Use and Care Guide

Gen 1 Series

Aqua-Hot

An AIRXCEL Brand

Gen 1 LPG
AHE-GXN-PX1

Thank you for equipping your RV, coach, or caravan with an Aqua-Hot heating system! We deeply value your business and we are grateful for the trust you have placed with Aqua-Hot Heating Systems, LLC. Our customers are our top priority and we are committed to providing best-in-class products, service, and support.

We understand how important comfort is to you as a recreational vehicle or manufactured home owner; therefore, we have designed a heating system to significantly improve all of your comfort levels. Additionally, the Aqua-Hot heating system is a low-emissions, fuel efficient system that adds thousands of dollars in value to your RV or home.

We know that you must be eager to get underway, but take time to read and understand this Use and Care Guide to understand the basic functionality of the Aqua-Hot. This guide should be maintained in legible condition and kept in a safe, accessible location for future reference.

Should you have any suggestions on how we can better serve you, please do not hesitate to contact us.

Technical Support can be contacted at (800) 685-4298. Hours of operation are 7:00am to 4:00pm (MST) Monday through Friday.

The Aqua-Hot heating system is protected by the finest warranty in the industry (read about it at the back of this manual).

Important Notes:

- A qualified installer or service technician must perform equipment installation or service. Contact Aqua-Hot for more information at www.aquahot.com/service-help, or call us at (800) 685-4298.
- Warranty work must be performed by an Aqua-Hot Factory Authorized Service Center.
- Your on-product identity label contains the specifications of your unit. Factory settings may be adjusted by the vehicle manufacturer, confirm final setting with your dealer.

- Follow this guide exactly. Failure to do so may result in a fire or explosion resulting in property damage and/or personal injury.

Contents

⚠ WARNING

WHAT TO DO IF YOU SMELL GAS

- Evacuate all persons from the vehicle.
- Shut off the gas supply at the gas container or source.
- Do not touch any electrical switch or use any phone or radio in the vehicle.
- Do not start the vehicle's engine or electric generator.
- Contact the nearest gas supplier or qualified service technician for repairs.
- If you cannot reach a gas supplier or qualified service technician, contact the nearest fire department.
- Do NOT run the first operation until it has been confirmed there are no gas leaks.
- Do not turn on the gas supply until the gas leak(s) have been repaired.

THE AQUA-HOT's EXHAUST IS HOT!

- Do NOT operate the burner inside an enclosed building.
- The heater must be switched OFF when refueling.
- The heater is not to be operated while the vehicle is being refueled, if the towing vehicle is being refueled, if the vehicle is in motion, or if the vehicle is in an enclosed space.
- The heater is not to be used while the any appliances are being refueled or serviced.
- Aqua-Hot will not be liable for problems and/or damage caused by the system installed by untrained technicians.

Caution Notes

As you read this information, take particular note of the NOTICE, CAUTION, WARNING, and DANGER symbols when they appear. This information is important for safe and efficient use of the Aqua-Hot system.

NOTICE signals a situation where potential damage to the Aqua-Hot could occur.

NOTICE

CAUTION signals a situation where potential harm or risk of minor or moderate injury could occur if you do not follow instructions.

⚠ CAUTION

WARNING signals a hazardous situation where potential harm, risk of serious injury, or death could result if instructions are not followed.

⚠ WARNING

DANGER signals a situation where immediate risk of serious injury or death will result if instructions are not followed.

⚠ DANGER

NOTE: This manual will also use notes sections similar to this one to draw attention to features and practices which must be observed.

⚠ DANGER

Water temperature over 125°F can cause severe burns instantly, or death from scalds. Children, disabled, and elderly are at highest risk of being scalded. See instruction manual before setting temperature at water heater. Feel water before bathing or showering! Temperature limiting valves are available.

Read and understand all instructions ***before*** using the Aqua-Hot system. Aqua-Hot Heating Systems is not liable for damage resulting from failing to follow instructions contained in this, and any other Aqua-Hot documentation relevant to this unit.

- Read this manual ***before*** using the Aqua-Hot System to reduce the risk of injury to persons or damage to the equipment.
- The product identity label contains specifications of the unit, to what standards it has been tested, and important safety notices.

⚠ CAUTION

- Disconnect electric wiring to the Aqua-Hot System before welding or plasma cutting the RV to avoid damage to the electrical components.
- The GEN-1 tank *must* have a cold water inlet pressure regulator set to 45PSI or below to avoid damage to the tank.
- Use caution when working on or near any propane system.
- DO NOT connect the 12-volt DC power to the Aqua-Hot if the vehicle requires welding.
- Use special caution when children are present. Children must not be allowed to play with the heater or perform cleaning and maintenance.
- At maximum operating temperature, the hot air outlet could be very hot that may result in serious burns or injury. Be aware of hot surfaces..

System Overview

The Aqua-Hot Gen 1 Heater is a Heating System that can provide interior heat and hot water using a built-in electric heating element and a propane burner. The heater can be used while driving.

There are three options for heating:

- **LPG Mode**: the heater automatically adjusts power according to temperatures.
- **Electric Mode**: manually select either the 900W or 1800W heating ode according to the power supply capacity of the shore power.
- **Hybrid Mode**: the system will control the use of electric and LPG heating based on the power demand on the system.

Important Notes:

- Service and repairs may only be carried out by a qualified technician.
- Aqua-Hot will not be liable for problems or damage caused by the system being repaired/serviced by unqualified technicians.
- Your on-product identity label contains the specifications of your unit. Factory settings may be adjusted by the vehicle manufacturer, confirm final setting with your dealer.
- The Aqua-Hot heating system operates independently of the vehicle engine and is connected directly to the electrical system of the vehicle or towable.
- Please read this manual and follow instructions to avoid injuries during installation and/or operation.

⚠ WARNING

If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

⚠ WARNING

In order to avoid overheating, do NOT cover the heater.

Safe Operation

The Aqua-Hot Heating system consists of an electric heating element and a propane burner. The heater with supplementary indirect water heating is for use in RVs only to heat the space and domestic water.

The room heater works by pulling air into the heater by a fan, heated up, and dispensed into the RV's interior by ductwork.

Locate the LCD screen (shown below) inside the RV (contact the vehicle manufacturer if unable to find), press and hold the turn knob to wake, use the rotary button to select the desired energy mode. Click the rotary button to confirm. It will take approximately 20 minutes to warm up the domestic water, but there is no wait to use interior heat mode. After the Gen 1 is to temperature, you can activate interior heat in your coach via the thermostat/LCD or run hot water.

Figure 1

Intended Use

This manual explains the operation and care of the Aqua-Hot heating system.

- Service and repairs may only be carried out by a qualified technician.
- The vehicle owner is responsible for correct operation of the appliance.
- All vehicle installations must comply with the requirements listed in the Recreational Vehicle Industry Association's (RVIA) ANSI/NFPA 1192 Handbook for Recreational Vehicle Standards.
- Make sure to properly drain winterize the Aqua-Hot's water tank when not in use and/or any time the heater is stored where freezing temperatures may be experienced. The Aqua-Hot warranty will not cover claims for freeze damage. Please refer to page 16 for proper winterization of the Aqua-Hot.

