



# WET DOG GLASS

## Watlow PM Plus Temperature Controller 2026 Rev 1

- 2. [Overview](#)
- 3. [Home Page - Buttons](#)
- 4. [Home Page - Screen](#)
- 5. [Operations Menu](#)
- 6. [Factory Menu](#)
- 7. [Profile Menu – Writing and Editing Profiles](#)
- 8. [Profile Menu – Step Types](#)
- 9. [Example Profiles](#)
- 14. [Profile Status Menu – Starting a Profile](#)
- 15. [Function Keys - Starting a Profile](#)
- 16. [Profile Status Menu - Monitoring](#)
- 17. [Alarms](#)
- 18. [Errors](#)
- 19. [Bluetooth App](#)



# Overview

Watlow released the PM plus Controller in 2022 as a direct replacement for the Watlow EZ-Zone controller. The EZ-Zone was discontinued in 2025, and WDG switched fully over to the PM Plus as the standard temperature controller in our equipment. The main advantage of the PM plus is the new screen which shows full words rather than the 9 segment display codes on the EZ-Zone.

The Watlow Controllers WDG uses are called PID controllers. They look at the temperature you want to get to, called setpoint, and the temperature the equipment is currently at, called process value, and adjusts its output power to achieve and maintain that setpoint. The PID is an algorithm that can be adjusted to help the controller achieve and maintain setpoint better. For example, if the temperature is only a few degrees low it should not send the output to full power and cause the temperature to overshoot. A good way to think about it is like driving in traffic. Slamming on the gas every time a gaps open, and the brake every time a gap closes puts a lot of wear and tear on the car, it is more efficient to ease on and off the gas.

While these controller have many settings in them that the average user will never need to adjust, here are a few that will help you understand what it's doing, and that you may need to view or adjust depending on your use.

## Heat Power

Heat Power is the output percentage of the controller. This output is tied to whatever provides heat to the equipment; Relays for electrical equipment and the air supply for combustion equipment (This could be either a variable speed blower, or a motorized air valve on a fixed speed blower). 0% represents no power to the elements on electric equipment, and minimum air on gas equipment. 100% represents maximum power.

## Control Mode

The control mode is something you may never change on an electric oven, but is often used when tuning combustion equipment. When in **Auto** you tell the controller the set point, and it decides what % to be at to get there and maintain that temperature. When in **Manual** you set that % directly. For tuning, this keeps the blower at the same speed, so that the gas can be adjusted without the blower changing its speed.

The other option in this setting is **Off**, which will stop the controller output entirely. On electric equipment this is the same as 0% power, but on combustion equipment this will turn the blower off entirely (0% for a blower is still on, just barely).

An important distinction is that **Profiles** are not a part of this control mode. When a profile is running, the profile takes over the **Auto** setpoint. The user will not be able to change the setpoint when the profile is running unless they first end the profile.

## Proportional Band

This is the setting that decides how big of a range the controller ramp powers in when not at 0% or 100%. For example, with a proportional band of 50 degrees whenever the process value is more than 50 degrees from set point the controller will be at 0% or 100%. When within 50 it will begin ramping up (or down) so that it does not overshoot (or undershoot) the setpoint. With too small a proportional band your equipment will bounce around too much as it tries to maintain the setpoint. When too large, the equipment will be slow to go up or down because it doesn't stay at 0% or 100% for long enough during a ramp up or down.

# Home Page - Buttons

A and B: +/- Scroll up and down through menus, increase or decrease settings and values. Holding the + or – will change the value at a faster rate the longer it is held. The blue/white/red symbols are a slider that can be swiped to change the value.

C: Right Arrow. Select items and move forward through menus. When changing a setting, this button will select the change, and also move you to the next screen.

D: Left Arrow Go back a level of the menu.

E: Home. Return to the Home (Temp/Setpoint) screen from any menu. Silences/resets active alarms.

F: Fn buttons. Function shortcuts. WDG standard programming has the left function button programmed to start/stop profile 1, and the right function button to start/stop profile 2.



# Home Page - Screen

G: FN Indicator. Lit after the FN button has been pressed. It does not go off when the profile has finished, so it should not be referenced for profile status.

H: Process Value. Current temperature reading from the Process thermocouple. The temperature reading of the High Limit Thermocouple can be found in the operations menu.

