



HOME INTELLIGENCE

Customer Service: (877) 288-7707

# Touchscreen Comfort Control



## Model TZEMT524AA21MA Installation Instructions and User Guide

The Trane TZEMT524 Touchscreen Comfort Control is compatible with single and multistage forced air systems, including:

- Gas furnace systems
- Oil furnace systems
- Electric furnace systems
- Heat pump systems
- Air conditioning systems

The Trane TZEMT524 Touchscreen Comfort Control may be compatible with some other system types, including:

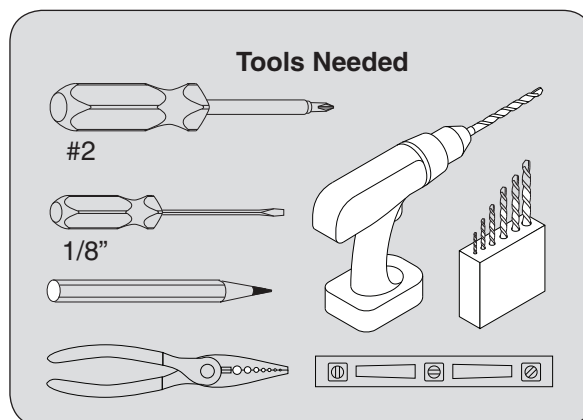
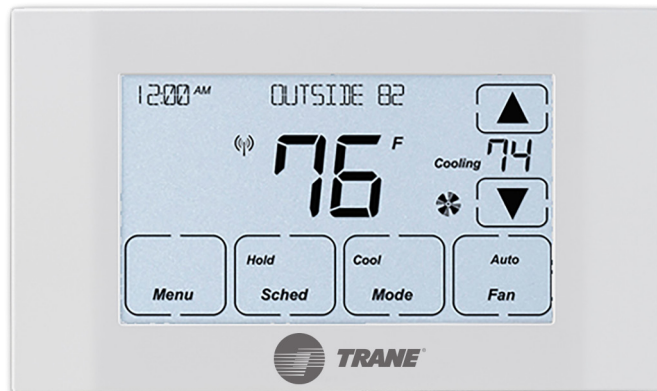
- Boiler systems
- Geothermal systems
- Multi-zoned systems

Call (877) 288-7707 to verify compatibility.

The Trane TZEMT524 Touchscreen Comfort Control is not compatible with the following system types:

- Radiant floor systems
- Wall heating systems

→ **NOTE:** A 24 Volt common and hot wire **MUST** be connected to the control for operation.



### MERCURY NOTICE

When this Comfort Control is replacing an old thermostat that contains mercury in a sealed tube, do not dispose of your old thermostat in the trash. Dispose of properly. Contact your local waste management authority for instructions regarding recycling and proper disposal of the old thermostat.

A listing of heating, ventilating and air conditioning wholesalers that participate in the Thermostat Recycling Corporation's recycling program are available at [www.thermostat-recycle.org](http://www.thermostat-recycle.org).

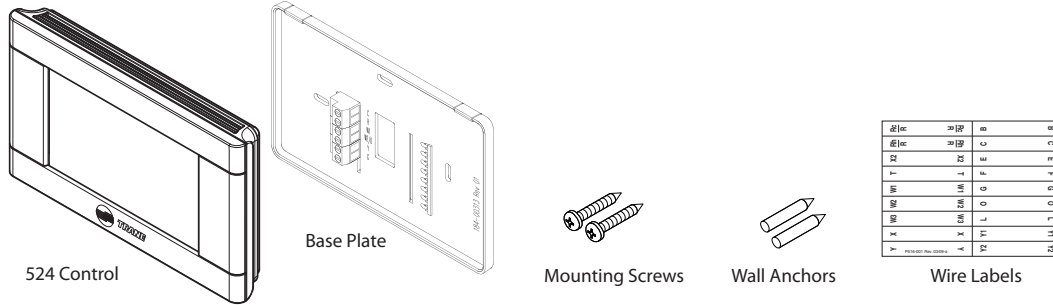


### CAUTION: ELECTRICAL HAZARD

Can cause electrical shock or equipment damage. Disconnect power to heating and cooling equipment before beginning installation.

## 1 Prepare for Installation

Unpack your new 524 Control and locate the 524 Control, Base Plate, mounting screws, wall anchors and wire labels.



## 2 Disconnect Power at the Breaker

Located your breaker box and remove or disconnect electrical power to your HVAC system. You may need to disconnect power at both the indoor unit and the outdoor unit.



### CAUTION: ELECTRICAL HAZARD

Failure to remove power can cause electrical shock and/or equipment damage.

## 3 Remove your existing thermostat cover

Carefully remove the cover of your existing thermostat leaving with wires connected. Consult instructions that came with the existing thermostat as necessary. DO NOT remove the thermostat wires yet.

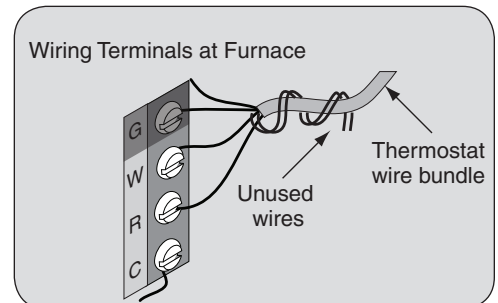
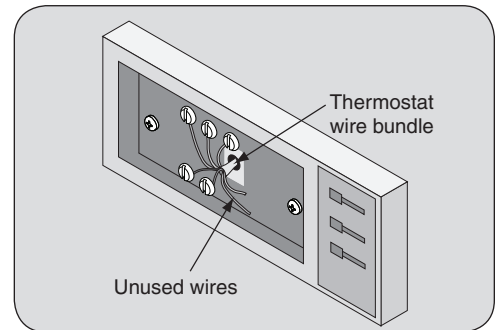
## 4 Determine if your system has a 24V common wire connected

1. If your system is a heat pump, skip to "6 Label and remove old thermostat wires" on page 3.
2. If your existing thermostat has a terminal named C, COM, X or B\* with a wire connected to it, skip to "6 Label and remove old thermostat wires" on page 3.

\* The B terminal on Trane, American Standard, Weathertron and York thermostats is the 24V Common terminal. On all other thermostats it serves another purpose.