Aqua-Hot Gen 1 Heater

1. Heater
2. Air Intake Inlet
3. Exhaust Outlet
4. Controller Cover
5. Plastic Frame Feet
6. Aluminum Frame Feet
7. Circulated Air Intake
8. Cold Water Connection (Inlet)
9. Propane Gas Connection
10. Hot Water Connection (Outlet)
11. Fan for Intake Air
12. Water Tank
13. Warm Air Outlets (Upper)
14. Warm Air Outlets (Lower)
15. Recessed Grips
16. Electronic Control Unit
17. LCD Control Screen

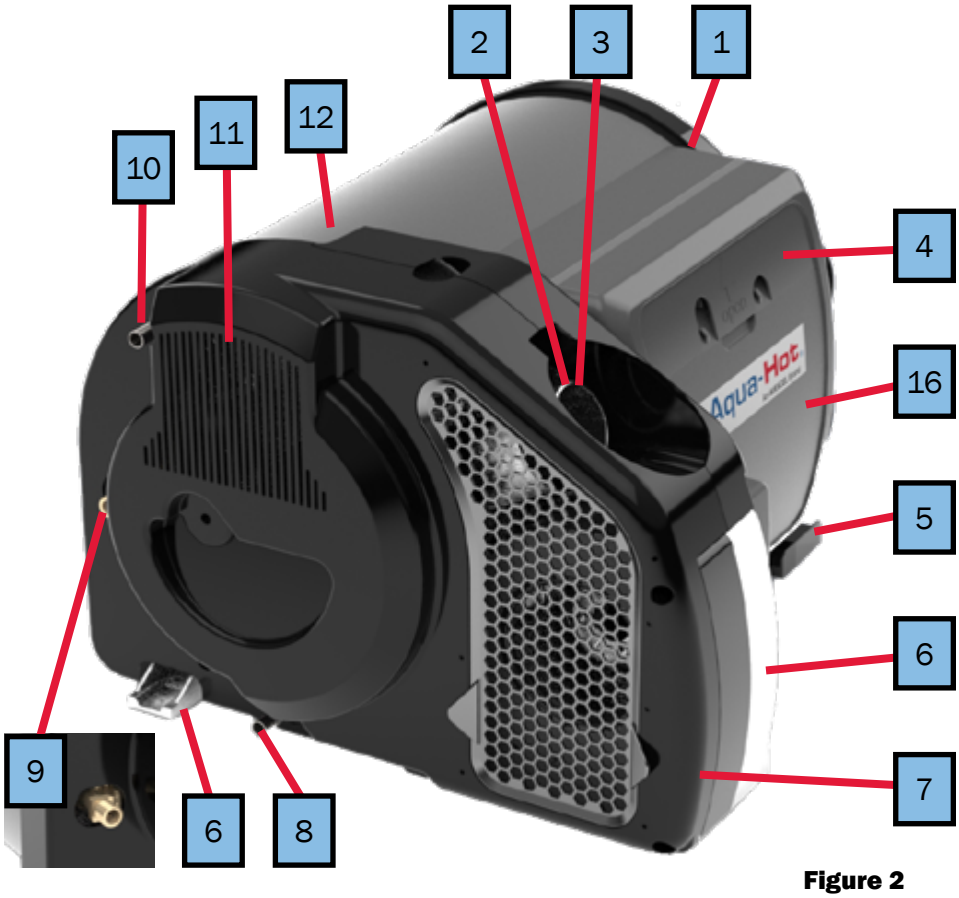


Figure 2

Figure 4

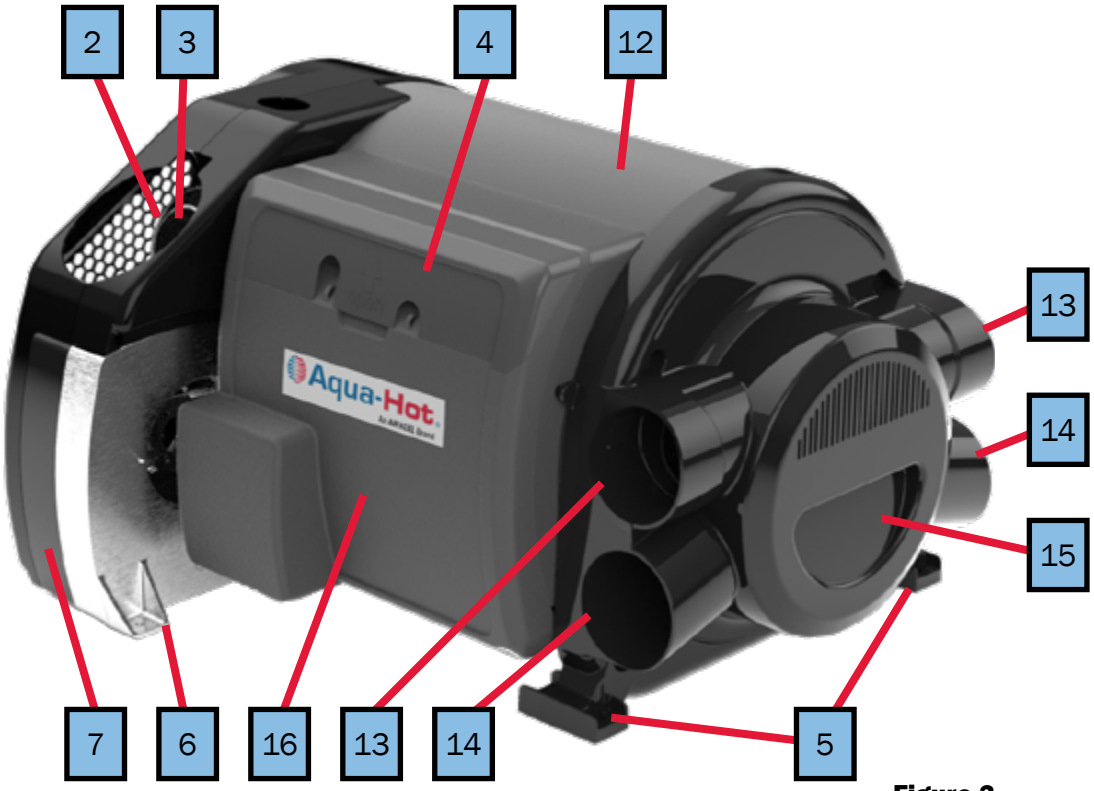


Figure 3

System Features

The Aqua-Hot Gen-1 Heater is a Heating System that can provide interior heat and hot water using a built-in electric heating element and a propane burner. The heater can be used while driving.

There are three options for heating:

- **LPG Mode**: the heater automatically adjusts power according to temperatures.
- **Electric Mode**: manually select either the 900W or 1800W heating mode according to the power supply capacity of the shore power.
- **Hybrid Mode**: the system will control the use of electric and LPG heating based on the power demand on the system.

When plugged into shore power, or powered by a generator, the electric element lets you use the power you are already paying for to provide heat in mild conditions and meet your light duty hot water needs.

The propane burner can be utilized with the electric element to heat and supplementary produce hot water.


Aqua-Hot®
An AIRXCEL Brand

For full details and installation requirements, please see installation and owner's manuals.

Minimum Service Clearances
Front - 4 Inches
Back - 1 Inch
Sides - 0.5 Inch
Top - 2 Inches
Bottom - No Clearance Necessary

This appliance must be installed in accordance with local codes or, in the absence of local codes, the Standard for Recreational Vehicles, ANSI A119.2/NFPA 1192 or CAN/CSA-Z240 RV.

Meets or Exceeds: ANSI Z21.47 CAN/CSA 2.3

Listing 20L01

Max Tank Pressure	65 PSI
Tank Capacity	2.6gal (10L)
Power (DC)	12VDC, 10A, 120W Max
Power (AC)	120VAC, 15.6A, 1800W Max
Fuel Pressure	12 ± 1 inches of water
Burner	Propane, 20,470 BTU/hr

Model Number: AHE-GXN-PX1
Serial Number: XXXXXXXX

NOTE: This product label is attached to the side of the Aqua-Hot, and provides a ready reference to specifications, test standards, and important safety notices.

All vehicle installations must comply with the requirements listed in the Recreational Vehicle Industry Association's (RVIA) ANSI/NFPA 1192 Handbook for Recreational Vehicle Standards.

Operational Overview

Energy Setting

The Aqua-Hot Gen 1 heater has three available energy sources: Fuel, Electric and Hybrid.

Fuel

When “Fuel” is selected in the energy setting menu the heater will use on-board fuel to generate heat.

Electric

In the energy setting menu, EL1 or EL2 can be selected. EL1 activates 900 Watts of electric heating elements. EL2 activates 1800 Watts of electric heating elements. EL2 can only be used when 20A 110AC service is available.

Mix Mode (Hybrid)

Hybrid mode is activated by selecting MIX1 or MIX 2. In each mode the propane burner is activated along with supplemental heat from the electric elements. In MIX1 900 Watts of electric heating is supplied. In MIX2, 1800 Watts of electric heating is supplied. MIX2 should only be used when 20A 110AC service is available.