I: Active Setpoint. When in Auto with no profile active this can be changed with the +/- slider. If a profile is running, this shows the current profile setpoint.

J: Unit Indicator. Fahrenheit, Celsius, % Percentage

K: Graph symbol indicates a profile is currently running.

L: Phone Symbol. Ignore, it will blink on and off even if no coms are active. Newer controllers have it hidden.

M: Caution Symbol. Indicates that an alarm is triggered, but has been silenced with the Home key.

N: Output Indicators. In this picture 1, 2, and 3 are lit, 4 is unlit. On most controllers 1 represents the primary heat output. It will be off if the output is at 0%, solid at 100%, and blinks faster and slower for percentages in between. 2 and 3 are usually triggered by alarms, and their lit vs unlit meaning varies with programming. 4 being lit indicates the High Temp Limit has tripped. Issues with 2-4 will also show larger alarm and error messages on the whole screen when occurring.

On new controllers the Zone, Channel, and Phone symbols are usually hidden. If you see these on your controller you can ignore them, they do not indicate anything relevant to how the controller is used.



# Operations Menu

Press the right arrow once from the home page, and the screen will change to the Operations Menu. This menu contains all the standard controls needed for the oven. Use the +/- keys to scroll through the menu, and the right arrow to advance into the selected menu or setting. The left or Home key will return you to the Home Page.

Some lines in this menu may have the ends of their words cutoff, especially on smaller screens (Like in the picture below “Filtered Process Value2”)

**Control Mode** will let you change the control mode between **Auto**, **Manual**, and **Off**. In normal use this should be set to Auto. Manual is only used for troubleshooting, gas furnace heat up/cooldown, and gas tuning. After selecting the needed control mode with the +/-, press the right arrow once to change to the mode. The screen will advance to display Heat Power. Press the home key to return to the Home Page, where you will now see the setpoint shown as your selected mode.

**Heat Power** shows the current percentage output that the controller is sending to the relays or blower.

**Filtered Process Value** Shows the current temperature reading of the High Limit Thermocouple (Universal Input 2)

**Profile Status** has the commands for starting, stopping, pausing, and resuming profiles. When a profile is running it will also show current step, step setpoint, and time remaining.

**Profile** is where profiles are created and edited.

**Factory** is where a password can be entered to unlock the Setup



# Factory Menu

If access to the setup menu is needed for an adjustment like calibrating the blower or changing the alarms, the password must be entered in the Factory Menu.

From the home page:

Right arrow to enter Operations Menu

+/- Keys to scroll down to Factory

Right arrow to enter Factory Menu

+/- Keys to scroll down to Unlock

Right Arrow to enter the Unlock Menu

+/- Keys to scroll down to Password

Right Arrow to enter Password setting

+/- Keys to Set the Password to 156 (Try 63 if 156 does not make the setup menu visible in operations menu)

Right arrow to enter the password, screen will flash.

Home key to go back to the Home screen

Right arrow to enter Operations Menu

Setup should now appear in the list. **Any changes made in the setup menus should be made with consultation from WDG. It is very easy to make an unintended change to a setting.**

To lock setup behind the password again, return to the password menu, and change the 156 to another number, press right arrow to enter, and home to return to home page. Alternatively, turn the controller off and back on.

# Profile Menu – Writing and Editing Profiles

The Profile menu is used to edit profiles. Most WDG controllers will come with an example profile as Profile 1. While our example may work for you, you will likely need to adjust the times and temps to match your glass and process.

From the Home Page, press the right arrow to go to the operations menu.

+/- Keys to select Profile.

Right Arrow to enter

+/- To select which Profile will be edited

Right Arrow to enter

+/- To select which step of that profile will be edited

Right arrow to enter

The options you see once in a step will change depending on the step type selected. Only relevant settings will be displayed. **Event 1 and Event 2** are not programmed on most equipment, leave them set to Off for all step types. Custom equipment with convection, automated vents, or other addons may use events to trigger these actions per profile step.

## Editing Running Profiles

Profiles can be edited while they are running, but there are restrictions. **The current step cannot be edited. If you make changes to the currently running step, the changes will not take effect until the next time the profile is ran.** All steps after the current step can be edited. If the current step needs to be edited, the profile must be terminated, changes made, and then restarted. If the current step was in the middle of the profile, then the profile must be restarted using the Profile Status menu Step command to start at that step.