## 5 Connecting a 24V common wire

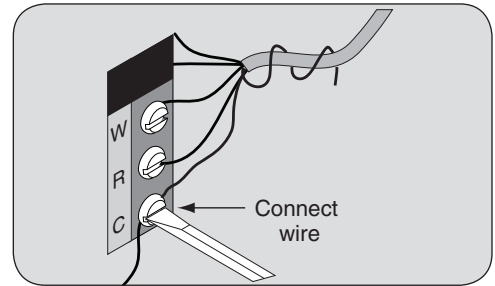
1. Locate all unused (disconnected) wires from the thermostat wire bundle and write down the colors. The 24V Common wire is typically (but not always) colored blue.
2. Go to your indoor HVAC unit and remove the cover(s) to access the 24 VAC furnace wire terminals.
3. Find the wiring terminals at the furnace and then identify the 24 VAC common terminal identified with the letter C, X, B, or COM.  
This terminal may already have a wire connected to it but it may not be a wire that goes to the thermostat.
4. Locate the thermostat wire bundle inside the furnace panel. This wire bundle is routed from the thermostat, through the walls, and into the furnace panel. This bundle can be identified at the furnace by checking the wire colors connected and not connected and comparing to the wire bundle at the thermostat.



5. Find a wire from the thermostat bundle that is unused at the thermostat and at the furnace.  
It is possible that one of the unused wires at the thermostat will already be connected to the 24 VAC common terminal at the furnace. If so, go to “6 Label and remove old thermostat wires” on page 3.
6. Connect the unused wire to the 24 VAC terminal, then replace the furnace cover.  
The 24 VAC common wire is typically (but not always) blue in color. If the blue wire has been unused, it is recommended that you use the blue wire.



If you are unsure about connecting this wire or you do not have any unused wires at the thermostat, contact Customer Service at 877-288-7707.



## **6 Label and remove old thermostat wires**

1. Label the wires on your existing thermostat to match terminal names.  
**DO NOT USE WIRE COLORS TO CHOOSE LABELS. THE TERMINAL NAME IS WHAT IS IMPORTANT.**
2. Locate the wiring labels included with the new thermostat.
3. Observe where each wire is connected to the existing thermostat and find the letter shown next to that wire terminal.
4. Attach the corresponding label the wire.

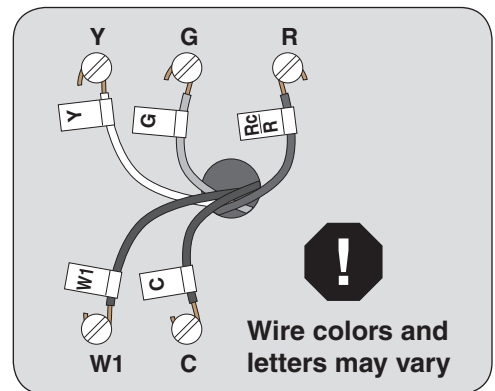
### **IMPORTANT NOTES:**

If you have a short jumper wire between two terminals, remove the jumper and do not label it. This jumper wire is not required on the new thermostat.

If you had to connect a new 24 VAC common wire, you will use the “C” label on that wire.

If you have a W terminal, use the W1 label on that wire.

If your thermostat has any terminals with names that do not match any on the label, write down the terminal names and wire colors for later reference.



### **TAKE A PICTURE**

It is recommended that you take a picture that clearly shows the wires attached to your existing thermostat terminals. This could be needed later if you have troubles with your installation.

## **7 Remove existing wall plate.**

The 524 Control is designed for installation in climate controlled living spaces. It is recommended to place the unit in a central location with good circulation. Avoid exterior walls and areas near windows, doors, vents or concealed pipes or chimneys.

**NOTE: DURING THIS PROCESS, MAKE SURE THAT THE WIRES DO NOT PULL BACK INTO WALL OPENING.**

5. Detach all wires from wall plate.
6. Remove all screws attaching the wall plate to the wall and remove wall plate.
7. See “MERCURY NOTICE”.

