

# USERS GUIDE

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## SOLAR THERMAL

For installation guide see reverse of book

When replacing any part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require.  
Do not use reconditioned or copy parts that have not been clearly authorised by Ideal.

## FOR THE OWNER: -

Please read the following notes carefully in order to gain the maximum benefit from your Ideal Solar System.

### NOTE: Risk of burns:

The collectors and pipes can become very hot during bright sunlight, please do not touch.

**IMPORTANT** This appliance is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction by a person responsible for their safety.

Please ensure children do not play near appliances carrying high voltages.

### Maintenance of the Solar System:

It is important that you do not open or close any valves or attempt to remedy any malfunctions to the solar system yourself. Attempting to do so runs the risk of either death or serious injury if the work is carried out improperly

In order to maintain permanent operational readiness, reliability and a long service life, it is essential that regular inspection and maintenance work is undertaken annually by an approved Solar System Specialist.



## THE IDEAL SOLAR EC 1 CONTROLLER

The Ideal Solar EC 1 controller basic settings are pre-programmed for optimal performance for most common solar installations.

It is recommended that original parameters are not altered.

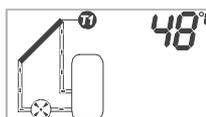
**Important Note.** Ensure that the left hand side sliding switch is set in the middle "AUTO" position. When selecting the correct position "Aut" is displayed in the upper right hand LCD display for 5 seconds.

Your Ideal Solar EC 1 Controller is now fully automated and will operate correctly.



Switch in central position means automatic mode.

The backlight display is yellow.



## 1 USER TEMPERATURE DISPLAY OPERATION

Pressing the / buttons allow you to view the following readings:

- Solar collector temperature **T1**
- Storage tank lower-zone temperature **T2**

## 2 USER SETTABLE PARAMETERS

### SOLAR STORAGE TANK LIMIT TEMPERATURE

Press and hold the **SET** button until the LCD display enters its set parameters mode.

NOTE: The control will return to normal operation after 60 seconds if no buttons are pressed.

Selecting the flashing **max** symbol and hold the **SET** button for 4 seconds until

the **T2** and temperature in the upper right hand will flash, using the / buttons, set the required temperature.

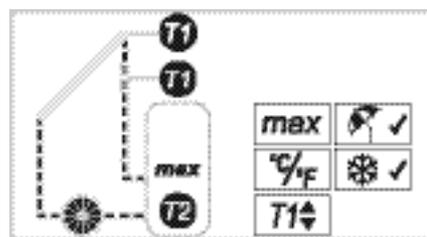
Once the temperature has been set press and hold the **SET** button for 5 seconds, the **max** **T2** will once again begin to flash.

Press repeatedly until the controller returns to normal operation mode.

**WARNING.** It is recommended that the solar store temperature set point is not set below 60°C as this temperature facilitates the eradication of *Legionella* bacteria.

**Risk of scalding from the solar storage tank if set above 60°C**

It is recommended that a thermostatic mixer is set to 60°C or below and is fitted local to the solar cylinder.



### 3 TEMPERATURE DISPLAY UNIT

Enter the parameters mode as described in Frame 1.

Use the arrow buttons  /  to select the  symbol.

Press and hold the  to change the unit.

Once the unit is set press  repeatedly until the controller returns to normal operation mode.

### 4 VACUUM COLLECTOR FUNCTION

**IMPORTANT:** It is recommended that this parameter not be adjusted from  as it is preset for Ideal Solar Collector Panel.

The vacuum collector function is only applicable for systems using Evacuated tube collector type systems. This is not applicable to the ideal solar system.

### 5 HOLIDAY FUNCTION

**This functions should only be applied if the property is vacant for long periods of time.**

The Holiday Function is a storage re-cool function. If the user does not use hot water from the solar cylinder over a number of days the storage cylinder may reach its maximum temperature. In this case vaporisation may occur within the Ideal Solar Collector panel which is normal.

When the holiday function is activated the Ideal Solar Controller automatically recognises if an overheat condition will occur and will reduce the cylinder temperature over night by using the solar collectors as a radiator.

Enter the parameters mode as described in Frame 1.

Use the  /  buttons to select the  symbol, press and hold the  button for 5 seconds until a tick  appears in the holiday symbol.

Once the unit is set press  repeatedly until the controller returns to normal operation mode.

*Repeat in reverse order once the property is occupied.*

### 6 ANTI-FREEZE FUNCTION

**IMPORTANT: THIS PARAMETER MUST NOT BE ADJUSTED AS IT IS PRESET FOR IDEAL SOLAR COLLECTOR PANELS AND HEAT TRANSFER FLUID.**

**Note.** *Ideal Solar Collector Panels must only be used with Ideal Solar Heat Transfer Fluid as this incorporates an anti-freezing agent.*

### NOTE: POWER FAILURE

None of the settings are lost if there is a power failure.

## TROUBLESHOOTING

If for any reason your Ideal Solar EC 1 Controller does not seem to be operating, check the fault finding chart below before contacting a Solar Qualified Engineer.

### **WARNING. DO NOT OPEN THE HOUSING**

#### Controller shows no function

Secondary condition:	Possible cause:
The controller's display is blank	No power supply, check fuse and electric mains.

#### The solar circuit pump connected to the controller does not run, although it's switch on conditions are met (sun in the display)

Secondary condition:	Possible cause:
Pump symbol does not rotate; "max" flashes in the storage symbol	No fault, controller deactivated the pump because maximum storing temperature has been reached.
Pump symbol does not rotate; Steam symbol flashes on the collector symbol.	No fault, controller has deactivated the pump because the collector maximum temperature (130°C) has been exceeded.
Pump symbol rotates in the display.	Pump's connecting line is not connected, interrupted or fuse in the controller is burnt-out (replacement fuses provided in the housing). Only use fuses of type 250V 4A MT.*
Pump symbol does not rotate; Backlight display flashes red and green alternately; one of the T1/T2 temperature displays a sensor fault.	There is a sensor fault (short circuit or interruption); check the sensor supply lines and its connect connection on the controller.*

#### Display showing a flashing "SYS"

<p><b>SYS</b> stands for <b>system error</b>. That means in spite of the pump running there is a difference in temperature of more than 80 Kelvin measured between collector and storage tank. The reason for such a huge temperature difference could be a damaged or faulty connected pump, a closed valve or air in the solar circuit. As air inside the piping can't be overcome by a conventional pump, circulation of the solar circuit is stopped. Check your solar-system for these sources of error to avoid damages.*</p> <p>You can quit the error message afterwards by pressing any key.</p>
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\* Contact a Solar qualified engineer.

If the trouble shooting does not solve the problem then contact your local Solar qualified Engineer.