Steps of a running profile cannot be skipped. The only way to achieve this it to terminate the profile, and then restart it at the desired step.

# Profile Menu – Step Types

## Step Types:

**Unused Step** - Blank step. Will not stop the profile; If an unused step is in the profile before the End step, the profile will continue past it.

**Soak** – Holds at the previous steps setpoint for a given amount of time. If a soak is the first step of a profile, it will hold at the current temperature.

**Hours, Minutes, Seconds** for time period to hold.

**Wait for Event** – Not configured for most WDG Equipment

**Wait for Process** – Works like a soak step, but is based on reaching a temperature instead of holding for a set time. Should follow a Ramp step.

**Wait for Process Instance** Sets which thermocouple it looks to for temperature. Set to 1.

**Wait for Process 1 Value** Sets the temperature at which this step will end and the next step will continue. Should be set at the same value as the previous steps target set point.

**Wait for Both** - Not configured for most WDG Equipment

**Jump** – Jumps to another step.

**Jump Step** is which step will be jumped to.

**Jump Count** indicates how many times the loop will occur before moving past the jump step.

**End** – Ends the profile. End Type defines what happens when the profile ends.

**User** should not be used.

**Off** sets the **Control Mode** to **Off**, which will stop all heating (Will cause a Flame Failure in gas equipment).

**Hold** will change the **Control Mode** to **Auto**, and leaves the setpoint at the temperature of the last steps setpoint.

**Time** – Ramp to a set temperature over a set time period.

**Hours, Minutes, Seconds** for time period to ramp over.

**Target Set Point Loop 1** is the temperature go achieve at the end of the time set

# Example Profiles

Profiles can be written in several different ways depending on user preference. Below are examples with an explanation of what they do and how they act. An important point to consider is that how a profile ends on Annealers and Casting Kilns will change how you start the oven again on the next cycle.

## **Annealing Profile:**

Designed to be started after the last piece of glass is put in the oven. Soak times and target temps will differ for different glasses and different thicknesses.

**Step 1:** Ensures that the setpoint is returned to your annealing soak temperature before the hold timer begins.

Step Type: Time

Hours: 0

Minutes: 0

Seconds: 10

Target Set Point: 950

**Step 2:** Soak time to ensure last piece of glass put in the annealer has adequate soak time.

Step Type: Soak

Hours: 2

Minutes: 0

Seconds: 0

**Step 3:** First ramp down. Will slowly go down from 950 to 770 over 10 hours.

Step Type: Time

Hours: 10

Minutes: 0

Seconds: 0

Target Set Point: 770

**Step 4:** Second ramp down. Will slowly go down from 770 to 250 over 8 hours.

Step Type: Time

Hours: 8

Minutes: 0

Seconds: 0

Target Set Point: 250

**Step 5:** End the profile and sets the Control Mode to off, stopping all heating to the oven.

Step Type: End

End Type: Off

To send the annealer up again when it is unloaded after running the above profile, there are two options. Go to Control Mode in the operations menu and set the Control Mode to Auto. The controller remembers the previous Auto set point. Once this has been set to 950, it will remember this on future control mode changes. The annealer will go to 950 as fast as possible and hold there until the setpoint is changed or another annealing profile is started. Always ensure the set point is correct after changing to Auto, in case another user changed it.

The other option is to use another profile to send the temp up: Time to 950 in 10 seconds, End Hold.

# Example Profiles

## Kiln Casting

Example of Kiln Casting Profiles. This is split into two separate profiles, the first for burning out the mold and reaching 1600 to melt, and the second for the crash and anneal. Hours, Minutes, and Seconds are omitted when set to 0. Times and temps will need adjusted for your glass, mold type, and thickness.

### Dry-out and Rise, Profile 1:

**Step 1:** Slow rise to dry out temp.

Step Type: Time

Hours: 4

Target Set Point: 300

**Step 2:** Soak time to drive out moisture

Step Type: Soak

Hours: 3

**Step 3:** Rise to burnout temp

Step Type: Time

Hours: 5

Target Set Point: 1050

**Step 4:** Soak time at burnout temp.

Step Type: Soak

Hours: 1

**Step 5:** Fast rise to flowing temp

Step Type: Time

Seconds: 10

Target Set Point: 1600

**Step 6:** End profile and hold at 1600. Step Type: End

End Type: Hold

At this point in the sequence the kiln will hold at 1600 indefinitely until a new profile is started or setpoint is changed. It can be helpful to manually time this part of kiln casting, rather than guessing at the melt time needed and trying to do everything in one profile. Once the initial load has melted, more glass has been added, bubbles have popped, etc, and the kiln is ready to send down, the next profile is started.

