P7 X.5-PRO CONTROLLER

USER MANUAL

P7 X.5-PRO Controller is the replacement control board for **Pit boss Series 3/4/5/7 Vertical Pellet Smoker**. We've added some useful features original control board so that you can better control and 2 PID temperature controlling programs to the your grill and make the perfect grilling food.

Illustration

1. Power Button, press to start, press and hold to shut down.
2. Press to toggle function menu, press and hold to switch temperature units between F and C.
3. Press and hold the "Prime" Button to activate an extra feed of pellets to the Burn Pot. This can be used to add more fuel to the fire just before opening the barrel lid, resulting in a quicker heat recovery time. It can also be used to add more fuel while smoking, to increase the intensity of clean smoke flavor. Overfeeding the Burn Pot may damage to grill barrel paint.
4. Timer, used to time counting or countdown.
5. Indicates the meat probe temperature when probe is connected. "noP" displayed when meat probe is not connected.
6. Indicate the grill (ambient) temperature.
7. The set temperature and the actual temperature of the grill and meat probes are alternately displayed.
8. Indicates the running status of Auger, Igniter and Fan respectively.
9. Meat probe connection ports.
10. Rotary Knob.

OPERATING INSTRUCTIONS

1. TEMPERATURE CONTROLLING PROGRAM SETTING

- **PID TEMPERATURE CONTROLLING PROGRAM:**

The P7 X.5-PRO has 2 PID versions (4PP, 7PP) to choose. 4PP is for Pit boss Series 3/4 Vertical Pellet Smoker. 7PP is for Pit boss Series 5/7 Vertical Pellet Smoker. If the 7PP does not work well on 5 Series, you can Choose 4PP for 5 Series.

- **NOTE:** As the grill reaches the set temperature, the PID regulates it by cycling the auger and fan on and off, creating a "puffing" sound. This is normal.

- **OEM TEMPERATURE CONTROLLING PROGRAM:**

It also has 4 OEM temperature controlling programs (3P1, 4P1, 5P1, 7P1) for Pit boss Series 3/4/5/7 Vertical Pellet Smoker respectively.

- **SETTING STEPS**

If you want to use the OEM or PID temperature controlling program, you need to select a corresponding program version in line with the Vertical Pellet Smoker Model you own following the instructions below.

(NOTE: Factory Code is 4PP)

1. Press and hold the "Select" button when the unit is not energized (unplug);
2. Energize the unit (plug in) then release the "Select" button;
3. Press the "Power" button to enter the Program Setting Mode, the selected code is showed as "P-code figures"; the others are showed as "C-code figures";
4. Rotate the knob to choose a program code for your pellet grill;
5. After selecting the right program code for your pellet grill, press "Select" button to confirm, the selected program code will be showed as "P-3P1, P- 4P1, P- 5P1, P-7P1, P-4PP or P-7PP", indicating that the setting is done.
6. Unplug the unit, next time you turn on the unit, the selected program code is displayed on the screen in the first second.

2. START

- **BOOT:**

Plug in, the Power button light flickers, indicating that the controller is in standby status, press the **"Power"** button to boot.

- **SET THE GRILL TEMPERATURE:**

"---" is showed on the screen indicating that you can set the desired grill temperature (**it will exit setting if you do noting in 5 seconds**). Press the **ROTARY KNOB** to enter temperature setting again, rotate the knob to set your desired temperature (**NOTE:** in Version **4PP**, **7PP**, temperature can be set in units of 1 degree, others versions in units of 25 or 50 degree.), then press the **ROTARY KNOB** to confirm.

3. MENU SELECTION

Press the **"Select"** button to enter menu selection. The menu order will jump in the loop of "Timer setting – Meat probe 1 target temperature setting – Meat probe 2 target temperature setting – Exit setting" (when a menu is unconfigurable, it will skip the menu to the next menu). The corresponding display area flickers when you turn to a certain menu, press the **ROTARY KNOB** to enter the setting process.

- **TIMER SETTING:**

Press the **"Select"** button to toggle the menu , when the timer display area flickers, press the **ROTARY KNOB** to enter the timer setting. **" ⌐ "** or **" ¬ "** will be showed before the timer figures, **" ⌐ "** represents time counting, **" ¬ "** represents time countdown.

TIME COUNTING:

Press the **ROTARY KNOB** to enter counting or countdown setting, rotate the knob to choose **" ⌐ "** , press the **ROTARY KNOB** to confirm, time counting starts.

