

**Preface:**

The Alde 3010 is fantastic system but there are some basic things you need to understand about it. I am this unofficial manual is an attempt to pool the collective knowledge of the Alde from T@b users for the benefits of new users. The owner's manual and official statements from Alde should always preempt any advice given here and you use this as a guide at your own risk. This is drawn from contributions from everyone at the T@b official forums, with particular assistance from J.D. Watson.

**Starting from cold**

(From this site: <http://www.caravanguard.co.uk/news/getting-the-best-out-of-the-alde-compact-3010-heating-system-3718/>)

When heat is applied at start-up, the heating fluid is heated first which then in turn heats the 8.4ltr hot water supply in the outer cylinder by conduction; this means that when starting the system up in cold weather it can take some time to get to the required temperature.

**The hook up amperage is critical**

Check the mains amperage when hooking up as the available amperage will dictate the appropriate setting on the control panel. The minimum amperage required is; 6amp = 1kW, 10amp = 2kW and 16amp = 3kW.

**Gas setting is automatic**

The gas output, when switched on, starts at 5.5kW and reduces automatically to 3.3kW as the temperature increases and shuts down when the required temperature is reached, restarting automatically when heat is called for.

**Auto default to electric supply**

If electric and gas are used together the system default is electric. This means that when you have gas and electric on at the same time the gas will supplement the electric power until the required temperature is reached at which time it is automatically switched off. Depending on the available site amperage you can speed up the warm-up period by combining electric and gas providing up to a maximum of 8.5kW (according to the boiler model)

**Gas consumption**

Be careful with your gas usage particularly in cold weather with either no mains or only using 1 kW, as at full power the gas burns 405g per hour; that equates to 9.72kg in 24 hours. Clearly this is a worst case scenario, but if you are running on gas alone do take into account the other appliances using the same supply.



### **Warnings:**

- The manual warns not to use heated water to cook with - in other words, it isn't potable. There are some who have used it and there have been no known repercussions.
- When using the Alde on shore power, do not turn the lightning bolts up all of the way. This unit was not designed for the American power grid and thus might fry the line. You can turn it up all of the way when at a campsite using 30 amp power.

### **A few basics and FAQs**

The Alde can be used on shore power alone, propane alone, or both together. The fastest way is to use both. The Alde will default to shore power and conserve propane once the T@b reaches the temperature to which the thermostat has been set.

Some degree of power, either via the battery or shore power, is necessary to circulate the glycol mix in the circulation pump.

There are three main components to the Alde:

1. The main unit, valves, and hoses. This part is found under the passenger's side rear bench.
2. The expansion tank and glycol fill tank. This is found all of the way in the rear of the Alde To access this, the bed must be folded down and the back panel must be removed. It is directly beneath the rear cupboards.

3. The radiators. These are found under the side benches and in the same section as the expansion tank.

Radiant heat, as used in the Alde, does not blast air like many are accustomed to in their homes and other RV furnace types. It is more of a gradual warm up and tends to heat more evenly. Be careful not to obstruct the vents and you should experience even, comfortable heat.

You can use the Alde once the unit has been winterized and the hot water tank has been drained. Be sure to follow the correct steps to winterization. Alde does not recommend using RV anti-freeze in your Alde unit. Newer T@bs have by-pass lines that allow you to safely use the T@b once you have winterized. IF your T@b does not have the bypass lines, you can contact Ed Kaufman at Pleasant Valley Trailers for further assistance.

Many ask whether you can you the heat but not hot water. The answer is mixed. You cannot set the Alde to heat only on the control panel, but you can still safely use the Alde without water in the tank. So, the control panel will show you are using hot water, even if you are not.

### **Using the Alde: The Control Panel**

The Alde panel looks a little confusing, at first, but once you understand what each setting does, you will find it very straightforward.

### **The Lightning Bolts - Shore Power**

Starting at the left of the control panel, you see a setting with four levels of lightning bolts. As in all of the control panel sliders, when the slider is all of the way at the bottom, that setting is off. Therefore, when all sliders at the bottom, the Alde is off. The higher you raise the lightning bolt slider, the more amps you are drawing. Also, note that the longer the power cord to the T@b (including extension) the more voltage loss you get. So in the end the heater might just get 100V or even 90V which affects the overall wattage.