An alternative would be to combine the up, hold, and down all in one profile, with a soak at 1600 for 1 minute. The Pause/Resume feature in the Profile menu can be used to Pause the kiln at during that 1 minute soak. Then the melting is monitored and the profile is resumed once the melt is complete. This can introduce problems however if the pause is not executed during that 1 minute soak at tom temp, causing the user to terminate and restart the profile at a mid step. This kind of use is made easier with WDG OnSite remote monitoring, allowing monitoring of the timers and pausing all in one screen.

# Example Profiles

## Kiln Casting

**Crash and Anneal, Profile 2:** Note that since this is Profile 2, its first step is 11. This profile would be started as soon as the melt is completed. Times and temps will need adjusted for your glass, mold type, and thickness.

**Step 11:** Crash temp to 950 as fast as possible.

Step Type: Time

Seconds: 10

Target Set Point: 950

**Step 12:** Since the time needed to crash to 950 is unknown, and the soak time at 950 is important to the glass quality, a Wait step can be used to ensure the soak at 950 time is more accurate. The profile will not move on past this step until the kiln temperature hits 950.

Step Type: Wait for Process

Wait for Process Instance: 1

Wait for Process 1 Value: 950

**Step 13:** Soak time begins after the kiln has hit 950. This does not account for the center of the casting which would still be at a temp higher than 950.

Step Type: Soak

Hours: 4

Minutes: 0

Seconds: 0

**Step 14:** First ramp down. Will slowly go down from 950 to 770 over 10 hours.

Step Type: Time

Hours: 10

Minutes: 0

Seconds: 0

Target Set Point: 770

**Step 15:** Second ramp down. Will slowly go down from 770 to 250 over 8 hours.

Step Type: Time

Hours: 8

Minutes: 0

Seconds: 0

Target Set Point: 250

**Step 16:** End the profile and sets the Control Mode to off, stopping all heating to the oven.

Step Type: End

End Type: Off

# Example Profiles

## Furnace Charging

**Melt, Squeeze and back to working temp all in one:** This profile is designed to handle all of what you need a furnace to do in normal operation, as simply as possible. While charging it will be stopped and restarted several times. It is primarily meant for gas furnaces. The profile is started a few hours prior to charging, and will send the furnace up to 2400. The profile is stopped and restarted just before each charge. This allows the profile to be used for any number of charges and with variable time between charges. By using Profile 1, before each charge press the Left Fn key to stop the profile, and then press it again to restart the profile. Charge immediately while the blower is running at minimum. Charging with the blower at minimum reduces heat on the operator and minimizes batch being blown around.

**Step 1:** Lowers the Blower speed just before charging.

Step Type: Time

Seconds: 1

Target Set Point: 2150

**Step 2:** Keeps the blower low while charging. Increase minutes if more time is needed for large charges.

Step Type: Soak

Minutes: 1

**Step 3:** Ramps the temperature back to melting temp after a charge is complete. Adjust setpoint to your charging temp.

Step Type: Time

Minutes: 5

Target Set Point: 2400

**Step 4:** Soak for melting. Adjust Hours based on melt time after last charge.

Step Type: Soak

Hours: 8

It is during step 4 that the profile will be stopped and restarted from step 1 just before each charge. The soak time handles the turn up before charging, the melt time in between charges, and the final melt time after the last charge (Which is what the hours should be set for).

**Step 5:** Ramp down to Squeeze. Step 5 target setpoint can be changed to working temp, and step 6 to End Hold if a squeeze is not needed.

Step Type: Time

Seconds: 1

Target Set Point: 1950

**Step 6:** Waits for temp to drop to 1960, and then starts the next step. This ensures the soak time at squeeze temperatures is more accurate.

