



EASY ZONE TOUCH

6 Zone Control System with
Active Temperature Management



User Manual

Ver 1.0

Preface

Your new temperzone air conditioning zone control system has been built using the best components and design philosophy currently available. As a result, if properly installed your temperzone 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 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. temperzone 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 temperzone 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 temperzone 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.

What Is Zoning?

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

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 TZT-100 thermostat set temperature.

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 often recommended that a smaller than normally required heating and cooling system be used. This saves money as a lower 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 or cooling 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 the TZT-100 thermostat permits you to control fan speeds permitting you to manually select a lower fan speed to eliminate or reduce this problem.

Your installer will have set a limit on the number of zones you are permitted to have closed at any time. Further, “spill” or bi-pass zones may be installed and open / close automatically based on the number of zones you have selected as open or closed.

Operation

The Easy Zone touch is a advanced touch screen device capable of actively controlling up to 6 temperature controlled zones.

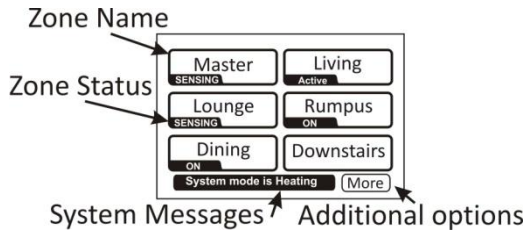
Without applying great pressure and using your finger tip or fingernail you are able to operate the system and turn zones on or off and set zone temperatures as required.

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. Any illegal requests will be greeted with multiple beeps and a message on the bottom of the screen informing you of the correct problem.

Screen layout

Zone Name

There is provision for a 10 Character name to be associated with each zone to help you identify that zone. Your installer will have set the zone names as part of the installation process. You can also adjust the zone name in the “More” window and selecting “Names”.








Function

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 TZT-100 thermostat. Additionally the EASY ZONE TOUCH can automatically open and close the zones based on zone, actual temperature and the zone desired temperatures.

Zone Status indication

Tapping the zone button will permit you to cycle between the available modes as set by your installer.

<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>
<p>Zone Spill</p> 	<p>If set by the installer, Zone one (the top left zone) may automatically open or closed based on the number of other zones that are in use. If this zone is automatically opened the word “SPILL” will be shown</p>

Pressing and holding the zone button will enable Active Zone temperature adjustments if enabled. Pressing and holding again will permit you to adjust the Active Zone set point values.

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 10)

More

Press this button to enter a sub menu that permits you to adjust screen brightness, contrast or perform other rarely used functions

Screen Calibration

If the touch screen accuracy is poor, you are able to calibrate the screen. Press the “More” and then select calibrate. Follow the on screen prompts and touch the three crosses as accurately as possible 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 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 TZT-100 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.

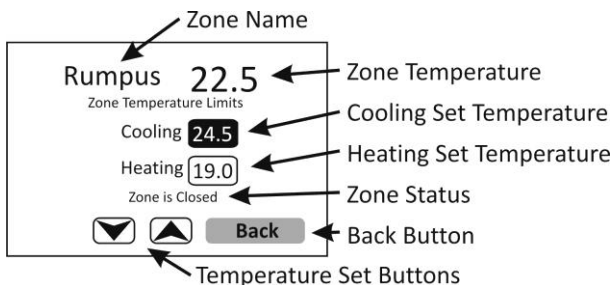
To turn Active mode off simply tap that zone button again.

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 2 seconds, the LCD will change to show the zone temperature adjustment screen as shown right.

Zone name

This is the unique name given to the zone where to help identify it.

Zone temperature

The current zone temperature as measured in the zone by the zone wall temperature sensor.

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 TZT-100 thermostat. The TZT-100 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.

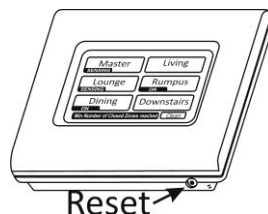
A number of innovative passive and active protection strategies have been incorporated into the EASY ZONE TOUCH design to protect the heating and cooling system. Therefore, depending on the requirements of your installation you may find that the EASY ZONE TOUCH makes some demands of you as setup by the 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 or as a consequence of power surges or the like the EASY ZONE TOUCH may become erratic or unresponsive 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 when a reset is performed.



Appendix 2 - Status messages

Message	Explanation
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.

A large, empty rectangular box with a thin black border, occupying most of the page. It is intended for the user to write their notes.

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	EE ² Prom 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>	