NOTE: In Mix mode, the electric element will take priority over the burner unless the heating demand cannot be met by the electric element, in which case the burner will activate.

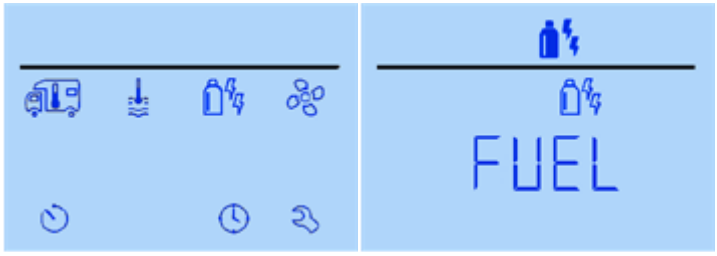


Figure 5

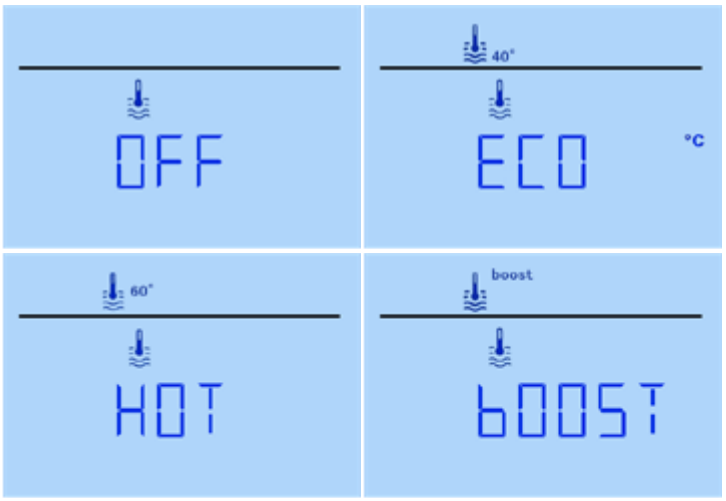


Figure 6

Heating Mode

The Aqua-Hot Gen 1 has three available heating modes: Interior Heat, Hot Water, and Combination.

Interior Heat

When interior heating is activated the burner or electric elements heat a heat exchanger. Air is forced across the heat exchanger and warmed. Ducting routes the warm air throughout the vehicle. The external temperature sensor reads the temperature of the vehicle and activates the flow of warm air through the vehicle.

Hot water

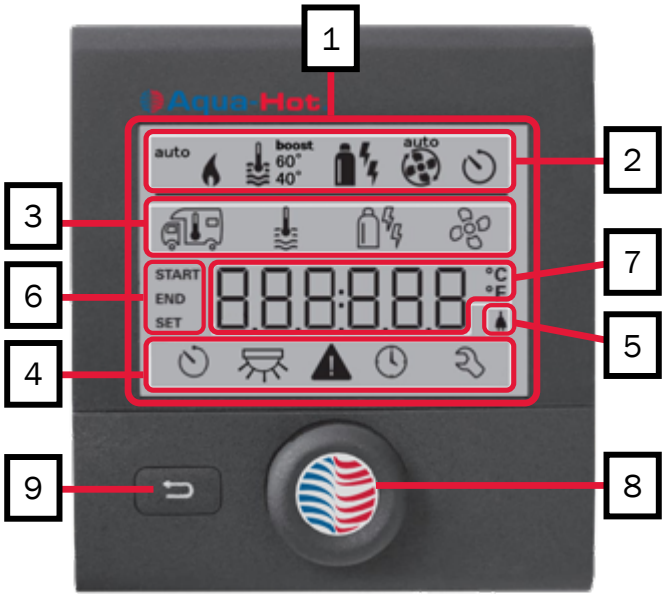
When hot water mode is activated the burner or electric elements heat a heat exchanger. The heat exchanger transfers heat to the water tank and warms the water. When a hot water faucet is opened, hot water flows from the tank through the faucet. Cool domestic water is pumped back into the tank, which remains full, and is heated.

Combination

When both hot water and interior heat modes are activated, the heat from the burner or electric elements is distributed to both hot air and hot water. If boost water mode is selected, interior heat will be temporarily paused to prioritize the creation of hot water.

Working Mode	Energy Mode
OFF	Water heating is off - icon will not show
ECO	Water Temperature target of 104°F
HOT	Water Temperature target of 140°F
BOOST	Prioritizes water heating for 40 minutes or until the water temperature reaches 140°F (60°C)

Operating the LCD



1 Display Area	6 Timing Display
2 Status Display	7 Parameter Setup Display
3 Menu Bar (top)	8 Rotary Button/Knob
4 Menu Bar (bottom)	9 Return Button
5 110/220V Electrical Display	

Display and Control Section:

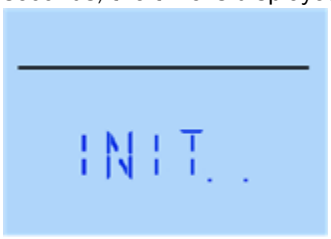
- The information is displayed on the screen with a back-light
- In the menu bar (#3, 4), the function of the LCD can be selected. The operating parameters are shown on the status bar (2) and display bar (5, 6).
- After the 110V is supplied to the system, the 110V power supply indication column (5) displays the power supply sign
- During heater operation, set the parameter bar (7) to display start/end times, and room temperature.
- Press the return button (9) to return to previous interface.

Rotary button (8)

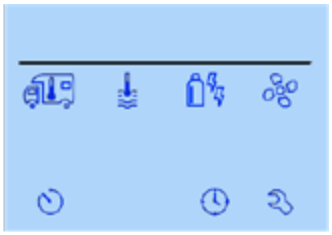
- Select, modify, and save icons for menu bars 3 & 4 by rotating the knob.
- Tap the button to confirm saving and return to main menu.
- Press and hold the button (+3seconds) to turn on/off LCD.

Power ON:

Hold the rotary button for 3seconds to turn on LCD. After a few seconds, the time is displayed as 00:00.

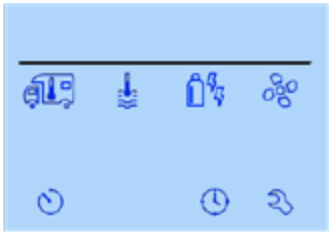


Click the rotary button to display the initial options in the display.



Clock setting (current time setting)

- Click the rotary button to display the icon in the menu bar (3).

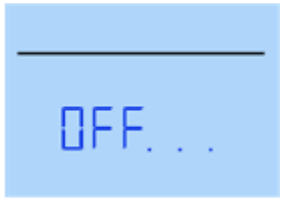


- Use the rotary button to select “Set Clock” icon in the menu bar (4).
- Click the rotary button to enter the clock settings.

- Use the rotary button to set the time.
  “A--” is displayed in the morning and “P--” is displayed in the afternoon
- Click the rotary button again to determine the time, then the minute display flashes.
- Set the minute with the rotary button.
- Click the rotary button to confirm the value and exit the clock setting.
- Rotate button to start
- Press the rotary button for 3 seconds, the LCD will start.

Shutdown

Press the rotary button for more than 3s at the initial interface to shut down. When the LCD switch is turned off, the heating process and any connected equipment are also automatically turned off. The parameters before shutdown are retained.



Post-Purge Process (Cool-Down Cycle)

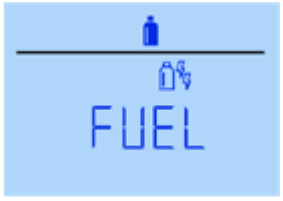
Since the heater has a higher residual heat after heating and a post-cleaning need, the fan typically runs for a few minutes for cooling.

Heating Function Settings

The heating function setting should first set the fuel, and then select water heating or room heating or simultaneous heating, and finally set the fan speed. The default heating function settings is the fuel setting and the fan speed setting ECO.

Fuel Setting

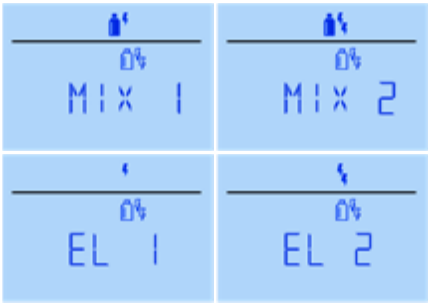
- Rotate the button to select the fuel icon in the menu bar (3).
- Click on the selected icon.



