

# Timberline

PREMIUM HEAT & HOT WATER SYSTEM



USER MANUAL | 2021-2022

## **OPERATION SUMMARY**

Timberline heat and hot water is generated by the Autoterm Binar Compact, a powerful but quiet diesel or gasoline heating unit made for the most adverse conditions. A heated glycol solution is circulated through the interior of the living space through quiet air handlers that provide soft radiant heat.

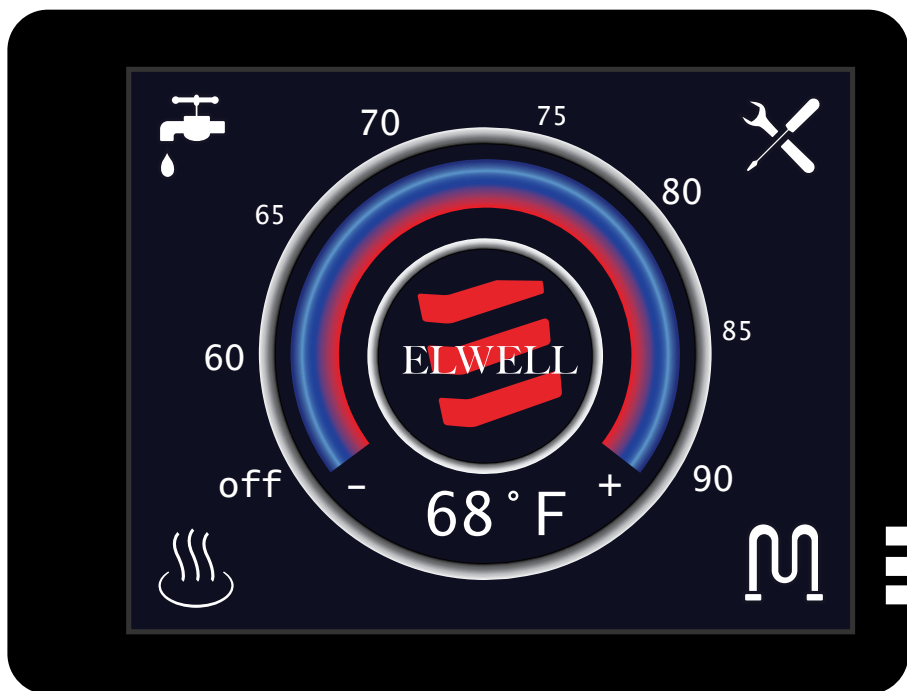
The glycol is also circulated through an instantaneous water heat exchanger which produces hot water for showers and kitchen use. By using the diesel or gasoline burner coupled with 110V electric element support, Timberline provides efficient comfort whether dry camping or plugged into shore power.

The Timberline touchscreen digital panel located inside the RV gives you full control of your interior temperature. The controls are intuitive and easily allow you to adjust how hard or soft you want the heat to distribute and whether you want to utilize your fuel source or electric only.

When the RV is cold the fans run on high until the interior temperature starts to reach it's target. The fans then automatically slow down and remain on low levels, maintaining the comfort levels inside.

### **Contact Elwell Corporation for Info**

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*Timeline Touch Screen*

## HOW TO USE THE SYSTEM

The best way to use the Timberline system is to enable the burner 🔥, the electrical element ⚡, and the hot water icon 🚰. The Timberline system will self manage, prioritizing the element if the coach is plugged in and only using the diesel/gas burner as needed. When its cold outside, set the thermostat to your desired temperature and the system will manage energy while maintaining the selected set point.




If you are utilizing multiple 120V appliances at the same time (Coffee maker, AC, etc) you can turn off the electric element ⚡ to conserve amperage and the Timberline system will maintain hot water and heat via the diesel burner. If you want to conserve diesel you can choose only the electric element ⚡.

*Note: The electric element is limited in energy and will not provide as much hot water or keep the coach warm in colder temperatures.*

## ICON DESCRIPTIONS






### Hot Water

When the Hot Water icon  is selected the system will cycle and maintain the hot water heat exchanger so hot water is available on demand. *Note: In order for hot water to be maintained, either the burner  or the electric element  icons must be selected (or both).*




### Electrical Element

When the 120V Electric Element icon  is selected the 1500 watt 120V element will activate and provide supplemental heat to the coolant.