Step Type: Wait for Process

Wait for Process Instance: 1

Wait for Process 1 Value: 1960

# Example Profiles

## Furnace Charging

### Melt, Squeeze and back to working temp all in one.

**Step 7:** Soak time at Squeeze temp.

Step Type: Soak

Hours: 2

**Step 8:** Return to working temp

Step Type: Time

Minutes: 30

Target Set Point: 2150

**Step 9:** End the profile. Returns the Control Mode to Auto with the set point the same as the Target Set Point from the previous Step.

Step Type: End

End Type: Hold

# Profile Status Menu – Starting a Profile

The Profile Status menu is primarily used to start and stop profiles. To use it properly, you need to understand how the Watlow treats Profiles and Steps.

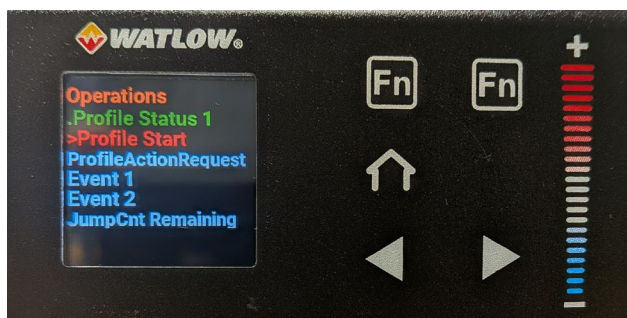
Watlow PM controllers have 40 possible “steps” split into 4 profiles of 10 steps each. Profile 1 uses steps 1-10, profile 2 uses steps 11-20, profile 3 is steps 21-30, profile 4 is steps 31-40.

The Profiles are like shortcuts to start at Step 1 (Profile 1) or step 11 (Profile 2), etc. The Watlow treats them as step 1-40. If a 40 Step profile is needed, step 1-39 can be filled with ramps and soaks, with step 40 being an End. Starting profile 1 would then go all the way from step 1 to step 40. The Watlow could also be programmed for 20 profiles of 2 steps each. Step 1 is ramp, step 2 is end. Step 3 is soak, Step 4 is end. Etc. Starting Profile 1 (Step 1) would go through Step 1 and 2, and end there. To run step 3 and 4, the Watlow needs to be told to start at step 3, and then it would run through step 3 and 4 and end there. Etc.

Luckily most uses only need 4 or less profiles of 10 steps each!

From the Home Page, press the right arrow to go to the operations menu.

+/- Keys to select Profile Status. You will see the below Menu:



Select Profile Start to begin. This will take you to the Profile Start setting, where you can adjust the number with the +/- keys. This is where you will select which profile or step you will perform an action with. After entering 1-4 (or 1-40 for starting at a step), press the right arrow.

The next menu is Profile Action Request. This is where you select what action will be done with the profile you entered into the Profile Start setting. Use the +/- keys to select the desired action (See below), then press the right arrow to begin that action. The screen will then advance to Event 1 or Current Step. **The action you selected has occurred!**

Press Home to return to the Home Screen, and you will now see that the profile has started (Graph Symbol), Terminated (No Graph Symbol), Paused (Graph Symbol Blinking), or resumed (Graph Symbol). The Events can be ignored (On or off, doesn't matter), except on custom equipment that makes use of them.

Profile: Starts Profile #

Pause: Pauses profile at the current setpoint, and pauses any ramp or soak timers.

Resume: Resume from a pause

Terminate: Ends the Profile, with the type of End step that would have occurred if the profile finished normally.

Step: Starts the profile at the Step # entered in the Profile Start setting. This can be used to start a profile in the middle instead of at step 1, 11, 21, or 31.

# Function Keys - Starting a Profile

The Watlow PM Plus has one or two Function (Fn) Buttons. These act like the EZ keys on the older generation of controller. Standard WDG programming has the left Fn button Start and Stop Profile 1. The right FN button starts and stops profile 2. Smaller controllers may only have 1 Fn button. If they are capable of profiles, this will start and stop profile 1. WDG Glory Holes do not have profiles, and the Fn button has no function.

Pressing a Fn button once will start the profile linked to that button (If a profile is present). Pressing that Fn button again will terminate the profile, **using the same kind of End Type that the profile would normally use.**

When pressed, a Fn indicator light will appear in the top left of the screen for the left Fn button, or top right for right Fn button.