- Use the rotary button to select the desired fuel mode.
- Click the rotary button to confirm.

If the fuel type is not selected, once the heater starts to operate (room temperature, hot water icon is activated), the status bar shows the type of fuel selected during the previous heating process or the fuel type set at the factory.

Working Mode	Fuel Mode
GAS	LPG/Diesel/Gasoline
MIX 1	Electric 900W + GAS
MIX 2	Electric 1800W + GAS
EL 1	Electric 900W
EL 2	Electric 1800W

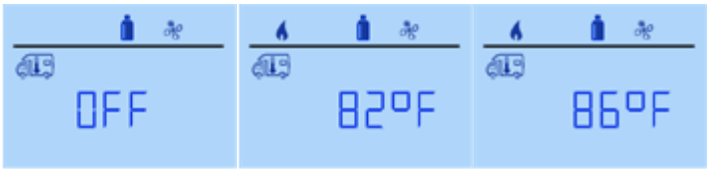


Adjustment of Interior Temperature

- Click the rotary button to display the icon in the menu bar (3). Select the room temperature heating system with the rotary button according to the connected device.
- Confirm the selection by clicking the rotary button on the selected room temperature icon.
- Use the rotary button to select the desired temperature.
- Click the rotary button to confirm its value.

Temperature Display	°C / °F
Temperature Range	5-30°C / 41-86°F
Increments	1° C/F

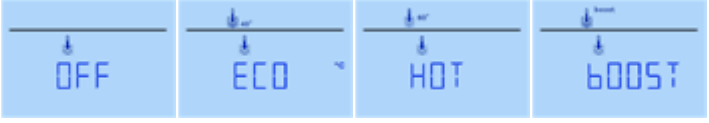
This flame icon will be on when room temperature heating starts, this icon will flash until the predetermined room temperature is reached.



Adjustment of Water Heating

- Click the rotary button to display the icon in the menu bar.
- Use the rotary button to select the desired water temperature setting level.
- Click the rotary button to confirm

Working Mode	Energy Mode
OFF	Water heating is off - icon will not show
ECO	Water Temperature target of 40°C
HOT	Water Temperature target of 60°C
BOOST	Prioritizes water heating for 40 minutes or until the water temperature reaches 60°C



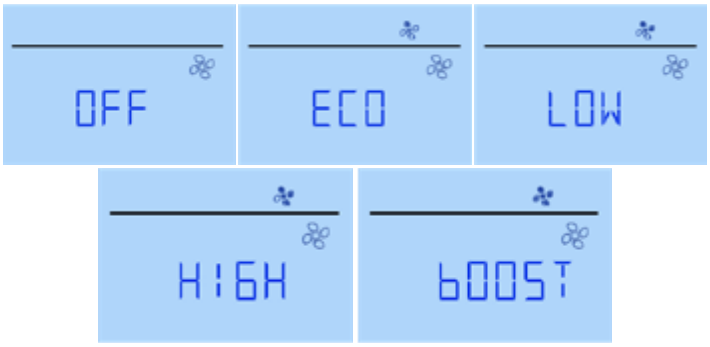
.This icon will flash until the predetermined water temperature is reached.

In the "heating and hot water mode", the water temperature of 40°C can only be stored for a limited time (room heating priority).

Adjustment of Fan Speed (when air heating is enabled)

- Click the rotary button to display the icon in the menu bar.
- Use the rotary button to select the desired fan speed setting level.
- Click the rotary button to confirm.

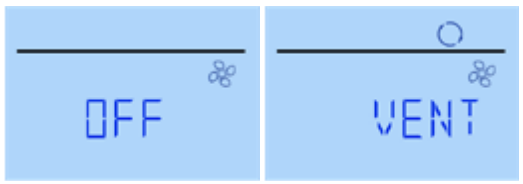
Working Mode	Energy Mode
OFF	Fan is off - icon will not show
VENT	Circulation ventilation. Can choose 10 levels of fan speed.
ECO	Low fan speed
LOW	Mid-speed
HIGH	High fan speed
BOOST	Fastest fan speed



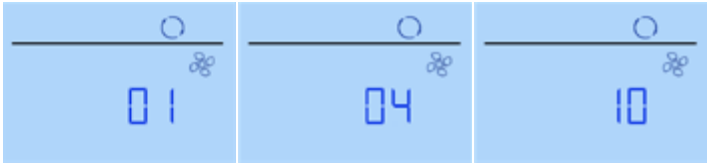
Adjustment of Vent Fan Speed

NOTE: Vent Fan is for air circulation without heating.

- Only available when air heating is not enabled
- Select OFF or VENT

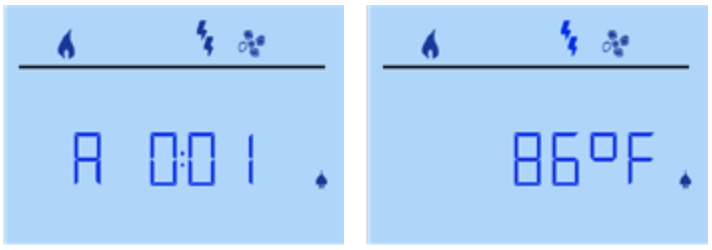


- If VENT is selected, set the fan speed between 1-10.



Heating Start

After the setting is finished, press the return key or wait for 10s to enter the clock interface, and the heating starts. The clock and set temperature are displayed alternately.



Heating End

Press and hold the rotary button for 3 seconds to shut down.

Timing Heating Settings

- Click the rotary button to display the icon in the menu bar (3).
- Click the rotary button to enter the timing settings.

WARNING

DANGER OF TOXIC EXHAUST FUMES

Even if the vehicle is stopped, unmanned, the activated time switch will turn on the heater. Exhaust gases from heaters may be toxic in confined spaces such as garages, workshops, and repair shops.

If the vehicle is parked in a closed room:

- Turn off the fuel supply to the heater.
- Turn off the timer switch of the LCD switch.
- Turn off the heater on the LCD switch. Press and hold the rotary button for 3 seconds to turn off.

Enter the Start-up Time

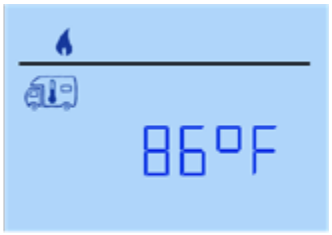
- Use the rotary button to set the start time.
- Click the rotary button to confirm and proceed to the next setting.

Enter the End Time

- Use the rotary button to set the end time.
- Click the rotary button to confirm and proceed to the next setting.

Set Room Temperature

- Use the rotary button to set the desired temperature
- Click the rotary button to confirm and proceed to the next setting.

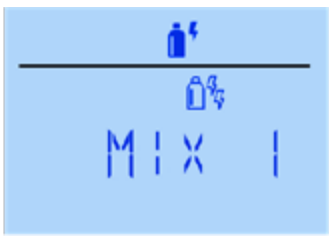


Set Water Temperature

- Use the rotary button to set the desired temperature
- Click the rotary button to confirm and proceed to the next setting.

Fuel Mode Selection

- Use the rotary button to set the desired fuel mode
- Click the rotary button to confirm and proceed to the next setting.



Select Fan Speed Level

- Use the rotary button to set the desired fan speed
- Click the rotary button to confirm and proceed to the next setting.

Enable Timer

- Use the rotary button to select Enable Timing (ON). If OFF is selected, the timer is canceled, but the settings are saved.
- Click the rotary button to confirm and proceed to the next setting.

The time switch is only enabled once until it is disabled (turned off) or powered down. If the timer switch is programmed and enabled, the time switch icon is displayed in the status line (2). The timing icon flashes if the time switch is enabled and activated.

