Instruction Manual

SYL-3615 Wi-Fi BBQ Controller Quick Guide

Firmware v0.9.77

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⚠ **Caution**

- This controller is intended to be used with proper safety equipment under normal operating conditions. Failure or malfunction of the controller may result in personal injury or damage to the equipment or other property, devices (limit or safety controls) or systems (alarm or supervisory) intended to warn of or protect against failure or malfunction of the controller. To prevent harm to you and to the equipment, this item must be incorporated into and maintained as a part of the control system under the appropriate environment.

- This controller carries a one (1) year warranty. This warranty is limited to the controller only.

1. Front Panel and Connections on SYL-3615

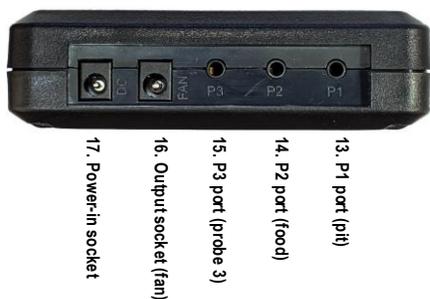**Figure 1. Front panel of a SYL-3615 controller.**

Figure 2. Connection ports on the bottom of a SYL-3615.

Table 1. Recognize different parts on a SYL-3615.

#	Name	Description
1	LCD display	Display probe readings, set temperature, and etc.
2	SET key	* Short-press to access cooking profile menu. * Long-press to access control menu and system menu.
3	TIMER / BACK key	* Check status (step number, time, and output). * Cancel Open-lid status.
4	DOWN key	* Mute the buzzer. * Scroll down the menu. * Decrease value.
5	UP key	* Scroll down the menu. * Decrease value.
6	Wi-Fi indicator	* Solid-on, connected to Wi-Fi. * Slow-blinking, lost Wi-Fi connection. * Fast-blinking, ready to pair (AP mode).
7	Output indicator	Indication of the output level to the fan.
8	Pit Probe	The probe that measures pit temperature
9	Food Probe	A pointed probe can be inserted into food.
10	Probe 3	A third probe for monitoring food temperature.
11	Fan connector	a) DC connector from the fan, 2.5 mm x 5.5 mm.
12	Power adapter connector	DC connector, 2.1 mm x 5.5 mm. Supplies 12 VDC from the power adapter.
13	P1	Sensor port for the pit probe.
14	P2	Sensor port for the food probe.
15	P3	Sensor port for the third probe.
16	Output to Fan	Output port for the fan, 2.5 mm x 5.5 mm.
17	Power-in	Power input socket, 2.1 mm x 5.5 mm.

2. Getting started

2.1. Powering up the device

Simply connect the 12 VDC power adapter to a wall outlet and then plug the barrel connector (2.1 mm x 5.5 mm) to the power-in socket on the bottom left port of the SYL-3615 controller (see Figure 2).

The controller's LCD screen should light up and show a model number and the firmware version (Figure 3a). The LCD screen then will go to the normal display mode (Figure 3b). The "-H-" is a sensor error code, which means no probe is connected or detected.
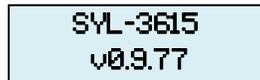

Figure 3(a). The display screen when controller is just powered up.

```
Pit: -H-    Set: 225
Food: -H-   P3: -H-
```
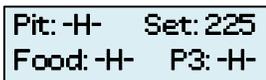
Figure 3(b). The display screen in normal operating mode.

2.2. Connecting probes

Plug the pit probe to the P1 port, the food probe to the P2 port, and the third probe to the P3 port. The screen should show the readings from each probe in the specific area as shown in Figure 3 below.
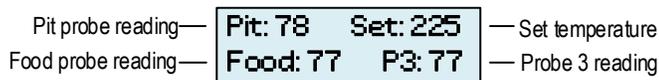
Pit probe reading ——
Food probe reading ——

```
Pit: 78    Set: 225
Food: 77   P3: 77
```

—— Set temperature
—— Probe 3 reading

Figure 4. A SYL-3615 shows readings from all three probe and the set-temperature.

2.3. Plugging in the fan

Plug the barrel connector from the fan (2.5 mm x 5.5 mm) to the second port from the left, which is marked as FAN (see Figure 2).

