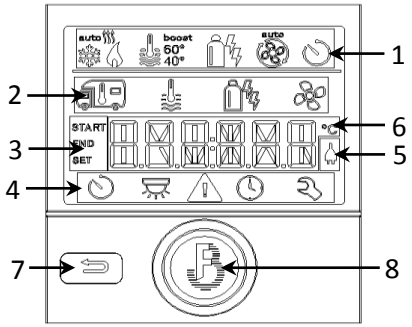
General COMPONENTS

QUICK START GUIDE

COMBI-HEATER CONTROLLER

1. DISPLAY LAYOUT

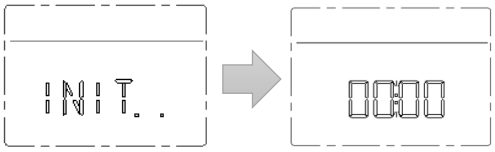


1 – Status bar; 2 – Settings bar; 3 – Time display;
4 – Menu bar; 5 – AC line icon; 6 – Temp. display;
7 – Return button; 8 – Rotary pushbutton.

Navigation through the menus and value adjustments are all done by the means of rotary pushbutton (8) and return button (7) on the front panel of the controller. Pressing rotary pushbutton is equal to [Enter] command, rotating pushbutton is equal to [+]/[-], up/down or left/right..

2. POWER UP

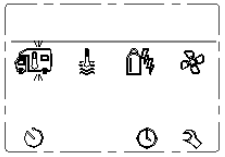
After device is turned ON, an “INIT..” message should appear on the screen. Few seconds later it changes to time display.



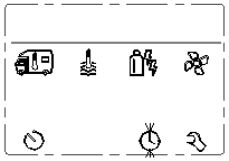
3. SETTING TIME

Press the rotary pushbutton **[Enter]** to bring up the menu.

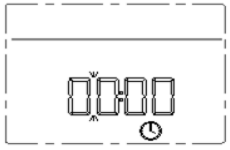
First icon begins to flash



Rotate the button **[<]** and **[>]** to select the clock icon and press **[Enter]**.

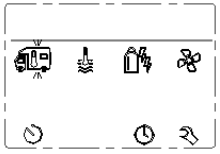


Rotate the button **[<]** and **[>]** to enter the time. Press **[Enter]** to navigate between segments.

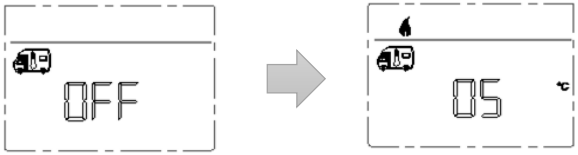


4. SETTING INDOOR AIRFLOW AND TEMPERATURE

Press the rotary pushbutton **[Enter]** to bring up the menu and rotate the knob to navigate to RV icon, then press **[Enter]**



Rotate the knob to select the temperature (between 5°C and 30 °C) or OFF, then press **[Enter]**.



Flame icon will appear in the top left corner to indicate that the heating cycle has started. The heating cycle will continue until the setpoint was reached.

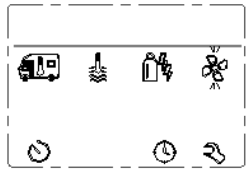
Press [Return] button to return to main menu.

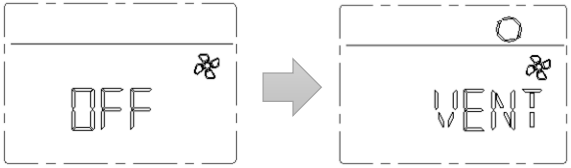
NOTE: *Setting higher setpoint will not increase amount of produced heat, use fan speed instead.*

To adjust the fan speed scroll to the fan icon and press **[Enter]**.

Select desired volume:

[VENT], [ECO], [LOW], [HIGH], [BOOST] or [OFF] and press [Enter]



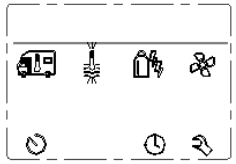


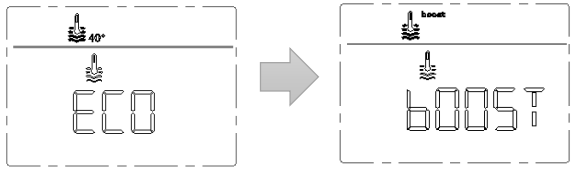
Setting higher fan speed will increase amount of produced heat and will heat room faster, setting lower fan speed will decrease amount of heat.

Press **[Enter]** to go save and go back to main menu.

5. SETTING WATER TEMPERATURE

Using **[<]** and **[>]** keys, navigate to **Thermometer Icon** and press **[Enter]**.

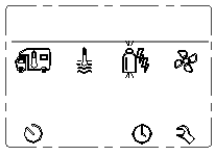




OFF	Water heater is turned off.
ECO	Temperature target is 40°C/104°F
HOT	Temperature target is 60°C / 140°F
BOOST	Only heats the water for 40 minutes or until the water temperature reaches 60°C / 140°F.

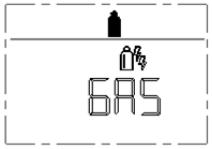
6. SETTING WATER HEAT MODE

Using **[<]** and **[>]** keys, navigate to water tank icon and press **[Enter]**.



In the following menu select one of the following modes:

GAS	LPG or Diesel only
MIX 1	electrical 900 W+GAS
MIX 2	electrical 1800 W+GAS
EL 1	electrical only, 900 W
EL 2	electrical only, 1800 W



Note: for best heating performance, always set MIX2.