Cancel Timer

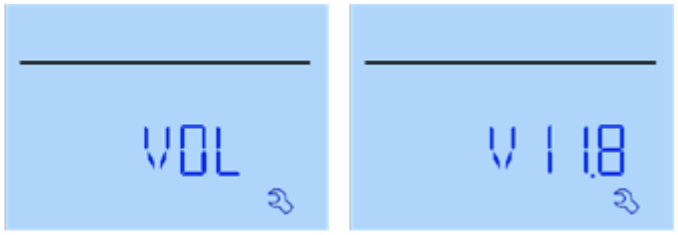
- With the timing set, use the rotary button to select the timing setting. Click the rotary button to enter the settings.
- Use the rotary button to select the cancel timing (OFF). If you select ON, continue to use timing. Click the rotary button to confirm that the cancellation timing is valid. But the previous settings are still saved

Parameter Settings

The content after the parameter setting is maintained after the power is turned off. Use the rotary button to select the “Settings” icon in the menu bar (4). Click the button to enter the settings.

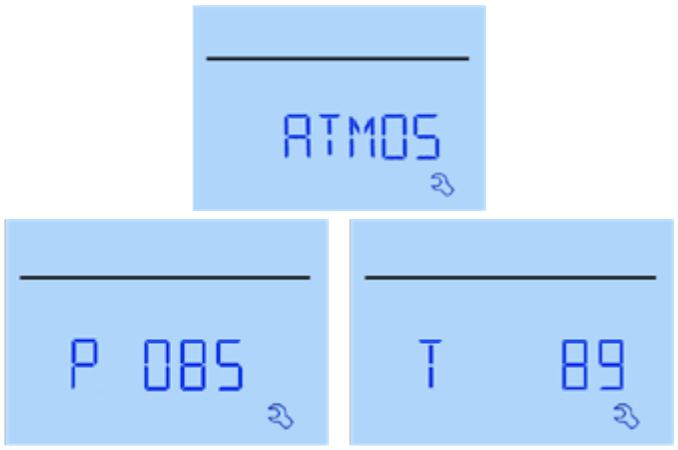
Voltage Inquiry

- Click the rotation button to display the voltage: 12.0V.



Air Pressure and Temperature Inquiry

- Click the rotation button to select the at ATMOS icon.
- Click the rotary button to enter the selection



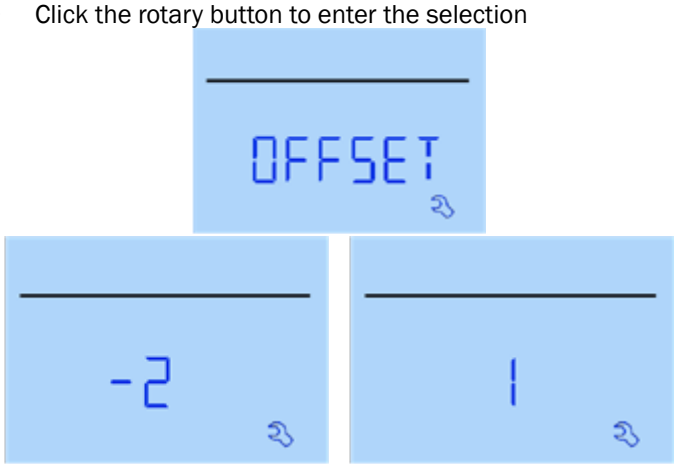
- Use the rotary button to switch between atmospheric pressure and ambient temperature.

Atmospheric pressure: 99KPa **Ambient temperature**: 89°F

Offset Setting

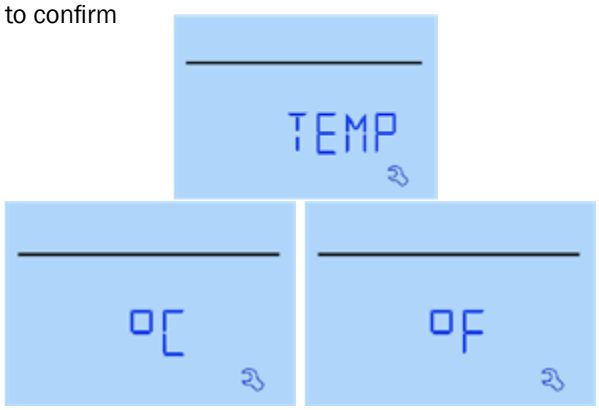
The external temperature sensor of the heater can be adjusted separately depending on the installation of the sensor. The offset setting can be in the range of -5°C to 5°C. The deviation is 1°C.

- Click the rotation button to select the OFFSET icon.
- Click the rotary button to enter the selection



Switching Temperature Units

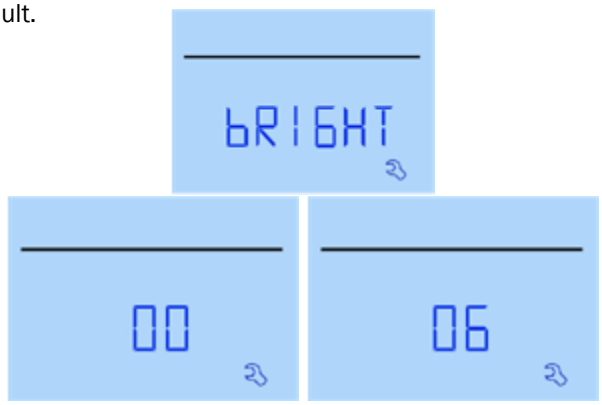
Use the knob to switch between Celsius and Fahrenheit, then click to confirm



LCD Backlight Adjustment

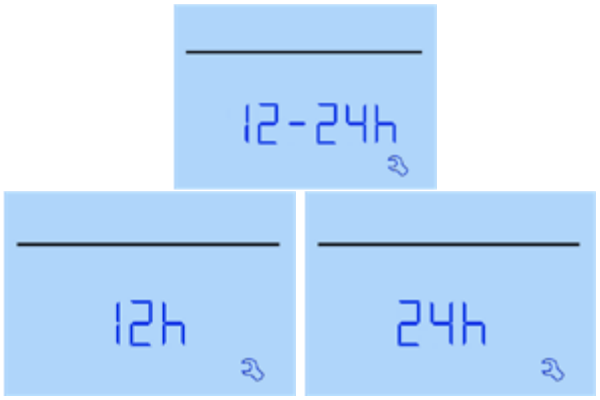
The LCD backlight has 10 levels of incremental adjustment.

Use the rotary button to select the BRIGHT icon and click the rotate button to enter the settings.
The brightness of the LCD changes as the rotary button rotates. After confirming by clicking the rotary button, return to the previous operation. The backlight brightness is set to 6 by default.



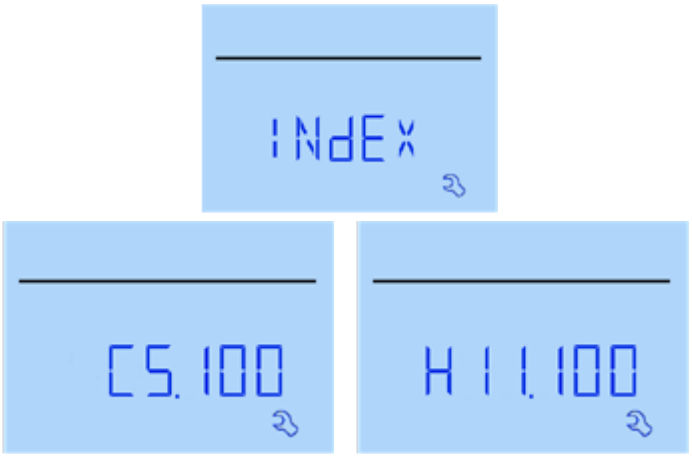
Time Settings

Use the rotary button to select the time format setting icon and click the rotary button to enter the settings. Use the rotary button to select the 12h or 24h icon and click the rotary button to confirm. The default setting is 24h.