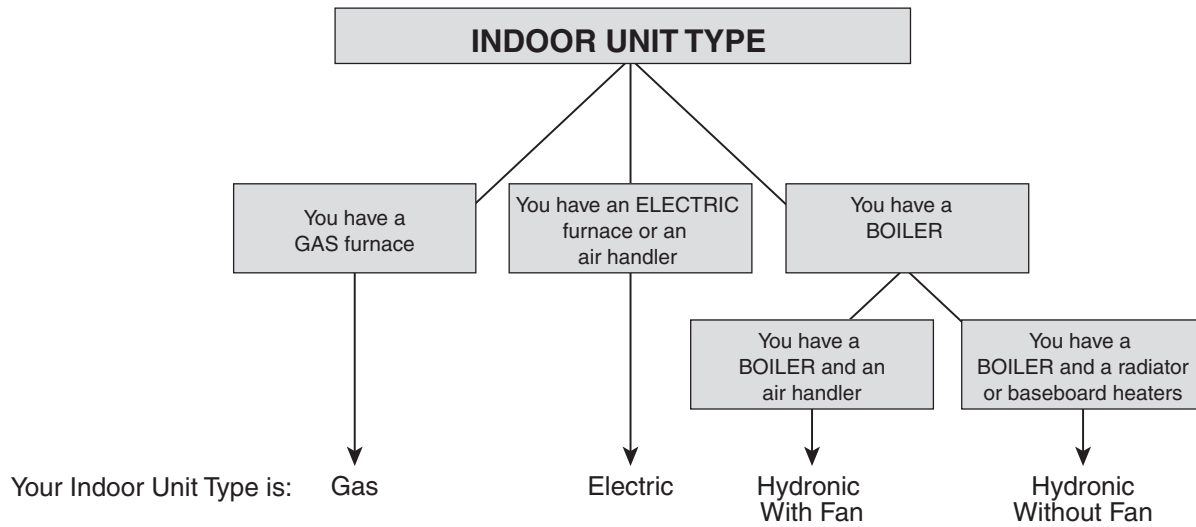


### **MERCURY NOTICE**

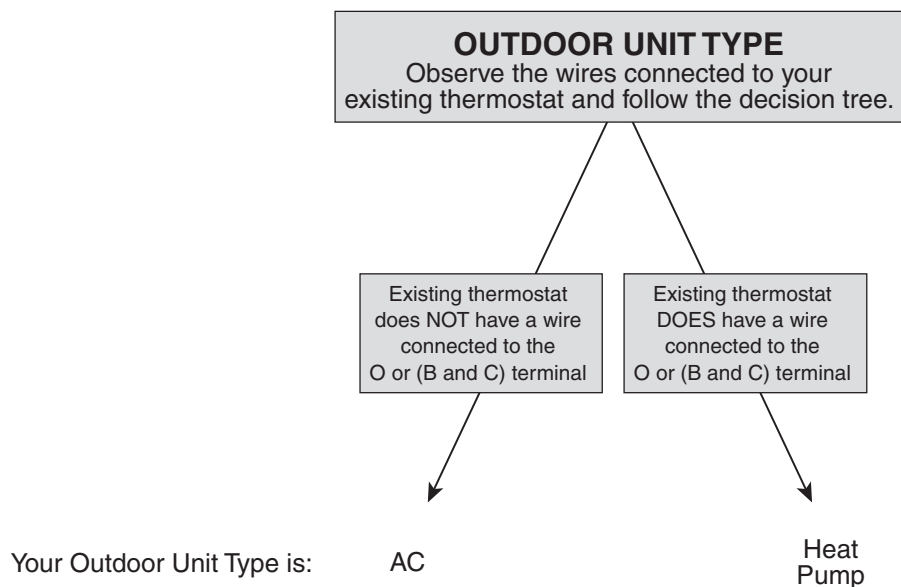
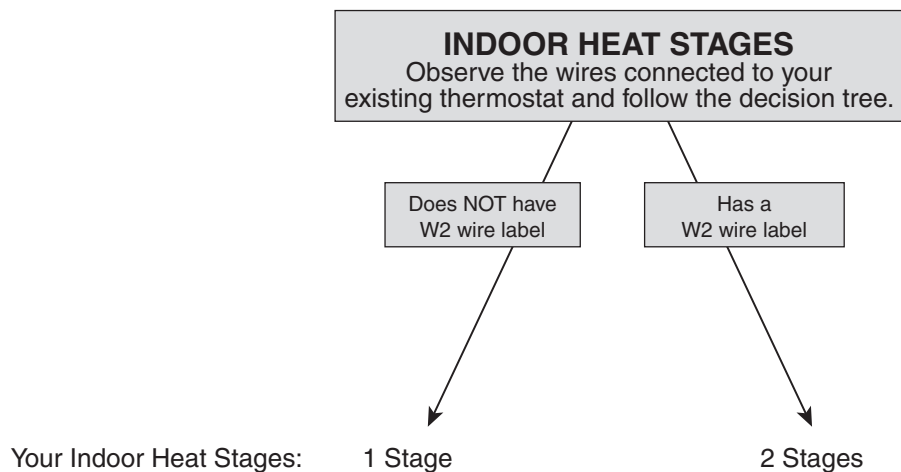
When this control is replacing a control that contains mercury in a sealed tube, dispose of the old control properly. Contact your local waste management authority for instructions regarding recycling and proper disposal. A listing of heating, ventilating and air conditioning wholesalers that participate in the Thermostat Recycling Corporation’s recycling program are available at [www.thermostat-recycle.org](http://www.thermostat-recycle.org).


## 8 Identify your system type

Assuming your existing thermostat is wired correctly, these steps will help you determine what type of equipment is installed in your home. You will use this information when you program your 524 Control.



If you have any questions regarding your system equipment, consult a qualified HVAC professional before proceeding.



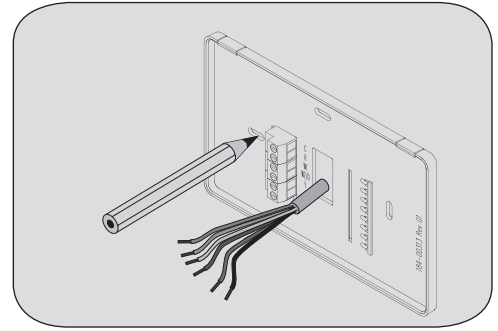


**CAUTION: EQUIPMENT DAMAGE HAZARD**

Improper system type selection can lead to equipment damage and/or high utility costs. Follow these instructions to properly determine and select the 524 Control to ensure proper heating and cooling system operation. If you are uncertain about your equipment, please call a qualified HVAC contractor.

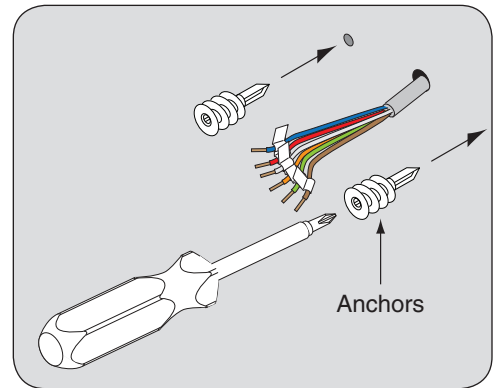
## 9 Prepare to install the 524 Control

- Separate the 524 Control from the Base Plate by applying pressure to the two tabs at the top of the 524 Control.  
NOTE: It is not recommended that this Z-wave™ Control be mounted onto metal structures. Metal may adversely affect the radio frequency (RF) communication between the Control and the Z-wave™ bridge.
- Pull the wires through the hole in the center of the 524 Control base plate.
- Mark the position of the two mounting holes on the wall using the 524 Control Base Plate as a template.
- Position the new wall plate over the existing opening.
- Mark the two holes.
- Use a level to verify that the two hole locations are level.
- Correct hole locations as needed.



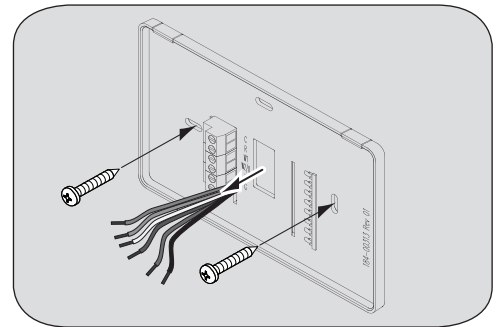
## 10 Prepare the mounting holes

- Drill 1/16" pilot holes in the two locations that were marked in step 9. If mounting to drywall with no studs behind it, enlarge pilot holes to 1/8" for anchors.
- If using anchors, screw them into the holes.



## 11 Attach the new base plate to the wall

- Pull the wires through the hole in center of wall plate.
- Position the new wall plate over the existing opening.
- Attach wall plate to wall using the two screws provided. Do not overtighten.



## 12 Review the wiring chart information

Refer the chart below to determine which wires connect to the corresponding terminal on the 524 Control. Note that you may have more than one wire connected to a single terminal on the 524 Control.

	If you have wires connected to any of these terminals, connect it to the corresponding terminal on the 524 Control					
<b>THERMOSTAT BEING REPLACED</b>	B C COM X	R RC*** RH*** V* VR*	AUX E W W1 X2	B** O W2 R*	Y Y1****	F G
Connects to	↓	↓	↓	↓	↓	↓
<b>NEW 524 CONTROL</b> Connect it to this terminal on the 524	C	R	W1	W2/O	Y1	G

\*If your existing thermostat has a "V" or "VR" wire label, connect that wire to "R" on the new thermostat, then connect the wire labeled "R" to "W2/O/B" on the new thermostat

\*\*On thermostats other than Trane, American Standard, Weathertron or York.

\*\*\*If your existing thermostat has an independent wire connected to the RC terminal and an independent wire connected to the RH terminal, the 524 Control is incompatible with your system.

