



## EASY ZONE TOUCH

6 Zone Control System with  
Active Temperature Management



## User Manual

Ver 1.0

## Preface

Your new air conditioning zone control system has been built using the best components and design philosophy currently available. As a result, if properly installed your Smart Temp EASY ZONE TOUCH will provide you with many years of trouble free comfort control.

The EASY ZONE TOUCH control system has been designed and built by Smart Temp Australia P/L to be an attractive, highly reliable and an easy to use controller. By taking the time to read and understand these simple instructions you can take advantage of many of the capabilities that are offered in this premium product.

*Great care has been taken in the preparation of this manual. Smart Temp Australia P/L takes no responsibility for errors or omissions contained in this document. It is the responsibility of the user to ensure this controller, or equipment connected to it is operating to their respective specifications and in a safe manner.*

*Due to ongoing product improvement Smart Temp Australia P/L reserves the right to change the specifications of the EASY ZONE TOUCH (or its components) without notice.*

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## Introduction

Thank you for choosing Smart Temp Australia P/L for your heating, cooling or air conditioning system zone control management. You have chosen a product built to exceptional standards and that offers that latest's technology in energy management and comfort control.

Please take the time to read these instructions and familiarise yourself with the features and functions found in this product.

Although the EASY ZONE TOUCH works well with any thermostat, its many features can be fully utilised when paired with a compatible thermostat, such as the Smart Temp SMT-770 "Chameleon" thermostat.

As the EASY ZONE TOUCH is capable of being a part of many different types of heating cooling and air conditioning systems. It is beyond the scope of this manual to describe them all. So whether your EASY ZONE TOUCH is connected to "inverter", "air conditioning system", "reverse cycle system", "heat pump system", "gas/oil heater" or "HVAC" system this manual describes these collectively as a "heating and cooling system".

### **What Is Zoning?**

Climate system zone control allows the user managed distribution of conditioned air (warmed or cooled) to specific arrears of your home or office to permit you to increase the comfort levels or to reduce energy costs in your home or office.

Just as your home or office has a number of light switches to control which rooms are lit, your zone control system permits you to control which rooms are heated or cooled and in most circumstances, what temperature is maintained in these rooms (or zones).

When using a zone control system, it is important that realistic demands are made on the system such as keeping all the zones desired temperatures to within 5 to 8c of other zone temperatures or of the master controlling thermostat.

## Advantages of Zoning

### Reduced energy Costs

Zoning permits you to reduce your energy costs by not heating or cooling an area of your home or office that is vacant. Shutting unused zones sends all available capacity of your heating or cooling system to zones that are occupied, enabling them to reach set temperature faster - saving energy.

### Rapid temperature recovery

By shutting down less important zones on particularly hot or cold days will bring more important zones to set temperature more quickly. Turn off the unoccupied bedrooms during day to ensure the living area temperature is effortlessly and efficiently maintained.

### More even temperature Control

The EASY ZONE TOUCH will enable you to turn zones off manually when they become too warm or cool, so turn off upstairs when the temperature is warm enough while leaving downstairs to continue to heat.

The EASY ZONE TOUCH can automatically shut some zones down when a zone preset temperature has been reached if configured by your installer.

### Smaller Heating or cooling system required.

As zoning is such an energy efficient method of climate control, it is recommended that a smaller than normally required heating and cooling system be used. This saves money as a capitol investment and in ongoing energy bills.

## Disadvantages of Zone control

Many heating and cooling systems must maintain a minimum volume of air through the system for them to work effectively. As zones are closed the volume of air through the heating and cooling system may be reduced and if too many zones are simultaneously closed while the heating and system is running, the heating and cooling system may shut down to protect itself.

The EASY ZONE TOUCH will attempt to prevent this by automatically opening all zones if it detects stress on the heating and cooling system.

Further, shutting too many zones down will increase air velocity through the open zones which now may become noisy. Using a thermostat such as the Smart Temp SMT-770 that can control fan speeds on a compatible heating and cooling systems will permit you to manually select a lower fan speed to eliminate or reduce this problem.

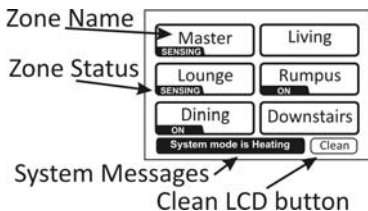
## Operation

The Easy Zone touch is a microprocessor based device capable of actively controlling up to 6 temperature controlled zones. It is also fitted with a LCD membrane that is touch sensitive making using the zone controller a very simple matter.

Without applying great pressure and using your finger tip or fingernail you are able to operate the system and turn zones on or off and set zone temperatures as required.

The EASY ZONE TOUCH will respond to all valid “touch” commands with a confirming “beep” and the new status will be displayed on the LCD.

### Screen layout



### Zone Name

Your EASY ZONE TOUCH has been provided with a library of standard names that can be associated with each zone button. This makes it simple to remember which button is used to control which zone in your office or home. Custom names can also be entered if necessary<sup>1</sup>. Your installer will have set these names during the setup and commissioning of the system.