Software Version Number

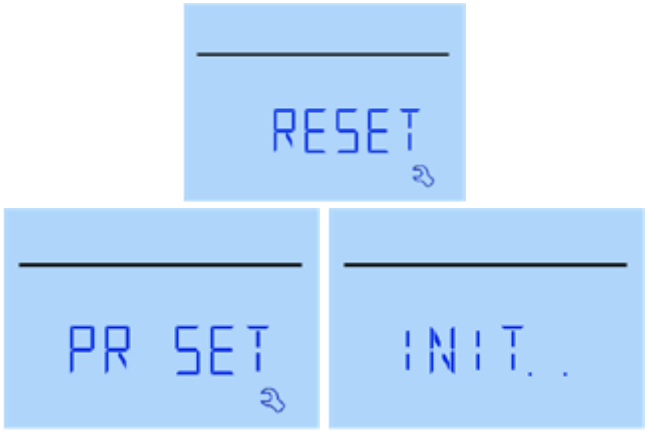
- Use the rotary button to select the INDEX icon and click the rotary button to enter the query item.
- Use the rotary button to view the information of the LCD switch or the information of the main controller.
- Click the rotary button or want to go back to return to the previous operation.



C5.100 - LCD Version **H11.10** - Master Controller Version

Factory Settings

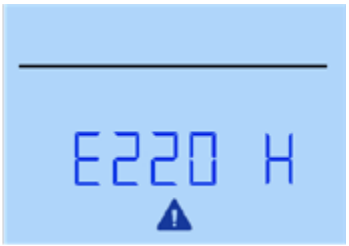
- The reset function resets the LCD switch to factory settings. All previous settings will be deleted. All devices used before RESET is installed and powered.
- Use the rotary button to select the RESET icon and click the rotary button to display the factory setting PR SET.
- After confirming, the initialization “INIT.....” is displayed.



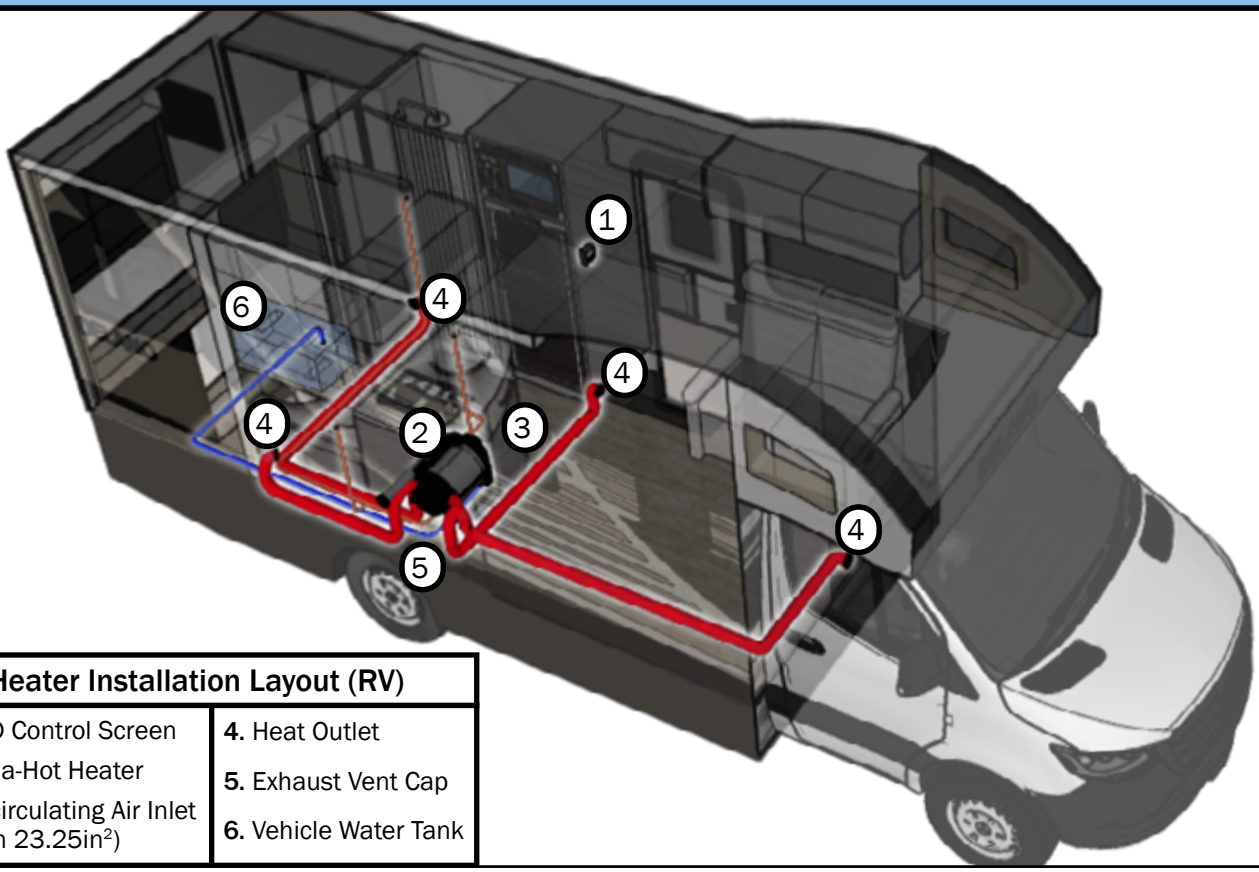
Fault Display

- Use the rotary button to select the icon and click the rotary button to display the current warning code (for troubleshooting, please refer to the relevant heater instruction manual).
- There are faults in the fault that are automatically recovered and manually recovered after repair.
- An automatic recovery fault is a warning fault in which an operating parameter has exceeded a defined normal working range and reached an undefined state. In this case, the device will continue to run and the warning symbol (⚠) will be displayed in the menu bar (4) without warning code. After the fault is repaired, the warning symbol disappears automatically (it can also be manually restored), and the device continues to work according to the original settings. For example: warning fault code W 120 H.
- A manually recovered fault means that the fault code is displayed in the parameter setting 8 field (7) when the fault occurs. The cause of the fault can be determined and remedied by the help of the troubleshooting guide. The fault code disappears after a few seconds, and the warning disappears, and the warning symbol is displayed in the menu bar (4).
- Select Reheat after the fault is identified and resolved, first remove the fault code. Press the rotary button to display the fault code, then press the rotary button, the displayed fault code disappears and return to the initial time interface. Re-enter the heating parameters to initiate heating. If the fault is removed, the heating will be normal or the fault will occur again. The LCD switch will jump to the “Fault” menu again, the warning symbol will be displayed again, and the affected device will still be in the warning state. Since the fault has not been eliminated, if you want to return to the set level, press the back button (9). For example: fault code E 31 H. Shutdown and power off can also eliminate faults.

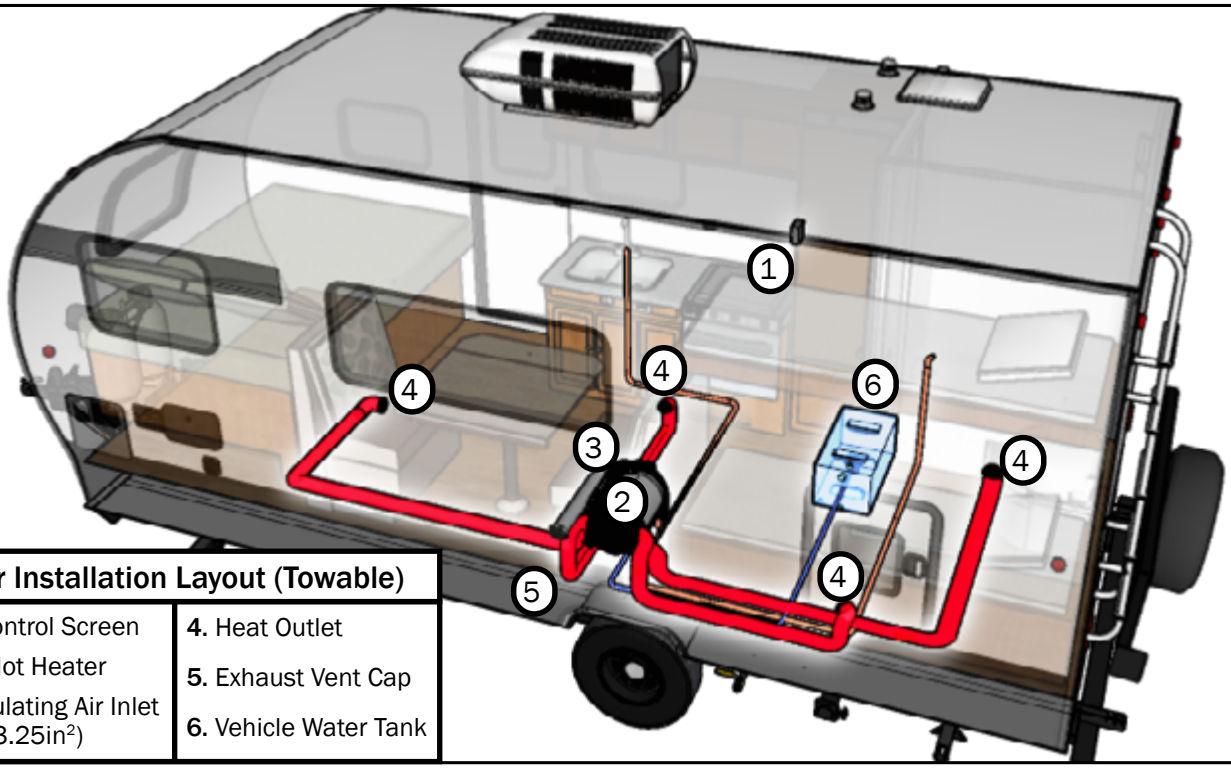
The fault code table and troubleshooting methods can be found in the tenth fault code table at the end of the manual.