\*\*\*\*If your existing thermostat has a wire connected to the Y2 terminal, the 524 Control is incompatible with your system.

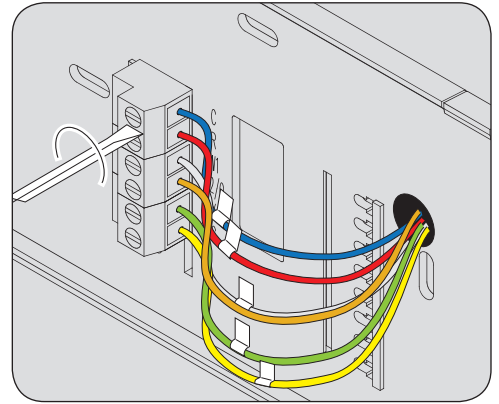
## 13 Attach all wires securely to the 524 Control

- Note: A wire must be connected to “C” to power the thermostat.
- Use 1/8” blade screwdriver to secure wires in terminals.



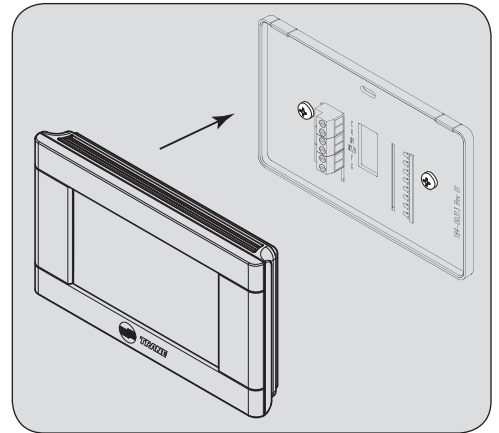
### CAUTION: EQUIPMENT DAMAGE HAZARD

Improper wiring can lead to equipment damage. Follow the Terminal Connection information from “12 Review the wiring chart information” on page 5 and carefully to ensure the control is wired properly. After wires are secure, bare wires **MUST NOT** touch each other.



## 14 Attach the 524 Control face plate to the base plate

1. Carefully align the face plate to the wall plate while aligning pins into wire terminals.
2. Once 524 Control face is properly aligned, apply pressure at top and bottom of 524 Control face until it is secure.



## 15 Turn system power back on

The 524 Control display should turn on and begin displaying information. You will now identify your system type and enter that information into the 524 Control.

## 16 Programming Equipment Settings

Before your 524 Control will operate properly, you must program the equipment settings. Equipment settings are programmed from the Service Menu.

1. From the Home Screen, press Menu. Press Next repeatedly until Service is displayed.
2. Press and hold Select until Installer Settings is displayed.
3. Press Select, Equipment Type is Displayed.
4. Press Select. Outdoor Unit Type (with the current selection) is displayed.
5. Press Select. Using the up and down arrows, navigate to the type of outdoor unit you have as you determined in “8 Identify your system type” on page 4.
6. Press Done. Press Next. Indoor Unit Type (with the current selection) is displayed.
7. Press Select. Using the up and down arrows, navigate to the type of indoor unit you have as you determined in “8 Identify your system type” on page 4.
8. Press Done. Press Next. Indoor Heat Stages (with the current selection) is displayed.
9. Press Select. Using the up and down arrows, navigate to the number of indoor heat stages you have as you determined in “8 Identify your system type” on page 4.
10. Press Done. If you do not have a heat pump, skip the next step.
11. Press Select. Using the up and down arrows, navigate to the setting that reflects when your heat pump’s reversing valve is energized. Press Done.
12. Press Done. You have successfully entered your equipment type and your system should be operational.

There are many other settings in the Installer Settings section of the 524 Control that will optimize your system’s performance. The following tables describe all of the available settings and provide a brief description of each.

**WHEN YOU HAVE COMPLETED ENTERING THE INSTALLER SETTINGS, YOU WILL FURTHER CUSTOMIZE THE 524 CONTROL WITH USER SETTINGS.**

## Installer Settings

Installer Settings allow the user to configure the equipment settings and customize how the control operates. To access Installer Settings press the Menu button, then press and hold Next for approximately 5 seconds, until Service is displayed. Now press Select until “Installer Settings” is displayed. Press Select again to enter Installer Settings menu. The default setting will be shown in brackets. After each selection press Done to save changes.

Menu Item: Equipment Type		
Setting	Range	Description
Outdoor Unit Type	None, [AC], HP	Select the type of outdoor unit installed
Indoor Unit Type	[Gas/Oil], Electric, Hydronic	Select the type of indoor unit installed
Hydronic Type	[With Fan], Without Fan	Select the type of hydronic heat operation. Hydro Air selection interlocks the blower during an active call for indoor heat. Wet Heat selection disables indoor fan operation on an active call for indoor heat.
Indoor Heat Stages	[1], 2	Select the number of indoor heat stages
Energize Reversing Valve*	[With Cool], With Heat	Select whether Reversing Valve is energized in cooling or heating mode
Once all selections have been made, press the Done button to exit and return to Menu. Press Next to navigate to the next setting.		

\* This setting is typically set to With Cool for systems from Trane, American Standard, Carrier, Lennox and Goodman. It is typically set to With Heat for Rheem/Ruud systems and some systems manufactured in China. If your system delivers heated air when it should deliver cool air, or vice versa, this setting may be reversed.

### These settings should only be modified by knowledgeable and experienced individuals familiar with HVAC systems

Menu Item: Equipment Settings		
Setting	Range	Description
Compressor Stage 1 MRT	[3] - 9 Minutes	Select the minimum runtime (MRT) of stage 1 compressor operation
Compressor MOT	[5] - 9 minutes	Select the minimum offtime (MOT) for compressor operation
Indoor Heat Stage 1 MRT	[3] - 9 Minutes	Select the minimum runtime (MRT) of stage 1 indoor heat
Indoor Heat Stage 2 MRT	[3] - 9 Minutes	Select the minimum runtime (MRT) of stage 2 indoor heat
Indoor Heat MOT	[5] - 9 minutes	Select the minimum offtime (MOT) for indoor heat operation
Once all selections have been made, press the Done button to exit and return to Menu. Press Next to navigate to the next setting.		

Menu Item: Sensor Settings		
Setting	Range	Description
Sensor Calibration	*-7 - +7 Degrees [0]	Calibrate the indoor temperature sensor (do not attempt to calibrate the indoor temperature within the 1st hour upon power-up)
Once all selections have been made, press the Done button to exit and return to Menu. Press Next to navigate to the next setting.		