When both the Burner  and Element  icons are selected the system automatically prioritizes using heat from the electric element. If there is greater heating demand on the system the burner will automatically engage and heat the glycol.





### Burner

When the burner icon  is selected the diesel heater will run and keep the coolant hot and ready for hot water and heat. The heater will cycle on and off, maintaining the temperature of the coolant.

## Interior Temperature

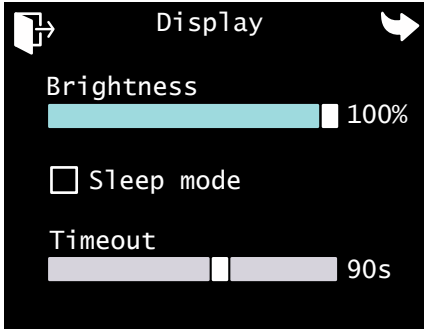
The interior temperature set point can be set by either sliding the temperature bar to the desired temperature or by pressing the **+** and **-** icons under the temperature bar.

When the RV is cold the fans run on high until the interior temperature starts to reach its target. The fans then automatically slow down and remain on low levels, maintaining the comfort levels inside. *Note: In order for the system to heat the interior, either the burner  or electric element  icons must be selected (or both).*

## ICON DESCRIPTIONS

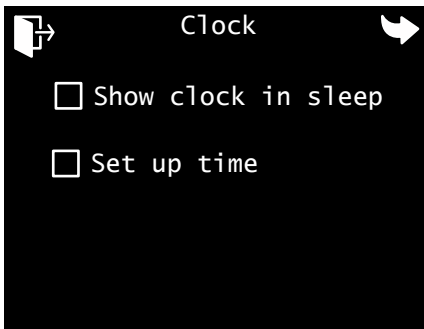


### Settings



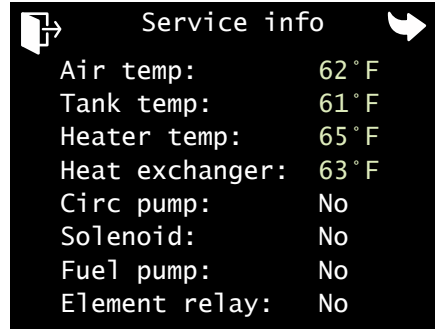
#### Display

For adjusting the brightness you can check the Sleep mode and the display will “go to sleep” for the set time. You can “wake” the panel by touching the screen.



#### Clock

Selecting Show clock in sleep will display a clock when the screen goes into sleep mode. Select Set up Time to set the clock.



#### Service Info

**Air Temp:** The current temp in the living space.

**Tank Temp:** The temperature of the coolant inside the Timberline tank.

**Heater Temp:** The coolant temp inside the Timberline heater.

**Heat Exchanger:** The temp of the domestic water heat exchanger.

**Circ Pump:** Indicates if the circulation pump is activated or not.

**Solenoid:** Indicates if the heating loop solenoid is activated.

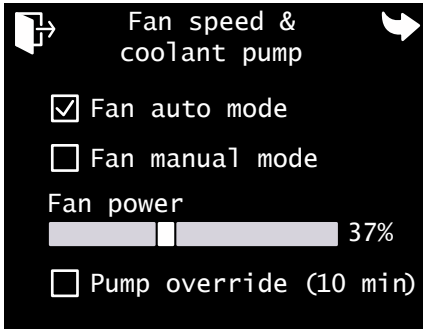
**Fuel Pump:** Indicates if the Fuel pump for the Timberline heater is activated.