NOTE: The illustrations below are just samples for the layout of the Aqua-Hot heating system. Actual placement may vary on the individual design of the RV. For questions or assistance, contact us at 574-AIR-XCEL (574-247-9235).



Heater Installation Layout (RV)	
1. LCD Control Screen	**4.** Heat Outlet
2. Aqua-Hot Heater	**5.** Exhaust Vent Cap
3. Recirculating Air Inlet (min 23.25in^2)	**6.** Vehicle Water Tank



Heater Installation Layout (Towable)	
1. LCD Control Screen	**4.** Heat Outlet
2. Aqua-Hot Heater	**5.** Exhaust Vent Cap
3. Recirculating Air Inlet (min 23.25in^2)	**6.** Vehicle Water Tank

Figure 7

Maintenance & Storage

Monthly Maintenance

- Check the exhaust and air intake systems
  Ensure there is no damage or leaks, inspect the exhaust bulkhead gasket for a proper seal. Replace any damaged components.
- Check the fuel system
  Check for abrasion along the fuel line. Ensure there are no leaks. Replace any damaged components.
- Check the vent air path
  Check for blockages in cold air return path. Check the ducting for any damage.

NOTE: Aqua-Hot recommends regular exercise of the Aqua-Hot heating system to avoid issues with starting after a several-month idle period.

NOTE: It is recommended to run the burner once a month (~20 minutes) to ensure optimum heater condition.

If the system has not been used for 2 months+, thoroughly flush all hot/cold water lines before use. It is recommended to run the heater at least once a month for 10-20 minutes to ensure optimum heater condition.

The water tanks must be cleaned regularly, minimum of twice a year. When the RV is driving or in storage, the temperature range should not fall below -40°F or rise above +185°F to prevent damage to the electronic components.

Storage

It is necessary to take precautions during any user maintenance

If the vehicle is parked in a closed room:

- Turn off the fuel supply to the heater.
- Turn off the timer switch of the LCD switch.
- Turn off the heater on the LCD switch. Press and hold the rotary button for 3 seconds to turn off (see below).

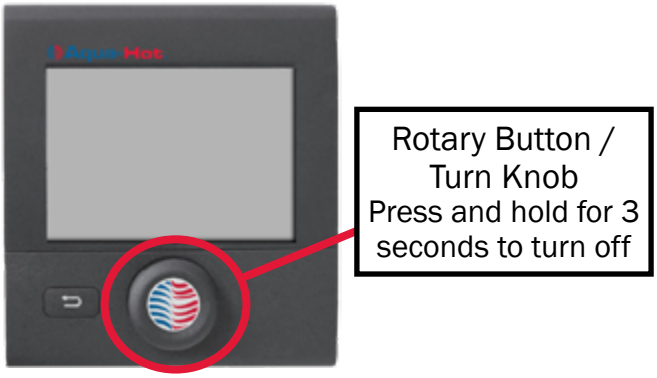


Figure 8

⚠ WARNING

If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

WHAT TO DO IF YOU SMELL GAS

- Evacuate all persons from the vehicle.
- Shut off the gas supply at the gas container or source.
- Do not touch any electrical switch or use any phone or radio in the vehicle.
- Do not start the vehicle's engine or electric generator.
- Contact the nearest gas supplier or qualified service technician for repairs.
- If you cannot reach a gas supplier or qualified service technician, contact the nearest fire department.
- Do NOT run the first operation until it has been confirmed there are no gas leaks.
- Do not turn on the gas supply until the gas leak(s) have been repaired.
- Installation and service must be performed by a qualified installer, service agency, or gas supplier.

⚠ WARNING

If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

⚠ WARNING

The heating system can produce dangerous CO gas when the propane system is operating if not properly installed or operated. Read all safety instructions before install or use.

Winterization

To avoid freeze damage to the system, the heater must be drained through the drain valve completely. If water is left in the system in below freezing temperatures, it can cause severe damage to the system that is not covered under warranty.

NOTE: The Aqua-Hot can continue to be used for interior heat once the domestic hot water system has been winterized.

- Turn off power supply and open hot water faucets in the RV.
- Place a container under the drain valve to catch the water.
- Open the drain valve and allow the water to drain out completely.

It is recommended to winterize if the RV will be stored for a long time or the system will not be used, and it is below freezing.

⚠ WARNING

Not winterizing the Aqua-Hot when freezing temperatures are present will result in serious damage to the Aqua-Hot domestic water heating system. The warranty does not cover freeze damage.

Disinfecting the Domestic Water System

NOTICE

The Aqua-Hot Heating components are not compatible to prolonged exposure to sodium hypochlorite (bleach or liquid bleach). Using products containing bleach, including water refreshers, may cause corrosion of the domestic water lines, resulting in a catastrophic failure of the Aqua-Hot system by creating leaks that cannot be repaired. This damage is not covered by the Aqua-Hot warranty.

If disinfecting the hot water system, be sure to follow any current national regulations or any other applicable local standards for Water Systems.

⚠ DANGER

Water temperature over 125°F can cause severe burns instantly, or death from scalds. Water temperature coming from the heater will be at 160°F. Feel water before bathing or showering! Temperature limiting valves are available.

Domestic Hot Water Installation Layout

1. Pressure Relief Valve
2. Cold Water Inlet
3. Hot Water Outlet
4. Drain Valve
5. Tempering Valve
6. Non-Return Check Valve
7. Domestic Water Lines
8. Pressure Regulator
9. City Water Hook-Up
10. Water Tank Connection
11. Water Pump
12. Fresh Water Tank

NOTE: This diagram is just a sample for the layout of the hot water system. Actual placement may vary on the individual design of the RV.