**These Fn indicators do not always mean that the profile is running! While they are helpful shortcuts, their indicator lights can be quirky.**

If profile 1 is started with Left Fn, the Fn indicator appears and the graph symbol (Profile running) lights up. If Left Fn is pressed again while that profile is still running, the profile will end and both graph and left Fn will go away.

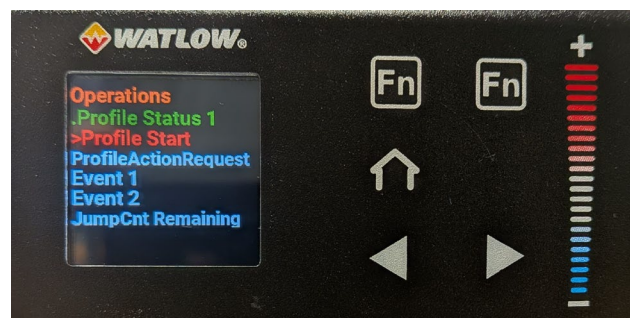
The issue comes when there is no profile for that Fn button, the profile ends normally not using the Fn to stop it, or commands are used from the Profile Status menu.

If there is no profile in steps 11-20, then pressing the right Fn button will light the indicator, but no profile will start (No graph symbol).

If a profile is started with the Fn, and reaches its normal end step, the Fn indicator will not go out when the profile ends. If a profile is started with the Fn, and is terminated from the Profile Status menu, the Fn Indicator will not go out. If a profile is started from the Profile Status menu, the corresponding Fn indicator will not light up. Pressing the corresponding Fn button once will light it up but not affect the profile. Pressing it again will stop the profile and the indicator will go out.

If an Fn indicator is lit, and ANY profile is running, pressing the lit Fn will stop the profile.

The Fn indicators light up when they are pressed, whether a profile is started or not. The Fn indicators go out when they are pressed and successfully stop a profile. If there was no profile running to stop, then the indicator will stay on.



# Profile Status Menu - Monitoring

When a Profile is running, details about it can be found in the Profile Status Menu. These only appear when a profile is running, they are hidden when a profile is not running.

**Current Step** – Step number currently active

**Step Type** – Step type of the currently active step

**Target Set Point Loop 1** – Final setpoint of the step

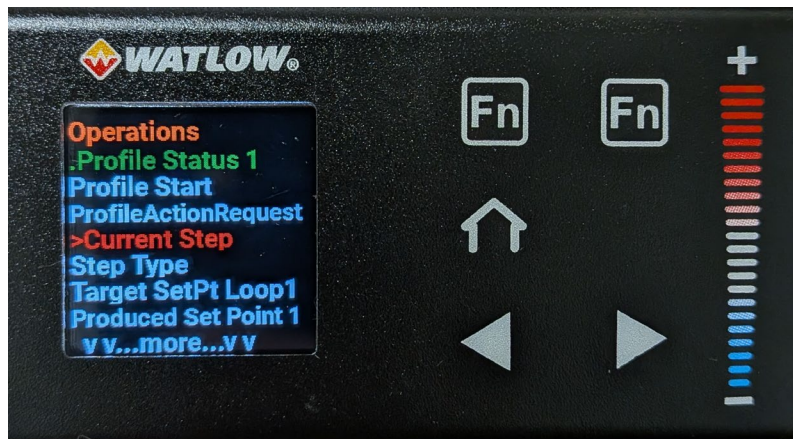
**Produced Set Point 1** – Current setpoint of ramp over time steps.

**Hours** – Time remaining in this step

**Minutes** – Time remaining in this step

**Seconds** – Time remaining in this step

**Jump Count Remaining** – When Jump step types are used, the number of jump loops remaining.



# Alarms

The Watlow can have up to 4 alarms set in its programming. On furnaces there are two preprogrammed alarms active. On Annealers, Casting Kilns, other ovens, and Glory Holes the alarms are turned off.

On most standard equipment the Alarms do not trigger anything to happen in the equipment, they are just status messages. On combustion Furnaces with Flue Dampers Alarm 3 or 4 is used to force the flue damper open when temperature needs to be reduced.

Alarms 1 and 2 are used to trigger email and push notifications from the OnSite Remote Monitoring system.

An Alarm in the Watlow can be linked to a physical relay in the Watlow to produce a real life action. While standard systems don't make use of this, they are setup so that an auto dialer can be triggered by a Watlow Alarm.

