

Brewing Teas and Coffee with the Portlet

Or basically using the Portlet to heat water to a certain temperature

Summary: This is a quick example to show how the Portlet can be used to control the temperature of your water heater. Different teas and coffees taste better when brewed to the right temperature, and now the Portlet can turn any basic water boiler into temperature controlled device. The code for programming the Arduino for this purpose is pasted in Appendix A

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Overview

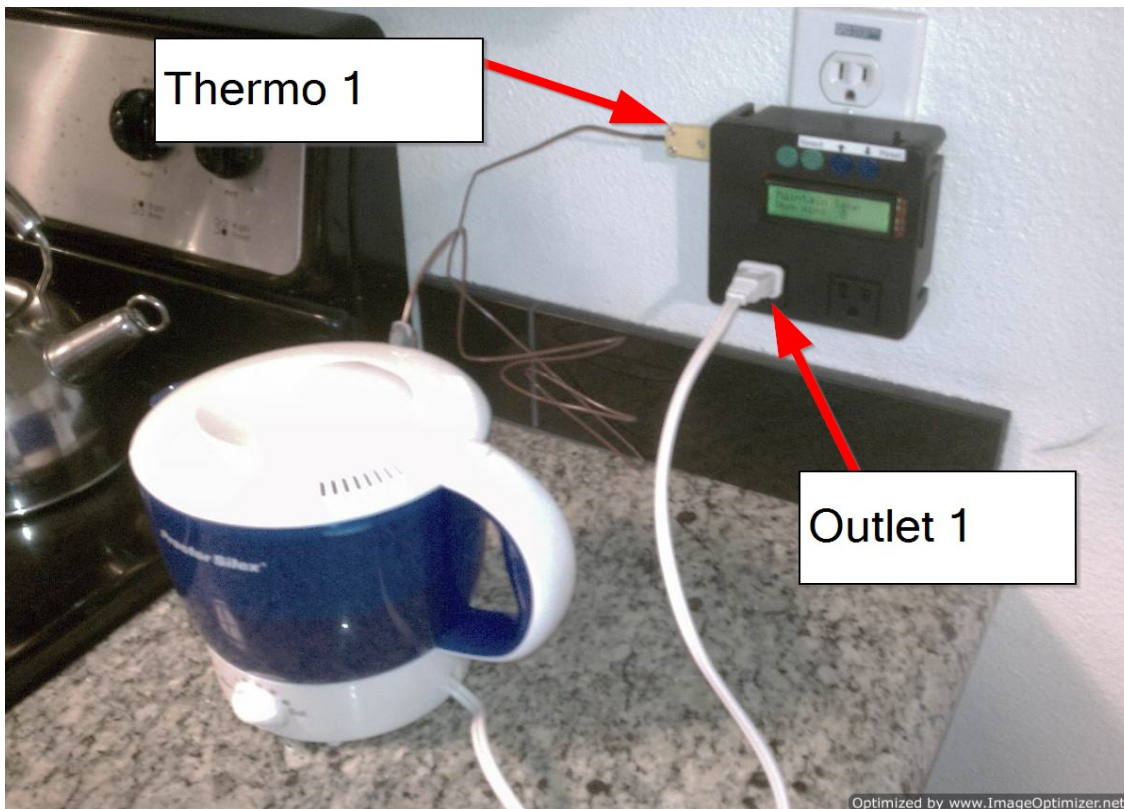
The basic operation of this example is very simple:

- 1) Fill your water boiler with water
- 2) Set up the Portlet putting the thermocouple into the water
- 3) Select a tea or coffee from the menu. This determines the brew temperature (temperatures are pre-programmed into the device)
- 4) Start the program! The water will heat to the desired temperature and alert you by flashing the screen
- 5) If you do not reset the device within 5 minutes it will automatically turn off so you don't leave the water heater on.