TIME COUNTDOWN:

Press the **ROTARY KNOB** to enter counting or countdown setting, rotate the knob to choose **" ¬ "** , press the **ROTARY KNOB** to confirm, the timer figures flicker, rotate the knob to set the hour, press the **ROTARY KNOB** to confirm, rotate the knob to set the minute, press the **ROTARY KNOB** to confirm, time countdown starts. When it count to 0, the buzzer beeps, press any keys to stop the beep.

COUNTING CANCEL:

Press **"Select"** button to toggle the timer menu, press the **ROTARY KNOB** to enter timer setting, press and hold **ROTARY KNOB for 3 seconds** to cancel.

- **MEAT PROBE TARGET TEMPERATURE SETTING:**

You can set the meat probe target temperature only when the probe is inserted in the probe jack. Press "Select" to toggle menu, when "Probe 1 or 2" flickers, press the ROTARY KNOB to enter setting, rotate the knob to set target temperature (90F to 250F), press the ROTARY KNOB to confirm. When the actual temperature of the meat probe reaches or is greater than that of the target temperature, the buzzer beeps. Press any key to dismiss the alerts, the meat probe target temperature is initialized.

4. CONNECTED UNITS FAULT DETECTION SYSTEM

The controller can automatically monitor the faults (e.g. bad contact, short circuit, open circuit, load current out of normal range) of its connected parts (Auger, Ingiter and Fan).

- **SYSTEM OFF:**

This function is turned off by default. When it is off, if all connected parts are working normally, the corresponding icon does not light on. If the system finds that some of the connected parts is abnormal, the corresponding icon flickers, indicating that there is a problem with it. Make sure wire connections are firmly connected and dry, if it still does not work, replace the fault part. If you are confident that the fault part does not affect the proper operation of the grill, you can ignore the fault alert, by which, however, may cause the grill to run unstable or even a certain probability of burning the controller fuse.

- **SYSTEM ON:**

Press the "Select" and "Prime" buttons at the same time to activate the detection system when the controller is on. In this state, all connected parts icons are solid, indicating that all parts are running normally. When some part is detected abnormal, the corresponding icon flickers, the error code shows, the buzzer beeps, and the grill stops working. The controller is locked and inoperable. Power needs to be cut off, you should make sure wire connections are firmly connected and dry, if it still does not work, replace the fault part.

- **NOTE:**

When the fault detection system is activated, if a part's current load is out of range, the controller will stop working. However, this doesn't always mean the part is fully damaged. You can bypass the "Fault Detection" by turning off the system to continue using the unit, but it's advisable to replace the faulty part soon to prevent unexpected issues if it fails completely.

5. "ACT" AND "SET" TEMPERATURE

The real-time and set temperature of the grill and meat probes are alternately displayed on the controller screen. When "ACT" icon

lights on, the real-time temperatures of the grill and meat probes are displayed. When **"SET"** icon lights on, the set temperatures of the grill and meat probes are displayed.

6. Shut Down

Do not cut the power supply right after you done use. Cool down program will be running in order to prevent cases such as fuel pipe scorched, ash stacking in burn pot and hopper backfire. This process will usually last 15 mins.

7. TROUBLESHOOTING

Problem	Cause	Solution
No Power Lights On The Control Board	Power Button	Press the Power Button. Try another attempt and hold for two seconds to verify connection.
	Not Connected To Power Source, GFCI Outlet Has Tripped	Ensure smoker is plugged into a working power source. Reset breaker. Ensure GFCI is a minimum 10 Amp service. Ensure all wire connections are firmly connected and dry.
	Fuse Blown On The Control Board	Remove cooking components from the main smoke cabinet. Turn the unit onto its side, and remove the screws on the rear side of the Control Board. Check the fuse for a broken wire or if the transparent fuse tubing has turned black. If yes, manually replace with a new fuse.
	Faulty Control Board	Control Board needs to be replaced.
Fire In Burn Pot Will Not Light	Auger Not Primed	Before the unit is used for the first time or anytime the hopper is completely emptied out, the auger must be primed to allow pellets to fill the burn pot. If not primed, the igniter will timeout before the pellets ignite. Follow Hopper Priming Procedure.
	Auger Motor Is Jammed	Remove cooking components from the main smoke cabinet. Press the Power