2.4. Getting familiar with different display modes

From the normal operating mode, the user can change the display to timer-checking mode, or to cooking profile editing mode, or to advanced parameter settings mode. The diagram below shows how to switch to other display modes.
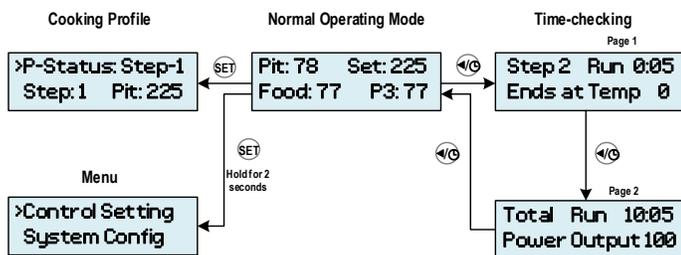

Figure 5. Switching to different display modes.

a) Checking status: time-checking mode:
   Press the TIMER/BACK key to check the current step number, step time, and the ending-criteria. Press the TIMER key one more time to check the total cooking time and the output percentage to the fan. Press the TIMER key again to return to the normal display mode.

b) Editing the cooking profile: cooking profile settings:
   Press the SET key briefly to enter the Cooking Profile Setting Mode.

c) Accessing control settings and system configurations:
   Press and hold down the SET key for 2 seconds to bring up the Control Setting and System Configuration menus.

3. Pairing a SYL-3615 to a Wi-Fi Router

Important: The Wi-Fi chip in SYL-3615 can only connect to 2.4 GHz Wi-Fi signal. Please make sure your router has 2.4 GHz Wi-Fi.

3.1. Download and install the latest AuberWIFI App

3.2. Set the controller to Access Point (AP) mode

The device will be on pair to your home router when it is in the Access Point (AP) mode. When you receive a new SYL-3615 from Auberins.com, the unit should be in the Wi-Fi pairing mode. The Wi-Fi status indicator (blue LED) should be fast-blinking.

To manually change the device to Wi-Fi pairing mode, press and hold SET key for 2 seconds to bring up the menu, and go to "System Config" sub-menu. Then scroll down to find "Reset WiFi" and select "Yes". The device will reset to AP mode and re-start.

3.3. Pair the SYL-3615 to a wireless router

a) Please make sure your phone is connected to a 2.4 GHz Wi-Fi signal from your router.

   IMPORTANT: The AuberWIFI app requires the Wi-Fi name (SSID) and send it to the SYL-3615 in a later step.

b) Open the AuberWIFI App, tap on "add a device" button.

c) Enter the Wi-Fi password and tap on the orange "Add Device" button.

d) Please read the pop-up message boxes and tap "CONTINUE". The App will then take you to the Wi-Fi Setting page on your phone.

e) On the list of the available Wi-Fi signals, select the one starts with "AuberWIFI". This Wi-Fi signal is generated by SYL-3615 for pairing purpose. No password is needed.

f) Once connected the "AuberWIFI" Wi-Fi signal, click the "Continue" button on the lower-right corner.

g) The next pop-up message box will ask you to confirm that your phone has connected to the Wi-Fi signal generated by the SYL-3615. Tap CONFIRM to go ahead with the paring process.

   IMPORTANT: Your phone may alert that SYL-3615 WiFi signal has "no internet access" and may want to switch to use mobile data or a different Wi-Fi signal. If your phone prompts such a notification bar on the top of the screen, please tap on it and select YES to stay connected.

h) Once you tap on the CONFIRM button, the SSID and password will be sent to the SYL-3615 so that it can log on to your 2.4 GHz Wi-Fi.

i)   If the pairing process is successful, the SYL-3615 will re-start with a soild-on blue LED. That means the device has successfully been connected to your router. In the meantime, the app will return to the Device List page, and a new SYL-3615 will appear on this page.

j)   If pairing is unsuccessful, the app will remain on the Add Device page. Please try again and make sure you check if the SSID wireless signal is strong enough, if the password is correct, and wait a little bit at step (g) until the "no internet access" notification appears.

4. Programming a cooking profile

4.1. Single-step mode

By factory default setting, the SYL-3615 is set to single-step mode with set-temperature at 225°F, which means the controller will try to maintain pit temperature at 225°F unless modified.

