The MCS-5 Hydronic Heating System

Preamble: Hydronic systems work in two stages:

Step 1: Heat created by the Furnace,

(or Electric Element, or the Engine - when installed * see #3 and #4 below)

is transferred into a fluid (antifreeze Glycol/Water mix).

This fluid is circulated by a pump in a closed loop.

Step 2: On demand, the heat in the fluid is transferred to air or domestic water.

1. Room temperature control - heating the air

By default, the MCS-5 system operates in what can be called "Economy Mode". Heat is only produced, and the fluid pumped, when the room thermostat demands it.

You can set your desired temperature on the Thermostat, make sure that the 'FURNACE' switch is ON and forget about it.

(Note: The SYSTEM switch should always be ON. The 'FAN' speed switch should always be in either High (II) or Low (I) There is no reason to have it in the center OFF position during normal use.)

The system will only run (use fuel and electricity) when the room temperature falls below the Thermostat's set point.

2. Hot Water use

While the system is running (due to the thermostat calling for heat), hot water is also available. To insure constant heat production the 'Hot Water' switch can be switched ON, which produces a permanent call for heat.

The furnace will keep the Glycol fluid hot (independently from the room thermostat), ready to produce unlimited hot water.

This switch <u>allows</u> the Diesel furnace to run, when there is a call for heat.

i.e. the switch does not start the furnace, it only allows it to start when the thermostat (or the Hot Water switch) calls for heat.

This switch in the ON position is a permanent call for heat. Usually for hot water use.



SYSTEM On/Off switch Leave it ON when using the RV

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4-Switch Remote

Fan speed select Leave it at your preferred speed No need to ever switch it Off during normal operation.

3. Electric Heat option (if installed)

How the 1500 Watt Electric Heat Element is switched on depends on your installation. Please refer to your installer's instructions.

Electric Heat only works when 120V AC is available (i.e shore power is plugged in).

Note: If your RV is wired so that an inverter provides 120V AC from the battery,

Do Not Use It. Electric heat will drain your battery quickly.

If only electric heat is desired, then the 'FURNACE' switch needs to be Off.

In normal operation, furnace and electric can be used together, where the furnace only starts when the electric can not keep up with the demand for heat.

4. Engine Heat (if installed)

To use Engine Heat we recommend to set the 'HOT WATER' switch ON, and the FURNACE switch Off.