		Button to turn the unit on, turn Temperature Control Dial to SMOKE, and inspect the auger feed system. Visually confirm that the auger is dropping pellets into the burn pot. If not operating properly, call Customer Service for assistance or a replacement part.
	Igniter Failure	Remove cooking components from the main smoke cabinet. Press the Power Button to turn the unit on, turn Temperature Control Dial to SMOKE, and inspect the igniter. Visually confirm that the igniter is working by placing your hand above the burn pot and feeling for heat. Visually confirm that the igniter is protruding approximately 13mm / 0.5 inches in the burn pot.
Flashing Dots On LED Screen	The Igniter Is On	This is not an error that effects the unit. Used to show that the unit has power and is in Start-Up mode (igniter is on). The igniter will turn off after five minutes. Once the flashing dots disappear, the unit will begin to adjust to the desired temperature selected.
Flashing Temperature On LED Screen	Smoker Temperature Is Below 65°C /150°F	This is not an error that effects the unit; however, it is used to show that there is some risk that the fire could go out
"ErH" Error Code	The Smoker Has Overheated, Possibly Due To Grease Fire Or Excess Fuel.	Press and hold the Power Button to turn the unit off. Once cooled, press the Power Button to turn the unit on, then select desired temperature. If error code still displayed, contact Customer Service
"Err" Error Code	Grill Temperature Probe Wire Not Making Connection	Access the electrical components on the base of the unit and check for any damage to the Grill Temperature Probe wires. Ensure the Grill Temperature Probe spade connectors are firmly connected, and connected correctly, to the Control Board.
"ErL" Error	Ignition failure	The pellets in hopper is insufficient, the feeding pipe is scorched and blocked,

Code		the hatch is closed
"noP" Error Code	Bad Connection At Connection Port	Disconnect meat probe from connection port on the Control Board, and reconnect. Ensure the meat probe adapter is firmly connected. Check for signs of damage to the adapter end. If still failed, call Customer Service for replacement part.
	Meat Probe Damaged	Check for signs of damage to the wires of the meat probe. If damaged, call Customer Service for replacement part.
	Faulty Control Board	Control Board needs to be replaced. Contact Customer Service for a replacement part.
"Er1" Error Code	Igniter Abnormal	Check the wiring, connect it firmly, If it doesn't work, change the damaged ignitor.
"Er2" Error Code	Auger Abnormal	Check the wiring, connect it firmly, If it doesn't work, change the damaged auger.
"ErF" Error Code	Fan Abnormal	Check the wiring, connect it firmly, If it doesn't work, change the damaged fan.
Thermometer Shows Temperature When Unit Off	Smoker Has High Ambient Temperature Or Is In Direct Sun	This will not harm the smoker. The internal temperature of the main cabinet has ambiently reached or exceeded 54°C / 130°F. Move the smoker into a shaded area. Prop the cabinet door open to reduce the internal temperature.
Smoker Will Not Achieve Or Maintain Stable Temperature	Insufficient Air Flow Through Burn Pot	Check burn pot for ash build-up or obstructions. Check fan. Ensure it is working properly and air intake is not blocked. Follow Care and Maintenance instructions if dirty. Check auger motor to confirm operation, and ensure there is no blockage in the auger tube. Once all the above steps have been done, start the smoker, set temperature to SMOKE and wait for 10 minutes. Check

		that the flame produced is bright and vibrant.
	Lack Of Fuel, Poor Fuel Quality, Obstruction In Feed System	Check hopper to check that fuel level is sufficient, and replenish if low. Should the quality of wood pellets be poor, or the length of the pellets too long, this may cause an obstruction in the feed system. Remove pellets and follow Care and Maintenance instructions.
	Temperature Probe	Check status of temperature probe. Follow Care and Maintenance instructions if dirty. Contact Customer Service for a replacement part if damaged.
Smoker Produces Excess Or Discolored Smoke	Grease Build-Up	Follow Care and Maintenance instructions.
	Wood Pellet Quality	Remove moist wood pellets from hopper. Follow Care and Maintenance instructions to clean out. Replace with dry wood pellets
	Burn Pot Is Blocked	Clear burn pot of moist wood pellets. Follow Hopper Priming Procedure.
	Insufficient Air Intake For Fan	Check fan. Ensure it is working properly and air intake is not blocked. Follow Care and Maintenance instructions if dirty.