## Menu Item: Comfort Settings

Setting	Range	Description
Comp Heat Delta Stage 1 On	.5 - 8 Degree	Select the delta on for 1st stage compressor heat
Indoor Heat Delta Stage 1 On	.5 - 8 Degree	Select the delta on for 1st stage indoor heat
Indoor Heat Delta Stage 2 On	1 - 8 Degree	Select the delta on for 2nd stage indoor heat
Comp Heat Delta Stage 1 Off	0 - 8 Degree	Select the delta off for 1st stage compressor heat
Comp Heat Delta Stage 2 Off	0 - 8 Degree	Select the delta off for 2nd stage compressor heat
Indoor Heat Delta Stage 1 Off	0 - 8 Degree	Select the delta off for 1st stage indoor heat
Indoor Heat Delta Stage 2 Off	0 - 8 Degree	Select the delta off for 2nd stage indoor heat
Cooling Delta Stage 1 On	.5 - 8 Degree	Select the delta on for 1st stage cooling
Cooling Delta Stage 1 Off	(-) 2 - (+)6	Select the delta off for 1st stage cooling
Recovery Enable	Yes, [No]	When enabled, will start the cooling or heating system so that the desired comfort temperature is reached by the next scheduled set point time. The advance start time calculation is a learned process that is recalculated and adjusted each day until the room temperature is at the target temperature at the schedule time. When the thermostat is in Recovery mode the display will show "Recov". While in Recovery the Aux-Heat stage will not engage. The maximum Recovery time is one hour.

Once all selections have been made, press the Done button to exit and return to Menu. Press Next to navigate to the next setting.

## Menu Item: Airflow Settings

Setting	Range	Description
Blower On Delay Cooling	[0] - 30 seconds	(Non-Variable Speed blower only) Select the cooling blower on delay
Blower Off Delay Cooling	[0] - 90 Seconds	(Non-Variable Speed blower only) Select the cooling blower off delay
Blower On Delay Heating	[0] - 30 Seconds	(Non-Variable Speed blower only) Select the compressor heating blower on delay
Blower On Delay Heating	[0] - 60 Seconds	Select the hydronic heating blower on delay
Blower Off Delay Heating	[0] - 90 Seconds	(Non-Variable Speed blower only) Select the compressor heating blower off delay
Blower Off Delay Heating	[0] - 90 Seconds	Select the hydronic heating blower off delay

Once all selections have been made, press the Done button to exit and return to Menu. Press Next to navigate to the next setting.

## Restore Defaults

Restore Defaults is used to restore the control to factory default settings. To access "Restore Defaults" press the "Menu" button, then press and hold "Next" for approximately 5 seconds, until "Service" is displayed. Now press Select until "Installer Settings" is displayed. Press Next until "Restore Default" is displayed. Now press Select again to enter "Restore Default". The default setting will be shown in brackets. After each selection press Done to save changes.

## Menu Item: Restore Defaults

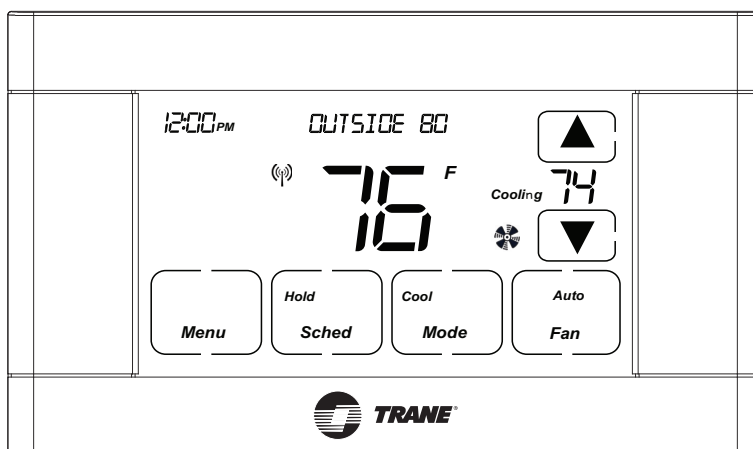
Setting	Range	Description
Restore Default	Yes, [No]	Select "Yes" to restore all the User and Installer settings to the factory defaults. If "Yes" is selected "Restoring" will be displayed. "Done" will be displayed once all settings have been restored.

Note: To reset all User, Installer and Z-Wave settings, press and hold the "Yes" button for 5 seconds. Release when "Factory Defaults" is displayed. "Done" will be displayed once all settings have been restored and the control will automatically return to the home screen..



# Operation

The model TZEMT524AA21MA Comfort Control provides typical operation of a forced air heating and cooling HVAC system. The control also features a Z-Wave™ module for remote control when connected to Nexia™ Home Intelligence.



Normally, the 524 Control displays the Home Screen as shown above.

Item	Description	Notes
Clock Display	The current time is displayed in the upper left corner of the main screen. The time will blink when the clock has not been set.	See <b>TIME/DATE</b> for more information. If the Control is connected to Nexia™ Home Intelligence, the clock will be updated automatically.
Dynamic Labels and Function Control Buttons	The buttons are defined by the dynamic labels in each button. As you navigate through menus, the labels for the buttons will change.	
Setpoint Display and Setpoint Up/Down Buttons	The current heating or cooling setpoint is displayed. These setpoints may be set using Nexia™ Home Intelligence, the Control's internal schedule, or by pressing the Setpoint Up/Down buttons. Pressing the setpoint button changes the setpoint screen. The current mode is displayed at the top of the screen. Adjust the setpoint by pressing the up or down arrows. To change setpoint mode press the <b>MODE</b> button.	The heating and cooling setpoints will push each other if they are adjusted to within the minimum heat/cool separation setting. The default is 3 degrees.
Temperature Display	The 524 Control displays the current temperature as sensed by the internal temperature sensor.	The internal temperature sensor offset can be adjusted if necessary.
<b>MENU</b> Button	Press to access other menus	Other menus can be accessed by pressing the <b>MENU</b> button.
<b>SCHED</b> Button	Press to change the schedule mode	Hold: System maintains the current temperature setpoints and schedules are disregarded. Run: Run the system schedule Energy Saving Mode (ESM): Temperature setpoints selected in ESM are maintained.
<b>MODE</b> Button	Press to change the system mode	Off: System off Heat: Heating only Cool: Cooling only Auto: Heating/Cooling as necessary
<b>FAN</b> Button	Press to change the fan mode	Auto: Fan is on when cooling/heating is necessary On: Fan constantly on Circ: Fan is on for a user-selected number of minutes per hour.

## User Settings

User Settings allow the user to customize various settings on the 524 Control. To access User Settings simply press Menu and **SELECT**. Use the **NEXT** and **BACK** buttons to navigate through the options. Use the **SELECT** button to enter change mode. After making your changes, use the **DONE** button to register your changes. The various options are shown in the following tables, and the default setting is shown in brackets.