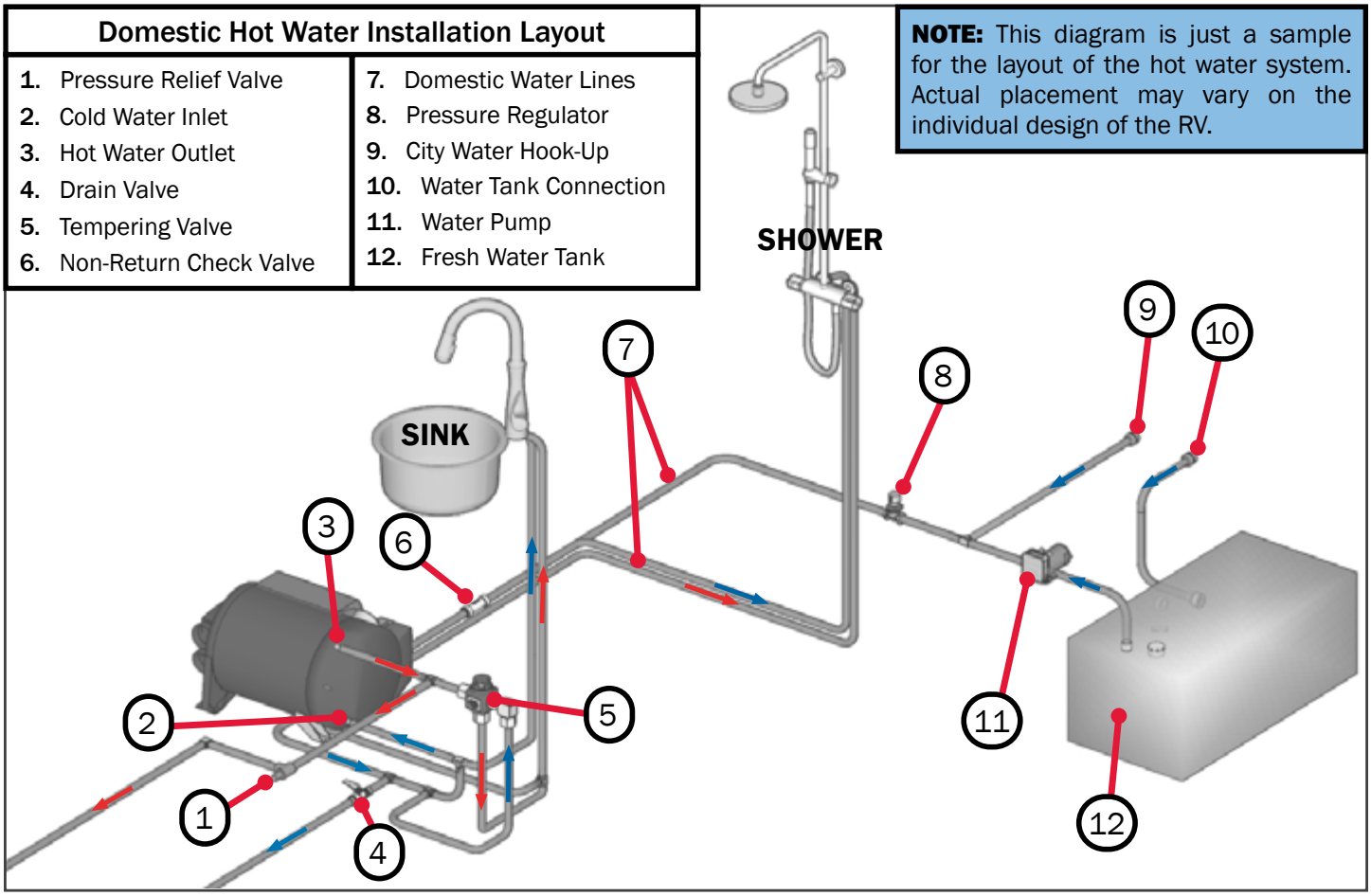


Figure 9

Troubleshooting

- Ensure that the system is supplied with electrical power and there are no blown fuses.
- Ensure that there is at least ¼ tank of propane in the gas supply.
- Make sure all the electrical and plumbing connections are connected and secure.
- Ensure there are no faults on the LCD. If there are, determine the fault and remedy. Refer to the table below for the fault code.

Fault Codes			
Error Code	**Fault Name**	**Remedy**	
10	Over-voltage	Check vehicle power supply	
11	Low Voltage	Check vehicle power supply	
21	Warm air outlet temperature sensor disconnect	Check temperature sensor connections	
22	Warm air outlet temperature sensor short circuit	Check temperature sensor wiring	
23	Water temperature sensor disconnect	Check temperature sensor connections	
24	Water Temperature sensor short circuit	Check temperature sensor wiring	
25	External temperature sensor disconnect	Check temperature sensor connections	
26	External Temperature sensor short circuit	Check temperature sensor wiring	
27	Combustion support temperature sensor disconnect	Check temperature sensor connections	**IAT Sensor**
28	Combustion support temperature sensor disconnect	Check temperature sensor wiring	**IAT Sensor**
31	Combustion Failure	• Check fuel supply system • Check intake and exhaust • Check ignition/glow plug • Check DC power supply • Check flame sensor	
32	Combustion failure		
33	Flame sensor fault	• Check flame sensor wiring • Check flame sensor	
41	Warm air outlet overheats	• Check air outlet for blockages • Open all vent covers • Check air overheat switch	
42	Warm air overheat switch protection	• Check air outlet for blockages • Check air overheat switch	
43	Water overheat	• Check water tank levels • Ensure heater tank is full • Check sensor wiring/connections • Check air outlet for blockages	

Error Code	Fault Name	Remedy
44	Warm air overheat switch protection	• Check air outlet for blockages • Open all vent covers • Check warm air overheat switch
45	Overheat fault	• Check air outlet for blockages • Check water temperature sensor • Check warm air sensor
51	Communication fault	• Check network cable • Check heater power • Check PCB
61	Fuel Pump Open Circuit	• Check fuel pump lead for damage • Check fuel pump wire connections • Check fuel pump • Check PCB
62	Fuel pump Short Circuit	• Check fuel pump lead for damage • Check fuel pump wire connections • Check fuel pump • Check PCB
63	Electric element circuit broken	• Check power supply voltage • Check resistance at room temp (0.2Ω/12V) • Check 110V AC PCB
65	No power to electric element	• Check 110V AC PCB
81	Combustion fan disconnect	• Check combustion fan wiring • Check combustion fan
82	Combustion blower boot failure	• Check blower motor lead wire • Check combustion air blower
83	Combustion blower speed too low	• Check combustion air blower motor • Check combustion fan wiring
84	Warm air blower motor disconnect	• Check warm air blower motor • Check warm air blower wiring
85	Warm air blower motor boot failure	• Check blower motor lead wire • Check warm air blower motor
86	Warm air blower speed too low	• Check warm air blower motor • Check warm air blower wiring
110	Window alarm	• Close window • Check window alarm bridge/wiring
120	Low Voltage Fault	• Check power supply and connections
220	220V Disconnect	• Check AC 220V/110V power supply

Heater Lock-out Reset Procedure

To reset the heater from a lock-out, simply turn off the heater and disconnect power supply to the heater, wait for 20 seconds, then reconnect power supply and restart the system.

DATE	SERVICE PERFORMED	SERVICE CENTER

DATE	SERVICE PERFORMED	SERVICE CENTER

Aqua-Hot
An AIRXCEL Brand

AQUA-HOT™ (2) YEAR LIMITED WARRANTY

Aqua-Hot Heating Systems Inc. warrants the AQUA-HOT heater to the original owner to be free from defects in material and workmanship under normal conditions of designed usage and service as outlined in the installation and operator manuals for a period of two (2) years covering both parts and labor beginning on the date of purchase of the vehicle by the original owner. Replacement parts are covered for the remainder of the heating systems warranty. All purchased replacement parts will carry a six months, (180) days warranty.

This warranty does not apply to scheduled maintenances items such as fuel filters and fuel nozzles, damage or failure of the AQUA-HOT heater or the vehicle into which it was installed due to improper installation, assembly, maintenance, abuse, neglect, accident, or the use of parts not supplied by Aqua-Hot Heating Systems, Inc. Aqua-Hot Heating Systems is not responsible for incidental or consequential damages.

The intent of this warranty is to protect the end user of the heating system from such defects, which might have occurred in the manufacture of the product. The warranty is not intended to protect the end user from problems, which are outside the ability of Aqua-Hot Heating Systems control.

To obtain a warranty repair authorization or information, please contact the Tech Support Department at 1-800-685-4298 (7:00am to 4:00pm Mountain Standard Time).

My Comfort Zones are On-Board
Vehicle:

Purchased From:
Dealer Information:
Name:
Location:
Phone Number:

Heating System:
Serial Number:

Scan the QR code on the right with your mobile device to take you to the website to register your Aqua-Hot product.

Use and Care Guide

Gen 1 Series

Aqua-Hot
An AIRXCEL Brand

Gen 1 LPG
AHE-GXN-PX1

Aqua-Hot Heating Systems, LLC
7501 Miller Drive, Frederick, CO 80504

Visit us online at www.aquahot.com
Call us at (800) 685-4298