GENERAL OPERATING INSTRUCTIONS

Operating your new unit is very similar to using any traditional water heating system. However, it is very important that you carefully read all of the set-up procedures and operating instructions and tips to ensure the maximum performance and energy savings from your new water heater. We recommend that all members of the household read these General Operating Instructions.

How your new unit works: The SmartBoost™ combines with the traditional hot water tank to provide an extremely effective and efficient way of heating your home. The unit reads the temperature coming out of the tank, and will turn on if the water drops below a set temperature, which you, the homeowner, can set. The booster will keep the water at the desired temperature, another limit which you can set.

MAINTENANCE

To ensure maximum performance of your unit and to reduce the risk of a water leak, we recommend the following maintenance:

You should inspect the connections on the inlet and outlet of the unit at least on an annual basis for any signs of damage or failure. Any signs of damage, cracks, leakage or weakness should be addressed. Take care not to over-tighten the connections. Serious internal damage to your water heater can occur if you over-tighten the water heater connections at the unit.

IMPORTANT NOTES:

As with all electrical appliances, under no circumstances should you attempt to install, repair or disassemble this water heater without first shutting off all power to the unit directly at the fuse or breaker box. SERIOUS BODILY INJURY OR DEATH COULD OCCUR IF YOU IGNORE THIS WARNING.

When any maintenance is performed on the unit or the home's plumbing system that may introduce air into the plumbing pipes, it is important to turn the power off to the water heater and purge the air out of the lines before allowing the unit to power up. FAILURE TO DO SO COULD CAUSE PERMANENT DAMAGE TO THE HEATING ELEMENT AND VOID YOUR WARRANTY.

If you have a water supply with a high level of mineralization (hard water), you should increase the frequency of your maintenance. Remove element and inspect for scale build up – soak in vinegar or deliming solution until scale is removed, typically within a few hours.

TROUBLE SHOOTING GUIDE

Are you having problems with your water heater?

Please call or email our customer service and technical support team for any help you may need.

TOLL FREE 1-877-474-6473

support@ecosmartUS.com

The following table represents some of the most common technical support questions we receive. Before calling us, please read thoroughly to see if your question or problem is addressed.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Unit is not heating at all (water is flowing but the unit is not heating at all — the outgoing water temperature is the same as my cold water supply) and/or the digital display does NOT light up. *	No power or incorrect wiring.	Make sure the breakers at main electrical panel are ON. You may have a faulty breaker or unit may be wired incorrect. Refer to page 13 for proper wiring layout.
	Internal part failure.*	Please call us for technical assistance.*
Unit is not heating at all (water is flowing but the unit is not heating at all - the outgoing water temperature is the same as my cold water supply) The digital display DOES light up.	Internal part failure.*	Please call us for technical assistance.*
	Flow rate is too low / water pressure is too low*	Your water heater has an activation flow rate of approximately 0.3 GPM. If your water flow rate is less than this level, your unit will not activate. Increase the flow rate*
	Activation temperature too low*	The water heater will turn on when the temperature of the water at the inlet of the Smart Boost falls below the activation temperature (when the tank is not providing hot water). Increase activation temperature.*
Unit is heating but the water temperature is not hot enough.	User temperature setting too low.	Turn up the temperature setting on the unit.
	Voltage less than 240 volts.	The heating elements on your unit are designed for 240 volts. When use with a lower voltage, they produce less heating power.
	Mixing too much cold water	You may have an anti-scald feature on your faucet that is mixing cold water. These types of faucets can usually be adjusted to reduce the amount of cold water mixed. Also, your tank may be completely out of hot water and is mixing cold water. Give the tank time to recover or reduce the amount of water you are using.*
The water temperature at my faucet is less than the temperature setting of my water heater.	Voltage less than 240 volts.	The computer chips in your unit are programmed with the expectation that your incoming line voltage is 240 volts. If you have less than 240 volts, it may affect the reading on your unit's digital display and cause it to read slightly higher than the actual output temperature. To compensate for this, increase the setting on your unit if you need / want hotter water.
	Anti-Scald pressure/balancing valve or tempering valve.	Your faucet may have an anti-scald feature or a tempering valve that automatically mixes cold water even when you turn your control lever or handle to full hot. These devices are usually adjustable so you can turn off the cold mix completely. You can compensate for this by increasing the setting on your unit if you need/want hotter water.
	Thermal loss due to long pipe run	As the hot water from the unit runs through the hot water delivery system to your faucet, some heat will be lost especially if it has long distance to travel or the pipes are cold. This is normal. You can compensate for this by increasing the setting on your unit if you need/want hotter water.
Pre-existing water tank is not heating.	Incorrect wiring.	The unit may be wired incorrectly. Refer to page 13 for proper wiring layout.*
	Relay switch is defective.	Please call us for technical assistance*
Unit displays 999 as inlet and/or outlet temperature*	Thermistor on corresponding channel is defective*	The unit may be wired incorrectly. Refer to page 13 for proper wiring layout.*