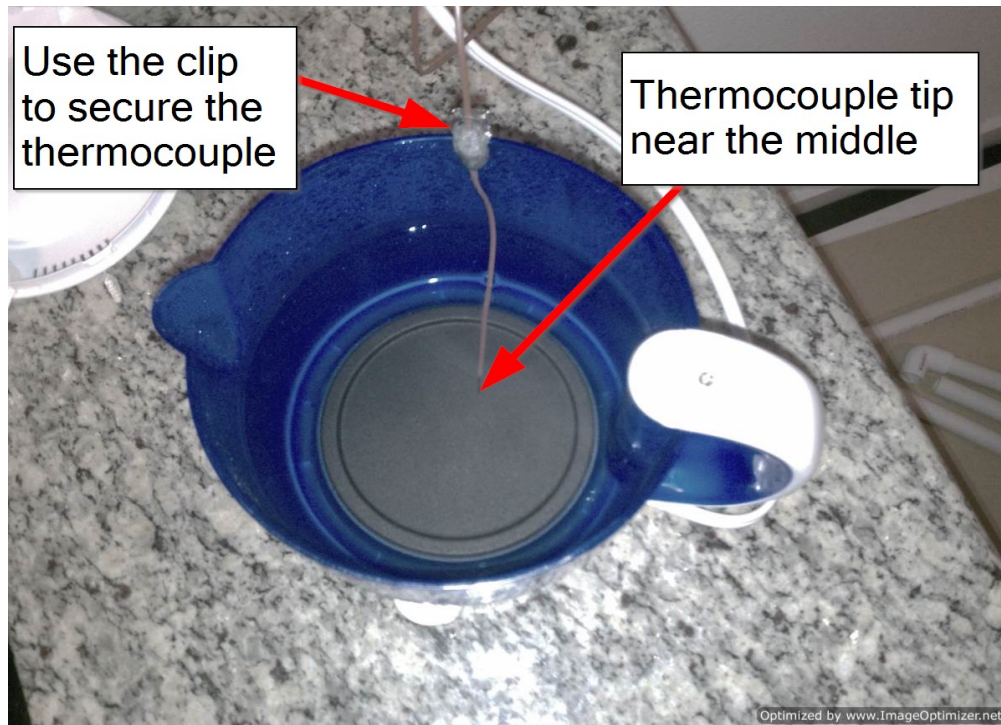
Once your water is at the desired temperature, add your tea or coffee and enjoy!

The Setup

- 1) Make sure your Portlet is programmed with the proper code!
 1. The code for this example is titled TeaAndCoffe.ino
- 2) Plug the Portlet into the wall
 1. The thermocouple should be plugged into the upper socket (this is Thermo 1)
 2. The water heater should be plugged into the left outlet (this is Outlet 1)