**Element Relay:** Indicates if the 110V element is activated in the Timberline Tank.

## ICON DESCRIPTIONS



### Settings

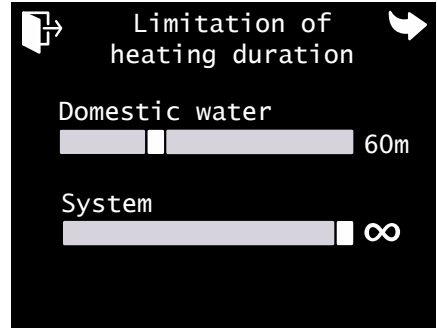


#### Fan speed and Coolant Pump

When Fan auto mode is selected the fans will regulate air flow based on the needs inside the living space. The fans will blow harder when more heat is needed and softer when maintaining the selected set point.

Selecting Fan manual mode will make the fans always run at the set percentage selected anytime there is a call for heat.

By selecting the Pump override the coolant pump will run for 10 minutes. This mode is used for purging air from the coolant system.



#### Limitation of Heating duration

Domestic water bar allows you to choose a length of time the domestic hot water is activated; from 30 minutes to infinity. These functions are used when you plan to leave the coach for some time and want to limit the heaters operation.

System bar allows you to choose a length of time the system will be activated; from 1 hour to infinity. These functions are used when you plan to leave the coach for some time and want to limit the heaters operation.

## **MAINTENANCE**

### **Hydronic System**

- The glycol system does not require annual maintenance.
- It is recommended to test the alkalinity in the system coolant annually.

### **Domestic Water**

- The domestic water loop does not require annual maintenance.
- Calcium build-up over time will act as an insulator. The exchanger unit can be back-flushed with a lime removal cleanser.

### **Fan Unit(s)**

- The fan unit does not require annual maintenance.

### **Furnace**

- The Timberline system is equipped with the efficient Autoterm Binar Compact Diesel or Gasoline burner. This burner is designed for optimal use in all climates including high altitude up to 10000 feet. There is limited required maintenance for the Autoterm burner.
- It is recommended to exercise the burner every month letting the burner run for 15-20 minutes. If the burner is utilized monthly there is no annual or hour based maintenance required.

### **Exhaust System**

- The exhaust system should be inspected annually for damage.

## **WINTERIZATION**

### **System Coolant**

- The system coolant does not require winterization.
- The system coolant can be tested for its freeze protection value.

### **Domestic Water System**

- The domestic water circuit needs to be drained or protected using RV winterizing fluid.
- Draining is accomplished by opening the low point drains and blowing air through the water system. Please refer to the RV's owners manual for the procedure.
- Propylene-glycol can be pumped through the system using the domestic water pump and opening both hot and cold valves at a plumbing fixture. Using this procedure does not require draining the Demand Hot Water exchanger.

## TIMBERLINE WARRANTY STATEMENT

Elwell Corp warrants to the original owner and subject to the below mentioned conditions, that the Timberline system will be free of defects in material or workmanship for a period of two years (unless otherwise specified) from the original date of purchase.

Elwell Corp liability hereunder is limited to the replacement of the product, repair of the product or replacement of the product with a reconditioned product at the discretion of the manufacturer.

This warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material workmanship.

This warranty extends to the original owner of the product only and is subject to the following conditions:

1. For two years (unless otherwise specified) from the date of purchase, Elwell Corp will repair or replace any part defective in material or workmanship. This warranty includes reasonable labor charges required to remove and replace the part. Service calls to customer's location are not considered part of these charges and are, therefore, the responsibility of the owner.
2. This warranty does not cover the following items classified as normal maintenance:
  - a. Cleaning the burner and screens
  - b. Replacing the screens.
  - c. Replacement of the glycol
3. Warranty approvals and payments will be made by Elwell Corp. All warranty repairs require a pre-authorization.
4. The warranty period on replacement parts is the unused portion of the original warranty period or one hundred eighty (180) days, whichever is greater.
5. Damage or failure resulting from misuse (including failure to seek proper repair service), misapplication, alterations, water damage or freezing are the owner's responsibility.
6. Elwell Corp does not assume responsibility for any loss of use of the vehicle, loss of time, inconvenience, expense for gasoline, telephone, travel, lodging, loss or damage to personal property or revenues. Some states/provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.



**ELWELL CORPORATION**

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