USER INTERFACE

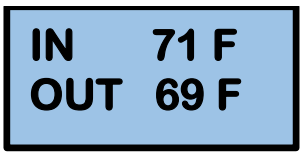
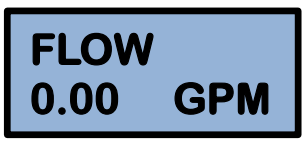
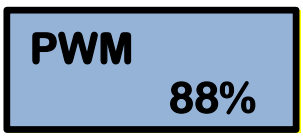
SmartBoost™ Features

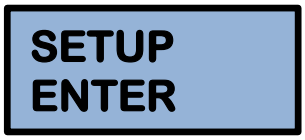
List of Menu Options Provided by the Software (Clarified Below and on Following Page):

- Inlet/Outlet Temperature Reading
- Active Unit in Operation
- Activation Temperature
- Max Temperature
- Software Version
- Vacation Mode
- Freeze Protect

Primary Menu Cycle Screens

Turn the control knob in either direction to cycle through menu options.

Inlet/Outlet Temperature Reading The temperature of the water going in and out of the SmartBoost™ can be observed from this display.	
Active Unit in Operation This screen will tell the user which heating unit is operating at that given point in time. It will either be the pre-existing water tank (“TANK”) or the SmartBoost™ (“UNIT”).	
Flow The flow screen will tell the user the amount of water that is flowing through the unit in gallons per minute.	
Load Factor Here you can see how hard your SmartBoost™ is working.	
Clock Set the time here (HOURS:MINUTES:SECONDS). Press the knob to cycle through hours, minutes, seconds and turn the knob to adjust the number.	

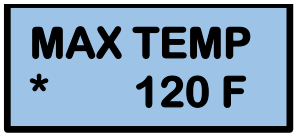
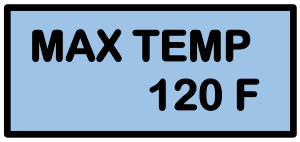
Active Time The active time screen will display how long the unit has been actively heating water. The time is displayed in HOURS:MINUTES	
Total Time This screen tells the user the total amount of time the unit has been on in it's lifespan.	
Setup If the knob is pressed once on this screen, the user will be taken to all the booster heating set up interface. **ALL OF THE FOLLOWING SET UP CYCLE SCREENS WILL ORIGINATE FROM PRESSING THE KNOB ONCE ON THIS DISPLAY.**	

SmartBoost™ Built-In Freeze Protect Feature (Select Models Only)

While the SmartBoost™ is off, if the temperature read at the inlet of the SmartBoost™ unit drops below 60°F, the tank will automatically power on to prevent the nearby pipes from freezing and potentially bursting. Once the temperature at the inlet of the SmartBoost™ exceeds 60°F again, the tank will power back off.

SmartBoost™ Set Up Menu Cycle Screens

Turn the control knob in either direction to cycle through menu options.

Activation Temperature The first heater setting is the activation temperature. If the unit reads an inlet temperature that below the activation temperature, the unit will turn on. For instance, if the activation temperature is 115°, and water coming into the unit is below 115°, the unit will turn on. To change this setting, press the knob once, and a "*" will appear on screen. Turn the knob to adjust temp, and then press the knob again to save the setting.	 
Max Temperature Here you can set the maximum temperature you want the SmartBoost™ to heat the water up to. To change the set temperature, press the knob once, and a "*" will appear on screen. Turn the knob to adjust temperature, and then press the knob again to lock in the setting.	 

Vacation Mode (Select Models Only) Vacation mode will shut down the heater while you go away on vacation. To change this setting, press the knob once, and a "*" will appear on screen. Turn the knob to adjust ON/OFF, and then press the knob again to save the setting. Note, freeze protect feature will override vacation mode.	
Eco Mode Eco mode will turn the tank off and on at specific times of the day, set by the user, in order to conserve energy.	
Software Version Here you can view the heater software version (useful for troubleshooting).	
Exit If knob is pressed once on this screen, the user will be taken back to the primary menu screen cycle.