Menu Item: Thermostat		
Setting	Range	Description
Temperature Scale	[Fahrenheit], Celsius	Select the temperature display scale
Fan Circulate On Time	10 - 55 minutes, [10]	Select the desired amount of time the fan will cycle per hour when the Fan Mode selected is Circ
Local Schedule Enable	[Yes], No	Select whether scheduling will be enabled or disabled. Note: Selecting No will hide the Schedule menu.
Max Heat Setpoint	55 - [90] Degrees	Select the highest heating setpoint allowed
Min Cooling Setpoint	[60] - 99 Degrees	Select the lowest cooling setpoint allowed
H/C Delta	[3] - 15 Degrees	Select the minimum distance between Heating and Cooling setpoints

When all selections have been made, press the Done button to register your changes and exit this menu item. Press Next to navigate to the next menu item.

Menu Item: Energy Save Mode		
Setting	Range	Description
ESM Heat Setpoint	55 - 90 degrees [62]	Select the desired Heating Setpoint when ESM (Energy Savings Mode) is selected
ESM Cooling Setpoint	60 - 99 Degrees [85]	Select the desired Cooling Setpoint when ESM (Energy Savings Mode) is selected

When all selections have been made, press the Done button to register your changes and exit this menu item. Press Next or Back to navigate to the next or previous menu item.

Menu Item: Display		
Setting	Range	Description
Screen Timeout	[0] - 90 Seconds	Select how long after the last button press before the screen times out
Backlight Timeout	0 - 90 Seconds [20]	Select how long after the last button press before the backlight dims
Backlight On Percent	0 - [100] Percent	Select the screen brightness when the backlight is lit
Backlight Off Percent	[0] - 100 Percent	Select the screen brightness when the backlight dims
Buzzer Enable	[Yes], No	Select whether button presses are audible
Security	[Unlocked], Display Lock, Guest Access	Select security level <ul style="list-style-type: none"> <li>• Unlocked - Enables selection of all menus and settings</li> <li>• Display Lock - Disables selection of all menus and settings</li> <li>• Guest Access - Disables selection of all menus and settings except the following: Raise or lower heating or cooling setpoint +/- 5 degrees and change system mode</li> </ul> Note: When Display Lock or Guest Lock is selected a lock icon will appear next to the up arrow. Note: To disable Display Lock or Guest Access, press and hold the up and down arrows until the lock icon disappears.
Guest Mode Range	[5 degrees], 1-5 degrees	How many degrees (+/-) Guests can change the preset Set Point

When all selections have been made, press the Done button to register your changes and exit this menu item. Press Next or Back to navigate to the next or previous menu item.

**Menu Item: Time/Date**

<b>Setting</b>	<b>Range</b>	<b>Description</b>
Hour	1 - 12 am, 1 - 12 pm	Select the current hour of day
Minutes	0 - 59	Select current minute of day
Day of Week	Sun - Sat	Select current day of week
Year	2013 - 2113	Select current year
Month	Jan - Dec	Select current month of year
Date	1 - 31	Select current day of month

When all selections have been made, press the Done button to register your changes and exit this menu item. Press Next or Back to navigate to the next or previous menu item.

**Menu Item: Reminders**

<b>Setting</b>	<b>Range</b>	<b>Description</b>
Filtration Enable	Yes, [No]	Selecting yes, enables the Filter Reminder feature
System Maint Enable	Yes, [No]	Selecting yes, enables the System Maintenance Reminder feature

When all selections have been made, press the Done button to register your changes and exit this menu item. Press Back to navigate to the previous menu item or Done to Exit User Settings.

## Schedule

The 524 Control features a 7-day programmable schedule, and each day can 4 unique periods (Wake, Day, Eve and Night). Each day of the week is set independently and the Copy Schedule function allows you to copy a schedule, once set, from one day to one or more other days of the week.

Note: If the Schedule menu does not appear, be sure that Local Scheduling is enabled. This setting is accessed from the User Settings: Thermostat: Local Schedule Enable.

### Programming a Schedule for one day

13. From the Home Screen press **MENU**, then press **NEXT** until Schedule appears at the top of the screen.
14. Press **SELECT**, Edit Schedule appears at the top of the screen, press **SELECT** again.
15. Press **NEXT** or **BACK** until the desired day of the week is displayed. Press **SELECT**.
16. Using the up and down arrows, select the time of day for the Wake period to begin. Press **NEXT**.
17. Using the arrows, select the desired heating setpoint. Press **NEXT**. Now select the desired cooling setpoint and press **NEXT**.
18. Continue this process for the Day, Eve and Night periods, pressing **NEXT** each time after you have selected the desired values.
19. After you have selected the Night cooling setpoint, the display cycles back to the Wake time of day setting. To verify your selections, press **NEXT** repeatedly to cycle through your selections, making changes as necessary. When you are satisfied with your schedule, press **DONE**. You now see the Copy Schedule screen. Skip to step 3 below.

### Copying a Schedule from one day to one or more days

1. From the Home Screen press **MENU**, then press **NEXT** until Schedule appears at the top of the screen.
2. Press **NEXT** or **BACK** until Copy Schedule appears at the top of the screen. Press **SELECT**.
3. Press **NEXT** or **BACK** until the desired day is displayed. This is the “from” day and will be a day for which you previously programmed a schedule.
4. Press **SELECT**.
5. Press **YES** to copy the schedule to this day, or **NO** to skip this day. Cycle through the days of the week until your selection is complete.
6. Press **DONE** to complete the copying process. Press **DONE** again to return to the User Settings menu.

#### Menu Item: Edit Schedule

Setting	Range	Description
Select Day	Mon-Sun	Select day of week to program
Set Time	12:00 am - 11:45 pm	Select starting time of this period. The periods are Wake, Day, Eve and Night. Pressing <b>NEXT</b> will accept the selected value and cycle through the Set Time, Set Heat Setpoint and Set Cool Setpoint for each of the four periods.
Heat Setpoint	55-90F	Set the heat setpoint for this period
Cool Setpoint	60-99F	Set the cool setpoint for this period

When the start time, heat setpoint and cool setpoint values have been selected for all periods, pressing **NEXT** will return you to the Set Time screen for the Wake period. Press Next repeatedly to review and modify your selections, or press **DONE** to finalize your schedule for the selected day.

#### Menu Item: Copy Schedule

Setting	Range	Description
Copy From	Mon-Sun	Day to copy schedule from
Copy To	Mon-Sun	Answer Yes to copy schedule to this day, answer No to skip this day

### Edit Schedule from the Nexia web portal

Schedules can be easily updated from your Nexia™ Home Intelligence account. Simply go to [www.MyNexia.com](http://www.MyNexia.com), log into your account and select a TZEMT524 comfort control from the Climate Page. Click on Edit Schedule and follow the online instructions.

