained next). This is to avoid overcooking the meat.

**Setting MEAT temperature(s):**
Programming of there temperatures for the meat is possible. The first temperature is P1 and is the temperature you want your meat to be heated up to. Next, you can set the time (T1)you want your cooker to hold that first set temperature. After completing this set time, Qmaster Senior will use the next set temperature P2, which is the "hold it at this" temperature.
The last temperature you can set is P3, which is a maximum for both P1 and P2 to avoid overcooking.
Press "**SET2**", PV2 window will show "P1,T1,P2,P3" after each press of the button to allow programming of respective values described below.
press "< and + or -" to adjust data in SV2 Window.
Press "**SET1**" to save above changes

**Press "SET2"**
P1 Target Meat Temp.
T1 Time for P1, in minutes
P2 Target Meat Temp after P1 for T1 minutes is over
P3 Max Pit temp for P1 and P2 to avoid overcooking your meat
Press "**SET1**" to save the settings

When doing long cooks/smoking be sure to set P5 to limit the pit temp to the maximum desired meat temp to avoid overcooking.

**Cooking considerations**

If you need to open your pit to turn or baste your meat, turn off power using the OFF/ON switch. With your pit open, a lot of oxygen will enter and the charcoal will start burning faster. At the same time the temperature in your pit will drop because of the hot air escaping. After you are done and have closed the pit, wait about 3 minutes or so for the temperature to settle before switching the Qmaster back on. This way the Qmaster will not "see" the low temperature due to the opening of the pit and will not command the fan to run for even more air to enter and overshoot the desired temperature.

When turning power off/on, it will remember and continue the last mode. Say if you set smoking time for 8 hours, if any power interrupt occurs, when power is back, it will continue.
**Important:**
When you press "AT/M", it will forget auto session.

## Setting advanced parameters

Two menus are available to adjust more parameters. Parameters in **bold print** are adjustable for all users. Leave other parameters alone if you don't know what they are for.

To access the first menu,
Hold **Set1** for 3 seconds, until the display changes to

**F-C** **C or F (press + or - to toggle between them)**
SL1. 1111
SL2. 1011
**Hdc** **maximum fan output percentage (for average size ceramic cookers like BGE Large, 90% is sufficient)**
Press "**SET2**" to save

To access the second menu,
Hold Set1 for 9 seconds, until the display changes to:
P Default 5
I Default 0
D Default 2
At
T
**Pb1** **for Pit probe calibration**
**Pb2** **for Meat probe calibration**
**Udc** **minimum fan speed (default 180)**
LCK

The P, I and D parameters determine how the selected pit temperature is reached. Default values are fine in most cases. If you think you need to adjust them, it is advised to read about PID controllers first.

**If you have changed settings and want to return to default values:**

**Reset to default**
Turn POWER off for 3 seconds
Press "< " and hold
Turn Power On, 8888 appears, then disappears, release the "< " button.