A list of the standard available names has been provided in appendix 1 at the rear of this document (page 10).

Your EASY ZONE TOUCH will be setup by your installer to either simply open or close the zone(s) or to report the zone temperature to the controlling thermostat or actively and automatically open and close the zones based on zone and set temperatures.

<sup>1</sup> Custom Zone Names require the use of modbus communication software to edit the name registers within the Easy Zone Touch memory. This will require special tools.

## Zone Status

Tapping the zone button will permit you to cycle between the available modes as set by your installer. Pressing and holding the zone button will enable Active Zone temperature adjustments if enabled.

<p>Zone Off</p> 	<p>This is showing that the “Rumpus” zone is OFF. No conditioned air will be sent to this zone.</p>
<p>Zone ON</p> 	<p>This is showing that the “Rumpus” zone is ON. This zone is receiving conditioned air from your heating and cooling system.</p>
<p>Zone Sensing</p> 	<p>This is showing that the “Rumpus” zone is ON, and the temperature in this zone is being monitored by your heating and cooling system which will then control the system accordingly.</p>
<p>Zone Active</p> 	<p>This is showing that the “Rumpus” zone heating and cooling desired temperatures are being actively maintained by the EASY ZONE TOUCH.</p>

## System messages

Various messages will be shown in this section of the screen to alert, inform or assist the user in the use of the EASY ZONE TOUCH control panel. See appendix 2 (Page 11)

## Clean

Press this button to temporarily disable the EASY ZONE TOUCH buttons so that you can clean the LCD (with a moist, chemical free soft cloth) without altering any settings.

## Screen Calibration

Pressing and holding the “Clean” button for 3 seconds will permit you to calibrate the touch screen, simply follow the instructions on the screen and touch the two points when prompted.

Note: It is recommended that when calibrating the screen that you use the cap of a ball point pen or other blunt pointy device for greater accuracy.

This normally only needs to be done once.

### Turning a Zone on or off

Tap the zone name to toggle the zone between On or OFF modes. If enabled by the installer, tapping this button again will also permit you to select "Sensing" mode where the zones temperature will be used by the thermostat to control the heating and cooling system to control that zones temperature. As each tap of the button is detected a Beep will be heard and the status of the zones will change.

Again, if enabled by the installer you can press and hold the zone button to permit Active zone temperature control where the EASY ZONE TOUCH will limit the zone temperature independently of the main thermostat.

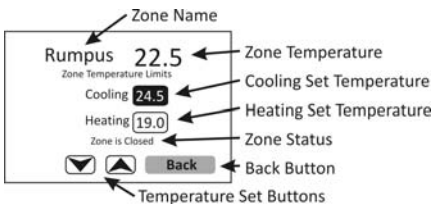
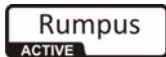
To turn Active mode off simply tap that zone button again.

### Setting the Zone Active Temperature (if function enabled)

The Easy Zone has the ability to monitor the zone temperature and, if enabled by the installer automatically open or close the zone based on the current zone temperature, the current room temperature and the current status of the heating and cooling system. So, if the zone is a little warm and the heating system starts, the EASY ZONE TOUCH will automatically close the zone to prevent the zone from further overheating. If the cooling starts the EASY ZONE TOUCH will open the zone to permit the zone to cool to the cooling set temperature if necessary. The heating set temperature should always remain lower than the cooling set temperature.

### To adjust the zone temperatures

Press and hold the zone button for 1 second, the LCD will change to show the zone temperature adjustment screen as shown below.





**Zone name**

This is the name of the zone where these settings are applied.

**Zone temperature**

The current zone temperature.

**Cooling**

When the cooling system is running the EASY ZONE TOUCH will close the zone damper when the room temperature is at or below this value. Touch the temperature to select it for adjustment with the temperature set button. It will highlight to show it has been selected. (Cooling is selected in the above example).

**Heating**

When the heating system is running the EASY ZONE TOUCH will close the zone damper when the room temperature is at or above this value. Touch the temperature to select it for adjustment with the temperature set button. It will highlight to show it has been selected. (Cooling is selected in the above example).

**Zone Status**

This shows whether this zone is receiving conditioned air based on the room & set temperatures and the mode of the air conditioning system. In the above example the zone has been automatically selected to off by the EASY ZONE TOUCH, as the current room temperature is between the desired heating and cooling set temperatures.

**Temperature Set Buttons**

Select the heating or cooling desired temperature and then adjust with these buttons.

**Back**

Select back to save changes and return to the previous menu, or wait 30 seconds and the easy Zone Touch will automatically return to the previous menu.

## EASY ZONE TOUCH Safety Systems

As the EASY ZONE TOUCH does not directly control the heating and cooling system, (turn the heating & cooling system on or off directly) it simply reports the zone temperatures to the standard supplied controller (thermostat). The standard thermostat then controls the heating and cooling system based on the “sensing” zone temperatures and thermostats set point. This zone control strategy offers the most flexible control and impacts least on the heating and cooling system electronics - thereby protecting warranties.