### **Propane Slider**

The second slider from the left turns the propane on or off. Sliding it up from the bottom turns it on. Sliding it down to the bottom position turns it off. In order for the Alde to run on propane, the propane line at the propane tank must be open and you must have enough power, either via the battery or shore power, for the circulation pump to run.

### **Hot Water & Heat Setting**

The final slider, third from the left and the very first from the right, is for selecting heat and hot water. In other words, it will control the circulation pump. Moving the slider to the first position from the bottom provides you with both heat and hot water. Moving the slider to the top position provides you with hot water, only. As previously mentioned, there is no setting for heat only, but you may safely use the Alde when there is no water in the hot water tank (or fresh water) or when you have winterized. Make sure to follow the correct winterization steps.

### **The Thermostat**

The dial is for setting the thermostat. The thermostat is used for setting the temperature of the heat and not the hot water temperature. . When the thermostat dial is set all of the way below "1" the Alde temperature is all of the way down. There is a dot mid-way between 3 and 4. That is indicative of room temperature but it sets the temperature to somewhere in the mid 70's which is somewhat warmer than most of us are accustomed to for room temperature.

### **Hot Water Temperature**

Hot water temperature should be adjusted by mixing in cold water at the tap. The Alde hot water tank is only 2 gallons, however the water is very hot and when you use hot water, you will be using a significant amount of cold water to cool down the temperature, thus, 2 gallons is sufficient for showering or doing dishes.

### **Winterizing the T@b**

**For winterization instructions, please see:** <http://cdn.vanillaforums.com/tab-rv.vanillaforums.com/FileUpload/fe/69ecd87d2c24cb89d409fbf8c337ed.pdf>

### **Maintenance**

Check the heating system's fluid level regularly in the expansion vessel. The level should be approximately 1/2 inch above the Min mark when the system is cold. The heating system should be filled with a mixture of water and glycol. For preference, use high quality pre-mixed glycol (with inhibitor) intended for use in aluminum heating systems.

If using concentrated glycol, the mixture should consist of 60% water and 40% glycol. If the heating system will be exposed to temperatures below  $-25^{\circ}\text{C}$ , the glycol content must be increased, but not to more than 50%. Any vessels used in handling the liquid must be spotlessly clean, and the pipes in the heating system must be free of contamination. This will prevent the growth of bacteria in the system. The glycol mixture should be changed every second year, since its ability to protect against corrosion, for example, will deteriorate. The glycol content should be checked before topping up with new liquid. This will ensure that the concentration of glycol in the mixture is not too high. If the fluid level in the expansion tank falls for reasons other than evaporation, check all joints, drain cocks and bleeder screws to ensure that they are not leaking. If the glycol-water mixture leaks out, rinse with water and wipe up. Never allow the heating system to stand empty of glycol fluid

### **Adding liquid:**

Ensure that the vehicle is standing level, and check that the bleeder screws and drain cocks are closed. Release the plastic nut on the circulation pump, located on the expansion vessel, and lift out the pump. Pour the glycol mixture slowly into the expansion vessel, using a watering can. When the system is being filled, air pockets may form, depending on how the pipe system has been installed. A good indication that there is air in the system is when the heat only travels a few feet along the pipe from the boiler, despite the fact that the circulation pump is operating. To make refilling and bleeding easier, we recommend using the Alde filling pump which quickly both fills and bleeds the system automatically.

### **Bleeding the Lines**

Bleeding a caravan heating system (manually): The LPG boiler must be switched on and the circulation pump switched off. Start by opening the bleeder screws (please refer to the vehicle instruction book for

their location). Leave them open until liquid escapes through the spout at the air screw. Switch on the circulation pump and let it run for a while. Check whether the pipes and radiators all around the caravan are warm.

If air still remains in the system, try the following:

The LPG must be switched on and the circulation pump switched off. Lower the front of the caravan as far as possible using the jockey wheel. Leave it in this position for several minutes, to allow any air to rise to the highest point in the system. Open the bleeder screw at the highest point and keep it open until all the air has escaped.

**Note: The bleeder valve is a silver stem that comes off of the connector pipe.**

**Fuses:**

3.1A/250V -

[http://www.amazon.com/dp/B009EU9ZWQ/ref=pe\\_385040\\_30332190\\_TE\\_3p\\_M3T1\\_ST1\\_dp\\_1](http://www.amazon.com/dp/B009EU9ZWQ/ref=pe_385040_30332190_TE_3p_M3T1_ST1_dp_1)