If you have not set up a Nexia™ Home Intelligence account go to [www.MyNexia.com](http://www.MyNexia.com) and click on “Get Started”. A router and Nexia Bridge are required for remote access to the 524 Control. For questions about connecting, contact Nexia™ Home Intelligence Customer Service at 877-288-7707

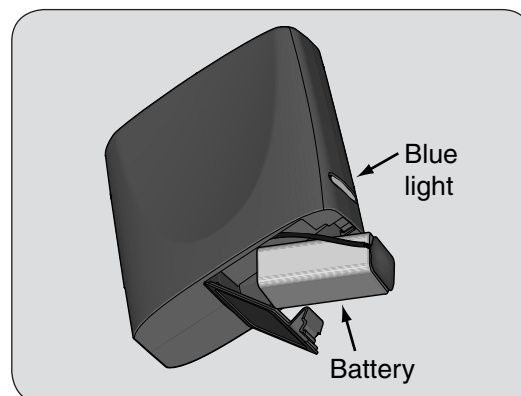
## Z-Wave

### Menu Item: Enroll In Network

#### 1 Prepare the Nexia Bridge for enrollment

➔ Note: The Nexia Bridge is purchased separately. If the Bridge is not installed, follow the instructions that were included with the Nexia Bridge. If the Bridge is already installed, follow the instructions as they are written in the following steps.

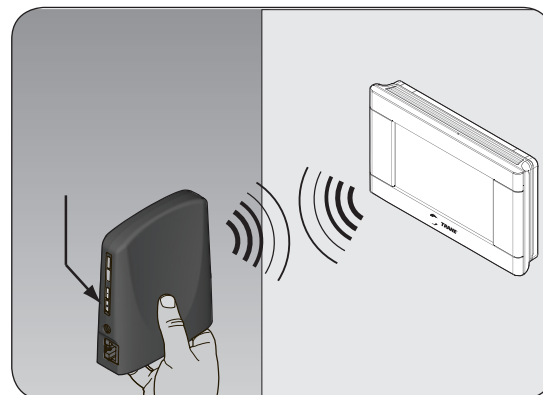
1. Unplug Ethernet and power cables from bridge
2. Install a fully-charged, quality 9 volt battery.
3. Verify that blue light is blinking. If blue light is solid, the battery is dead.
4. Take the Bridge to the location where the 524 Control is mounted.



#### 2 Enroll the 524 Control into the Bridge. (Inclusion)

If you are using a controller that is not a Nexia™ bridge, consult the instructions that shipped with the controller to find out how to enroll a new device.

1. Hold the Bridge within 6 feet (1.8 meters) of the 524 Control throughout this process.
  - ➔ After you begin the enrollment process, you have 30 seconds to complete the remainder of the steps. Study the steps below before beginning.
2. Press and release the plus (+) button on the bridge.
3. Press **MENU** on the 524 Control.
4. Press **NEXT** to advance to the Z-WAVE menu.
5. Press **SELECT**.
6. Observe the lights on the bridge. The orange light will blink while enrollment is taking place. Enrollment is complete when the orange light becomes solid.



#### 3 Verify enrollment of the 524 Control

1. Press **MENU** from the 524 Control Home screen.
2. Press **NEXT** to advance to the About screen and press **SELECT**.
3. Press **NEXT** to advance through the menu options to Node ID.
  - If the number listed there is anything other than "00", the 524 Control has been successfully enrolled.
  - If the number listed there is "00", the 524 Control has NOT been successfully enrolled. In this case, restart the process beginning with Step 2.
4. Press **DONE** twice when finished.

#### 4 Configure the 524 Control for Nexia

A Nexia™ Home Intelligence account must be active before continuing. See [www.nexiahome.com](http://www.nexiahome.com) for more information.

1. Remove the battery from the Bridge.
2. Plug the Ethernet and power cord back into the Bridge.
3. Log into your account at [www.mynexia.com](http://www.mynexia.com)
4. Click the Climate tab. Locate the new 524 Control and follow the on screen instructions.

Note: If the new thermostat icon remains gray or cannot be controlled remotely, you might need to add Z-wave repeaters to improve communications. Contact your local Nexia expert or call 877-288-7707 for assistance.

Note: From time to time, firmware updates for your 524 Control may be placed in your Nexia account. To check for available updates, log in to your Nexia account and click on the Edit Home button. Next, click on the Firmware Updates button and follow the on screen instructions.

**Menu Item: Exclude from Net**

**If you need to remove the 524 Control from a Nexia™ Home Intelligence account, follow these exclusion steps. This will disable remote access. If you are unsure, please contact Nexia support at 877-288-7707.**

**Install a fully charged, quality 9-volt battery into the Bridge.**

1. Hold the Bridge within 6 feet (1.8 meters) of the 524 Control throughout the entire exclusion process.
    - ➔ After you begin the exclusion process, you have 30 seconds to complete the remainder of the steps. Study the steps below before beginning.
  2. Press and release the minus (-) button on the bridge.
  3. Press **MENU** on the 524 Control.
  4. Press **NEXT** to scroll to Z-WAVE screen then press **SELECT**.
  5. Press **YES** to exclude the control.
  6. Observe the lights on the Bridge. The orange light will blink while exclusion is taking place. Exclusion is complete when the orange light becomes solid.
- ➔ Z-Wave™ controllers from various manufacturers may support the Z-Wave™ Thermostat General V2 Device class used by the Z-Wave™ control. If you are using a controller that is not a Nexia bridge, consult the instructions that came with the controller to find out how to enroll and exclude devices.

## Installer Settings

Installer settings are described earlier in this document.

## About

About	
Setting	Description
Version	Current firmware version loaded on the control
Z-WAVE Ver	Current version of the Z-WAVE firmware
Node - ID	Z-WAVE identification for this device
Home - ID	Z-WAVE identification for the connected Z-WAVE network
Out - Type	Identifies the type of outdoor unit installed
C/O - Type	Indicates whether the reversing valve is energized in cooling or heating mode
In - Type	Identifies the type of indoor unit installed

## Clean Screen

Clean Screen		
Setting	Range	Description
Clean Screen	Yes, No	Selecting yes allows the user to clean the screen without activating any of the onscreen touch points. Use only water and a soft cloth, no harmful chemicals.

Once all selections have been made, press the Done button to exit and return to Menu. Press Next to navigate to the next setting.