Note: MIX1, MIX2, EL1 and EL2 only work when RV is connected to 120V/240V service.

7. START AND STOP HEATER

<u>To shutdown the heater at any moment, press and hold [Enter] button for more than 3 seconds.</u>

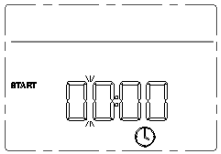
Note: it may take up to two minutes for the heater to cool off and stop completely.

Press and hold [Enter] button for 3 seconds to start the heater back up again.

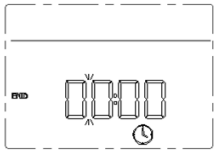
8. SETTING SCHEDULED OPERATION

Using **[<]** and **[>]** keys, navigate to **Stopwatch Icon** and press **[Enter]**

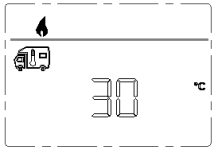
In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **Start Time**.



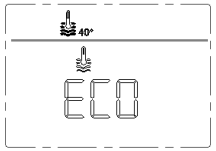
In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **End Time**.



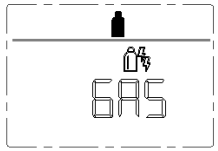
In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **Room Temperature**.



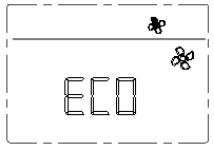
In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **Water Temperature**.



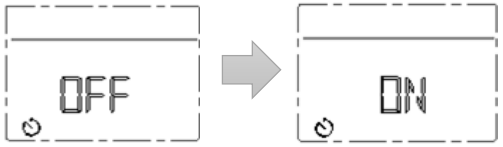
In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **Water Heat Mode**.



In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **Fan Speed**.



In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enable (or disable) the program.



<u>The program is now set.</u>

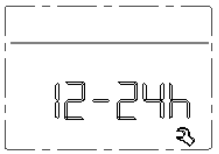
9. SETTINGS

While in main menu, using **[<]** and **[>]** keys, navigate to **Wrench Icon** and press **[Enter]**.

In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **Offset**.

Offset allows you to calibrate the remote temperature sensor reading to ±5 degrees of its actual value.

In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **Time Format (12H or Military)**.

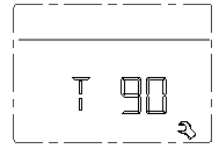


In the following screen, using **[<]** and **[>]** and **[Enter]** keys, enter the desired **LCD Brightness Between 0 and 10**.

Index screen allows you to check software version of the timer and heater controller.

FUEL option of the menu allows you to prime the fuel line after the installation or after you ran out of fuel.

You can set the priming duration of up to 90 seconds. Press return at any time to stop priming.



Use **RESET** option to reset your controller to factory settings.

10. FAULT DISPLAY

When a fault of warning appears in the system, the fault icon appears on the screen.

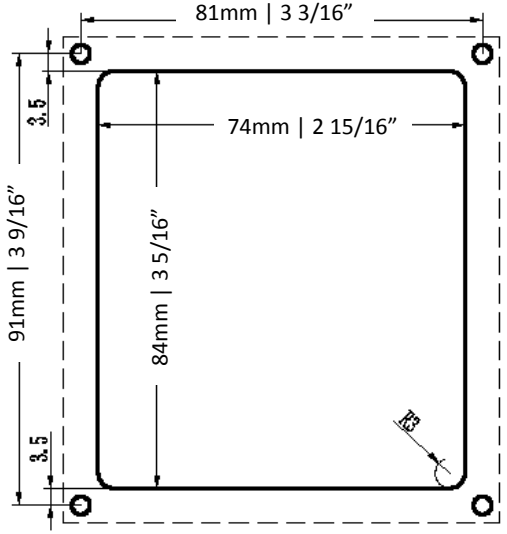
Please do not attempt any repairs yourself. Always refer to your service centre.

List of fault codes and their description:

Code	Description
10	Overvoltage fault
11	Undervoltage fault
21	Heater supply temperature sensor open circuit
22	Heater supply temperature sensor short circuit
23	Water temperature sensor open circuit
24	Water temperature sensor short circuit
25	Room temperature sensor open circuit
26	Room temperature sensor short circuit
27	Combustion temperature sensor open circuit
28	Combustion temperature sensor short circuit
31	Ignition failure
32	Combustion failure
33	Flame sensor failure
41	Supply air temperature is too high
42	Supply air overheat switch tripped
43	Water temperature is too high
44	Water temperature overheat switch tripped
45	Continuous overheat failure
51	Communication failure
61	Fuel metering pump (FMP) open circuit
62	Fuel metering pump (FMP) short circuit
63	Spark plug (glow plug) open circuit
65	Spark plug (glow plug) driver failure
71	Gas valve failure
72	Gas valve driver failure
81	Combustion blower circuit open
82	Combustion blower failed to start
83	Combustion fan speed is too low
84	Heater fan disconnected
85	Heater fan failed to start
86	Heater fan speed is too low
91	High voltage package failure
92	High voltage power supply failure
93	High voltage circuit failure
94	Gas valve circuit failure
110	Window alarm
120	Low voltage alarm
220	220V not connected

11. CONTROLLER INSTALLATION

Install controller in dry locations only, at a height of 5 feet from the floor. Leave some slack when running the cable, secure wire and protect from frays.



Wall cutout