Note: In single-step mode, the Start and Stop function in the "P-Status" (Program Status) parameters do NOT work.

To change the set temperature in single-step mode, short-press the SET key on a SYL-3615 to view the cooking-profile menu. At "Step:1", press the SET key to enable editing. When finished editing, press the SET key again to save the value. Press the BACK key to return to the normal operating mode.
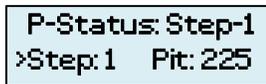
```
P-Status: Step-1
>Step: 1    Pit: 225
```

Figure 6. Move the cursor to Step 1 to edit the set value in the single-step mode.

4.2. Enable multi-step mode

To enable the multi-step cooking profile, please go to the System Configuration menu and change the parameter PRG to ON.

```
>PRG:           ON
 OL Detect      ON
```

Figure 7. Change PRG to ON to enable the multi-step mode.

4.3. Multi-step cooking profile

You can program up to 6 steps in each cooking profile. There are 3 parameters and 2 combinations available for each step:

1)   Pit temperature, ending criteria, and step timer
2)   Pit temperature, ending criteria, and food temperature

The table below describes how the settings in each parameter affect execution of a cooking step. See figure 8 for details.

Table 2. Cooking profile parameters

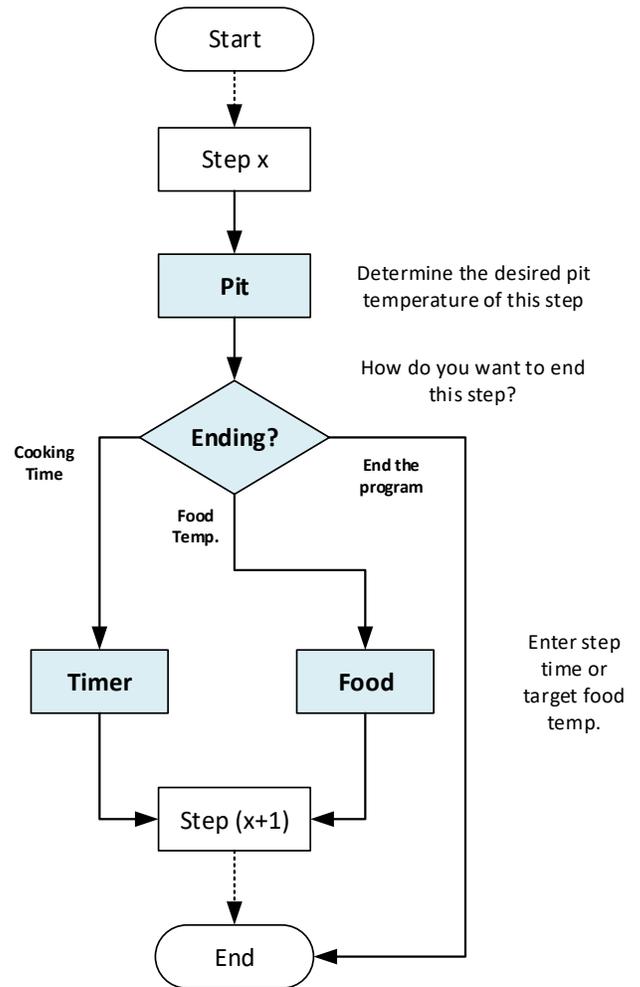| Name	Range	Description
Pit	-99°F ~ 999°F	The set value of pit temperature of the current step.
Ending	Food Temp	To end the current step when food probe reading reaches a desired temperature.
	Time	To end the current step by cooking time.
	End	To end the entire cooking. The rest of steps in this cooking profile will be ignored.
Timer	0:00 ~ 23:59 (hh:mm)	Cooking time, if the current step will end by "Time".
Food	-99°F ~ 999°F	Target food temperature, if the current step will end by food temperature.

Figure 8. Flow chart on how the parameters of a cooking step works.

5. Accessing the menus

To access the menus, press and hold the SET key for 2 seconds.