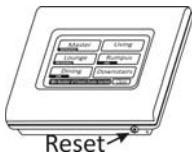
Given the wide variety of heating and cooling system capable of being controlled by the EASY ZONE TOUCH, a number of innovative passive and active protection strategies have been incorporated into the EASY ZONE TOUCH design to protect the heating and cooling system hardware. Therefore, depending on the requirements of your installation you may find that the EASY ZONE TOUCH makes some demands of you as setup by the installer. Some restrictions may include some or all of the following

- Not being permitted to close all zones simultaneously.
- Not being able to open all zones simultaneously.
- Keeping at least one zone as a “Sensing” zone at all times.
- Limiting the maximum number of “Active” zones.

System messages on the status bar will guide you in using the EASY ZONE TOUCH. For example, if you want to close the bedroom zone and you not permitted, simply open another zone first and then try closing the bedroom zone. This ensures that a sufficient number of zones are open at all times to maintain the necessary air flow through the heating and cooling system for safe operation.

### Performing a Reset

The EASY ZONE TOUCH is a microprocessor based device and in rare circumstances, as a consequence of power surges or the like, may seem erratic or show garbled data and need to be reset. Simply press the reset button with a thin blunt object such as a ball point pen or a straightened paper clip to perform this function. No user or installer settings will be lost.



### Appendix 1

Available Zone names

Master	Girls Room	Boys Room	Nursery	Bed 1
Bed 2	Bed 3	Bed 4	Dining	Family
Living	Lounge	Rumpus	Games	TV room
Play Room	Study	Guest	Theatre	Bathroom
Downstairs	Upstairs	Spare Room	Pool	Kitchen
Kids Room	Laundry	En - suite	Alfresco	User defined

**Appendix 2**  
**Status messages**

<b>Message</b>	<b>Explanation</b>
Max Number of Active Zones reached <i>This is normal message</i>	A limit on the maximum number of temperature controlled "Sensing" zones may be set by the installer. This limit has been reached.
Spill Opened <i>This is normal message</i>	The EASY ZONE TOUCH may open a "Spill" zone to reduce the air pressure in the system caused by too many zones closed.
System mode is Heating <i>This is normal message</i>	The Easy Zone touch believes the heating system is running as the air in the vents is warm.
System mode is Cooling <i>This is normal message</i>	The Easy Zone touch believes the cooling system is running as the air in the vents is cool.
Memory Chip Failure	This is a critical fault – call for service.
System temperature is too low	The EASY ZONE TOUCH believes the air in the ducting is too cold, so it is trying to correct this situation by opening more zones. This is normal operation but you should call for service if this message appears often.
System temperature is too high	The EASY ZONE TOUCH believes the air in the ducting is too warm, so it is trying to correct this situation by opening more zones. This is normal operation but you should call for service if this message appears often.
System Sensor Fault	The sensor monitoring the heating and cooling system duct temperature is missing or faulty. Call for service.
Communication breakdown	This is a critical fault – call for service
Zone Sensor Fault	A zone temperature sensor is missing or faulty. Call for service.
Please Select Another Open Zone First <i>This is normal message</i>	You have reached the safe minimum number of closed zones. Before trying to close another zone, open an extra zone first.
Please Select Another Sensing Zone First <i>This is normal message</i>	You must have at least one zone selected as a "sensing zone" so please selects another zone before closing any sensing zone.
Less than Minimum Open Zones <i>This is normal message</i>	You must maintain a minimum number of open zones at all times.
More than Maximum Active Zones <i>This is normal message</i>	The limit on the maximum number of "Active" zones has been reached.
Open at least A Active Zones <i>This is normal message</i>	You must maintain a minimum number of Active zones at all times.

## Specifications

### Wall Controller

Input Voltage	24VAC 50/60 Htz +/- 15%.
Operating Temperature	0-50C (32 to 122F).
Operating RH	0-95% (non condensing).
Storage Temperature	0-65C (32 to 150F).
Size	113 x 103 x 23mm.
Display Size	69.5 x 46.3mm.
Backlight	White or blue EL (30 seconds after last button press)
Display type	240 x 320 pixel FSTN touch panel
Memory type	Non volatile – Settings do not require battery backup.
Communications	Modbus RTU 9600baud 1 stop bit 1 start bit no parity (adjustable)

### Main Relay Card

Input Voltage	24VAC 50/60 Htz +/- 15%.
Operating Temperature	0-50C (32 to 122F).
Operating RH	0-95% (non condensing).
Storage Temperature	0-65C (32 to 150F).
Size	110 x 200mm.
Memory type	Non volatile – Settings do not require battery backup
Zone / Spill Relays	24V @ 2amps max
Zone Sensor input	2 to 50K (10KTypeII NTC required for advanced mode).
AC sensor input	10KTypeII NTC only (Smart Temp PN Rs-1D)

### Common

Approvals	FCC (Part 15) (pending), C-tick.
Warranty	3 years RTB.

<u>Date Installed</u>	
<u>Installed By</u>	