**Alarm 1** - Deviation Alarm, dynamically triggers based on current setpoint. Usually set for +/- 100F from the current set point. If the temperature drops above or below the setpoint by more than 100, the alarm is triggered.

**Alarm 2** - Process alarm, set for static values. Usually set to trigger below 1900 and above 2400.

When an alarm is initially triggered, it will flash "Attention!" with details of the alarm on the home screen. An alarm can be silenced by pressing the Home button, which changes to full screen attention to a small caution symbol. When an Alarm is silenced, any relay outputs linked to it will revert to the unalarmed state. This means if the alarm is used to trigger an auto dialer, silencing the alarm will make the auto dialer stop calling.

Alarms will usually trigger during furnace heat up and cool down. On gas furnaces where heat up is done with the Control Mode set to manual, the deviation alarm will still trigger. Even though a % is used instead of a temperature setpoint, the controller still remembers the last temperature set point and triggers alarms based on that. Alarms can be silenced during heat up/cool down. They will automatically clear themselves when the temperature rises high enough, and the control mode is switched back to Auto.

# Errors

Error codes will show on the Home screen with an Attention! message.

**Input 1: Error** - Process Thermocouple is not sending a temperature signal. If this is the only error, the equipment can continue to run. The controller uses a sensor backup setting, so that the reading from Input 2 can be used in place of Input 1. This only works for Input 1, Input 2 is required.

**Input 2: Error** - High Limit Thermocouple is not sending a temperature signal

**Limit 1: Error** - High Limit has tripped due to no temperature signal from Input 2. This is a latching error, once corrected the Home button must be pressed several times to clear the error.

**Limit 1 Low/High** – The limit thermocouple is showing a temperature lower or higher than the limit setpoints. This is a latching error, once corrected the Home button must be pressed several times to clear the error. Can be caused by a runaway condition (Heaters stuck on high), or by a thermocouple issue (Failing probe, bad connection, flipped wires).

Alarms will often also trigger when errors occur.

**These errors are most often caused by a connection issue at the thermocouple head.** If these errors occur, the first step is to open the head of the thermocouple and check the connections. Tighten the thermocouple lead and wire connections. If the wire connections that go to the Control Panel are corroded or discolored, remove them, clip back an inch to new wire, and replace the connections.

Check and tighten any other connections between the thermocouple and the Watlow. There may be plugs or terminal blocks where the wire is spliced. If the error still can't be cleared, the thermocouple itself may be broken.



# Bluetooth App

## Overview

Nearly all WDG PM Plus controllers come with Bluetooth, set on by default. You can check by looking at the side of the controller inside the control panel. If the first digit of the second sequence of the Model Number is a B or G (ex: PM9R3FJ-GLEKPWP) the controller has Bluetooth.

Bluetooth can be turned of by accessing the Setup Menu (See Factory Menu page for password) then the Global Menu. Bluetooth is several pages into the Global menu list.

When enabled the controller can be accessed with a Bluetooth app from Iphone and Android. You can find the app in the App Store or Play Store as Watlow EZ-Link. To work properly the App must be given full permissions.

## Connecting

When opening the app, the first screen will show available Watlows to connect to. If in a studio full of Watlows, they can be named individually. Select Ping for a controller, and the controller you are trying to connect to will have a 0\_\_\_ message displayed on it. Check you are connecting to the desired controller, and press connect. Go to the Device tab in the App to rename the controller.

## Using the App

On the Home Page the Control Mode and Active Setpoint can be changed when there is no profile running. If a profile is running, these cannot be changed.

Pressing the All Parameters button will display the Profile Status and Profile menus. Here, all editing and profile commands can be used as through the front screen of the controller. **Be aware** that when editing profiles in the app, all settings are shown for the steps, even when they do not affect a given step type. The Watlow screen only shows applicable settings, while the app shows all settings and lets you edit them even when they won't affect that kind of step.

## Stored Images, Importing and Exporting

The Stored Images tab allows you to download the programming file from the connected Watlow, and shows previously downloaded files. This can be helpful in for troubleshooting as you can send WDG your file, and we can send files to you.

## Setup Menu

The password protection is active in the App just like on the Watlow screen, To access the Setup menu the password must first be entered in the Factory menu from the screen of the Watlow.