5.1. Control Settings

Table 3. Control settings

Name	Description	Range	Initial
Pit-AH	Pit High Alarm	0 ~ 999	350
Pit-AL	Pit Low Alarm	0 ~ 999	50
Food-AH	Food High Alarm	0 ~ 999	350
Probe3-AH	Probe 3 High Alarm	0 ~ 999	350
P	Proportional Constant	1 ~ 999	45
I	Integral Time	0 ~ 9999	1200
D	Derivative Time	0 ~ 999	75
T	Control Cycle Time	2 ~ 200	15
MODE	Control Mode	Manual-FS, Manual-TP, PID-FS, PID-TP	PID-FS
Save	Save PID Settings	(Back), BGE, WSM22, WSM18, 4,5,6	Back
Recall	Recall PID Settings	(Back), BGE, WSM22, WSM18, 4,5,6	Back
Back	Back to main menu		

5.2. System Configuration

Table 4. System settings

Name	Description	Range	Initial
PRG	Multi-step program	On, off	Off
OL Detection	Open-lid detection	On, off	On
FMRV	Minimum running voltage of the fan	3.0 V ~ 11.0 V	4.0
OUTH	Output high-limit	0 ~ 100 (%)	100
OUTL	Output low-limit	0 ~ 100 (%)	0
C-F	Temperature unit	°C, °F	F
PB1	Probe 1 offset	-99 ~ 100	0
PB2	Probe 2 offset	-99 ~ 100	0
PB3	Probe 3 offset	-99 ~ 100	0
Buzzer	Enable or disable the on-board buzzer	On, Off	On
nFIL	Powerline filter	A, B, Auto	B
Brightness	LCD back-light brightness	0 ~ 10	10
Push Alarm	Enable pushing temperature alarms to a paired mobile device	On, off	On
Push Step	Enable pushing step notifications to a paired mobile device	On, off	On
Reset	Restore all parameters to factory default values	Yes, No	No
Reset WiFi	Reset Wi-Fi chip to AP mode (pairing mode)	Yes, No	No
Update	Check and update device firmware	Yes, No	No
Back	Back to main menu		

6. Using and mounting the controller

6.1. Operating temperature

The operating environment temperature for the meter is from 0°F ~ 100°F (20°C ~ 50°C). The meter should be placed away from high heat to protect the plastic housing and electronics. Mount or place the controller away from the heat from the smoker. Avoid exposing the controller under directly sunshine during hot summer days.

6.2. Protect the controller from rain

The controller case is not water-proof. However, if you want to use this setup under light rain, it's better to cover the controller with a transparent and waterproof bag/container. Please also lift the controller from the ground or any surface that may cause splashed water get into the case from the bottom of the controller.

6.3. Mounting hooks

Two mounting hooks and two M4 screws are supplied with the controller. These hooks can be installed as shown in Figure 9 and 10.
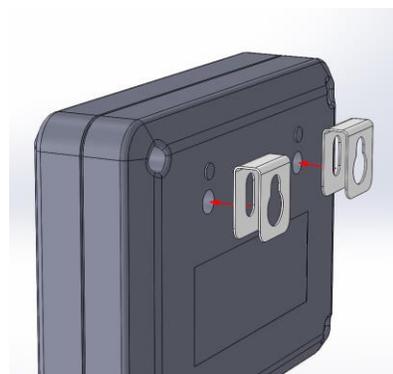

Figure 9. How to install the mounting hooks to SYL-3615.

Figure 10. Two mounting hooks installed on the back of a SYL-3615 controller.

7. FAQs

7.1. What does it mean when the probe shows "-H-" when it is plugged in?

The "-H-" is a probe input error message, which usually indicates that no probe is connected or the probe is defective.

7.2. Why does my probe reading appear to be jumping around?

Please test with another probe to see if the issue moves with the probe or stays with the probe socket. If the probe connector is loose, the wires inside the probe are broken or about to break. The reading may jump around.

7.3. How do you clean the probe?

Do NOT wash the probe. Only wipe the probe's stainless steel sheath with damped paper towel or cloth. Please also keep water out of the probe connector as well.

7.4. Can I leave the controller, the fan, and the probes on the smoker after each cooking?

No, please do NOT leave them outside on the smoker. After each use, keep them in a dry and cool environment.

7.5. What if I have one cooking step ends with food temperature but I have no plugged in a food probe?

If a cooking step's" ending criteria is food temperature, however, no food probe is plugged in, the controller will still maintain the pit temperature but this step will never end.

(End)