3) Position the thermocouple so that the tip sits near the middle of the water

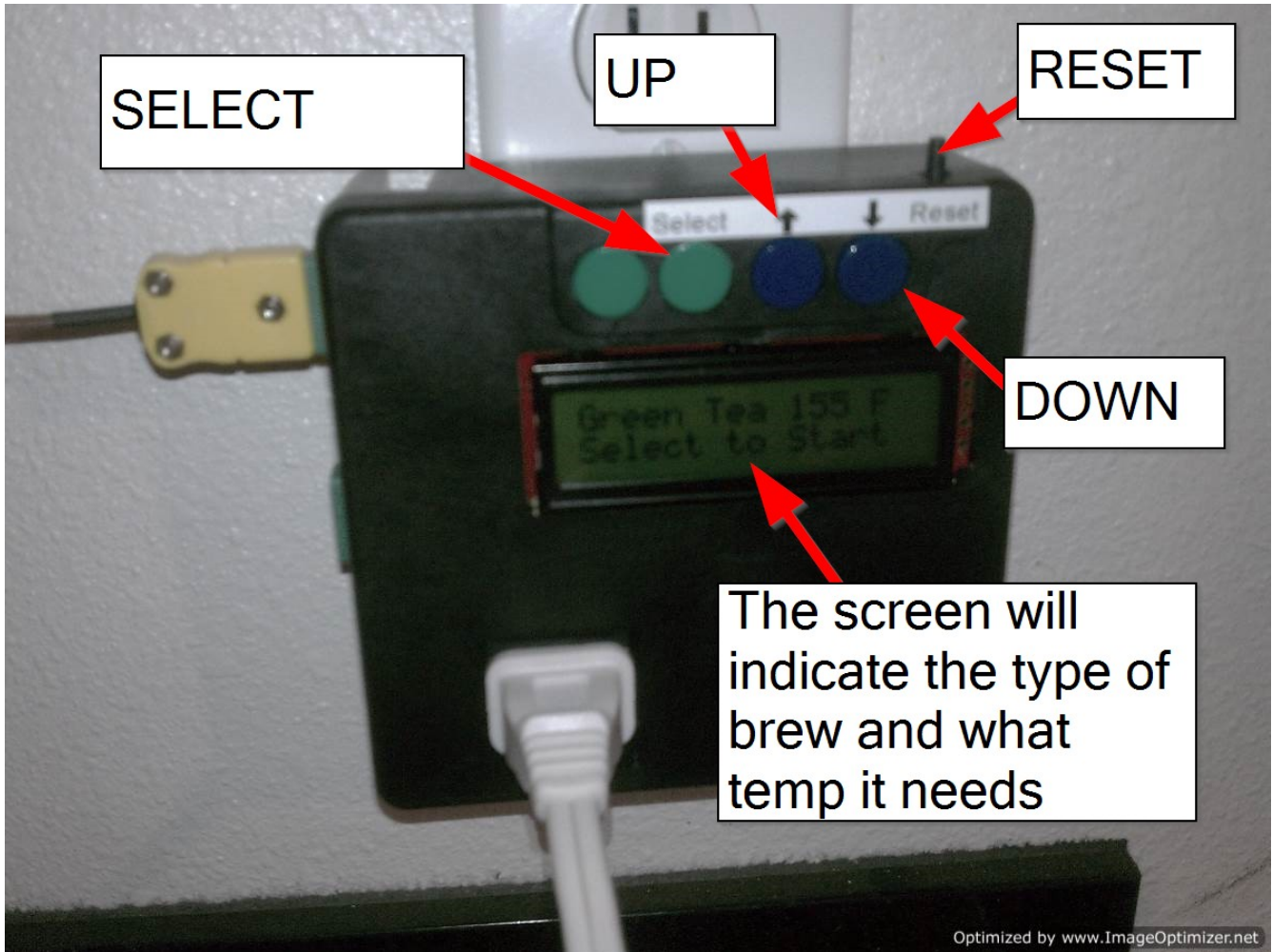


Put the cover on the water boiler and you are ready to go!



The Operation

- 1) Use the UP and DOWN keys to scroll through the list of options. When you find the temperature you are looking for, press SELECT!



The available pre-programmed temperatures are:

- Black Tea (200°F)
- Oolong Tea (190°F)
- Green Tea (155°F)
- White Tea (180°F)
- Rooibos (200°F)
- Herbal Tea (190°F)
- Coffee (180°F)

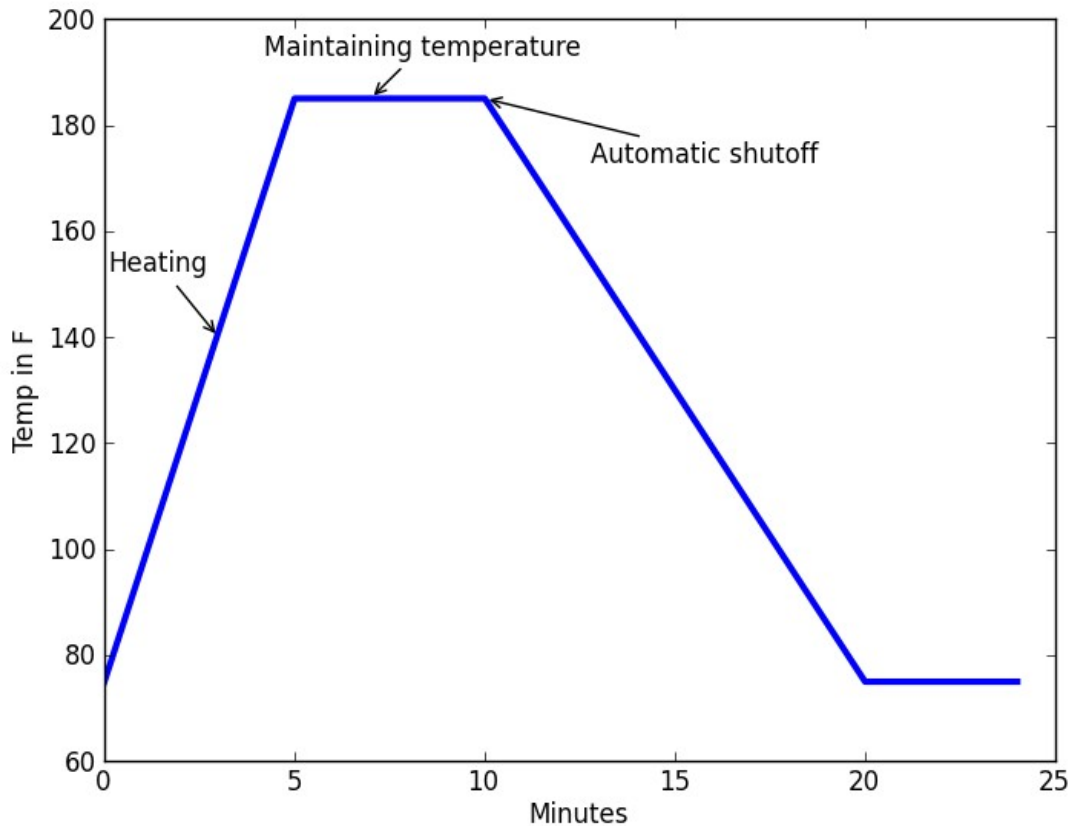
2) Once selected, the Portlet will indicate that it is heating up to that temperature

What is happening at this point is that the Portlet is monitoring the temperature through the thermocouple, and operating the water heater by turning the outlet On or Off.

Once the desired temperature is reached, the screen of the Portlet starts flashing to alert you that your water is at the correct temperature!

The Portlet will maintain that temperature for 5 minutes. **After 5 minutes the Portlet will automatically reset and turn the water heater off.** This is just for safety in case you forget about it.

So if you were to graph the temperature, it would look something like this:



3) Reset and start again!

At any time, to restart the program, or even to just turn the water heater off, simply push the Reset button