**Troubleshooting**

<b>Troubleshooting</b>		
<b>Symptom</b>	<b>Possible Cause</b>	<b>Action</b>
Display will not come on	Loss of 24VAC between R & C at the Control	1) Check wiring between R & C 2) Check transformer for 24VAC output 3) Check for broken or shorted thermostat wire
Indoor Temperature display is incorrect	1) Indoor temperature display needs calibrating (always allow 1 hour before calibrating after any power cycle) 2) Heat from the touchscreen is being trapped within the body of the control	1) Calibrate indoor temperature sensor  2) Relocate the control away from any competing air sources or redirect the air sources away from the control
Room temperature overshoots the desired setpoint in cooling mode	1) The delta "Off" in cooling mode is set to a negative number 2) Minimum compressor on time has not been met	1) Intended operation; if objectionable, change the delta "Off" to 0 degrees 2) Intended operation; if objectionable, lower minimum on time (lowest setting available is 3 minutes)
Room temperature overshoots the desired setpoint in heating mode	Minimum compressor/indoor heat on time has not been met	Intended operation; if objectionable, lower the minimum on time (lowest setting available is 3 minutes)
Cooling will not come on	1) System mode is not set to Cool/Auto or setpoint is set too high 2) Delta "On" for cooling is set too high 3) Minimum off time delay is being enforced 4) Cooling system may need service	1) Select the correct system mode and/or lower the setpoint  2) Change the delta "On" setting for cooling mode 3) Intended operation; if objectionable, lower the minimum off time delay (lowest setting is 5 minutes) 4) Check/repair system
Heating will not come on	1) System mode is not set to Heat/Auto or setpoint is set too low 2) Delta "On" for heating is set too high 3) Minimum off time delay is being enforced 4) Heating system may need service	1) Select the correct system mode and/or raise the setpoint  2) Change the delta "On" setting for heating mode 3) Intended operation; if objectionable, lower the minimum off time delay (lowest setting is 5 minutes) 4) Check/repair system
Heating or Cooling is being displayed, but no air coming from registers/vents	1) Fan delay time has not expired 2) System is not operating properly	1) Wait one minute for blower delay to end, then recheck register/grills 2) Check/repair system
Fan runs all the time	1) Fan mode is set to "On" or "Circ" 2) System is not operating properly	1) Intended operation; if objectionable, change fan mode to "Auto" 2) Check/repair system
Fan is set to "On" but not running	1) System is not operating properly	1) Check/repair system
On Nexia Climate tab, 524 icon remains gray and cannot be selected.	1) Bridge and 524 are not able to communicate via Z-wave.	1) Verify Nexia bridge is not located inside of an enclosure and is not sitting directly on other electrical equipment. 2) If bridge and 524 are more than 30' apart, enroll a Z-wave repeater (plug-in dimmer or appliance module) into the bridge, and plug repeater into outlet midway between bridge and 524. 3) Temporarily turn off other nearby wireless transmitters such as baby monitors After checking 1-3, click on Climate page and allow 1-2 minutes for icon to turn blue
System cools when it should be heating or heats when it should be cooling	1) Energize Reversing Valve setting is reversed	1) Navigate to Installer Settings:Equipment Type:Energize Reversing Valve. If setting is set to With Cool, change to With Heat. If setting is set to With Heat, change to With Cool.

Troubleshooting		
Symptom	Possible Cause	Action
524 remote operation with Nexia is intermittent.	1) Bridge and 524 have marginal Z-wave communications.	1) In Nexia: Go to Edit Home, Advanced 2) Find the 524 and click on "Test Connection" button. 3) If test results are less than 80%, enroll a Z-wave repeater (plug-in dimmer or appliance module) into the bridge, and plug repeater into outlet midway between bridge and 524. 4) Repeat steps 1-2 and verify communications is greater than 80%.
524 remote operation with Nexia previously worked, but now does not.	1) Bridge and 524 have lost the ability to communicate via Z-wave	1) Verify Nexia bridge has not been moved. If yes, then move bridge back to original location and then re-test remote features. 2) Verify bridge is connected to AC power and to an active Ethernet (internet) connection. 3) Verify a Z-wave repeater has not been unplugged or removed. If yes, then restore the repeater to its original location. 4) Verify that new wireless equipment has not been added to the home. If yes, temporarily unpower the new equipment and then re-test 524.

## Features

### TZEMT524AA21MA Comfort Control Features

- 24v, Z-Wave comfort control
- Remote access via smart phone, tablet, or P.C. (requires a Nexia bridge, Internet access and a Nexia™ Home Intelligence account).
- Interactive 4.3" touchscreen
- 7 Day programmable, 4 periods/day
- Filter and maintenance service reminders
- Energy Savings Mode (ESM)
- Screen lock and guest lock
- Upgradable firmware (requires a Nexia™ Home Intelligence account).

## Product Specifications

Specification	Description
Product Model:	TZEMT524AA21MA
Product:	HVAC System comfort control. Z-Wave™ RF communications enabled
Size:	5.75" wide x 3.5" height x 1" depth
Display:	Fixed Segment LCD, 4" x 2.25", with 17 character alpha numeric display
Touchscreen:	Yes.
Backlight:	Yes, White, Controllable, on, off, timeout
Power:	24VAC from HVAC System
HVAC System Type:	Standard (gas/electric), Heat Pump, or Dual Fuel
Heat/Cool Stages:	Up to two stages of heat/one stage cooling
Heat Pump Reversing valve:	Selectable reversing valve with cool or with heat
Communications:	Z-Wave™ RF
Memory:	Non-volatile
Date/Time:	24 hour super capacitor backup Time is automatically updated if the control is connected to Nexia™ Home Intelligence



## Trane Remote Energy Management Thermostat Limited One (1)-Year Electronics and Mechanical Warranty

U.S.A. and Canada Only

Subject to the terms and conditions of this Limited One (1)-Year Electronics and Mechanical Warranty, Trane warrants that, if within one (1) year from Original Date of Purchase, the Purchased Product fails due to defect in manufacture, material or workmanship, Trane will provide a replacement for the Purchased Product or refund the Original Purchase Price, at its sole option, to the Original Purchaser occupying the premises in which the Purchased Product was originally installed. This warranty applies to the Original Purchaser only and is non-transferable. The one (1)-year limited warranty period begins from Original Date of Purchase, confirmed by sales receipt or other dated proof of purchase.

Exclusions: The following costs, expenses and damages are not covered by the terms and conditions of this One(1)-Year Limited Electronics and Mechanical Warranty: (i) labor and costs including, but not limited to, original initial installation, removal and reinstallation of Purchased Product; (ii) shipping and freight expenses for any required return of Purchased Product; (iii) failures, defects, or damages (including, but not limited to, any security failure or loss of data) caused by any third party product, service, or system connected or used in conjunction with the Purchased Product; and (iv) any other incidental, consequential, indirect, special and/or punitive damages, whether based on contract, warranty (express or implied), tort (including, but not limited to, strict liability or negligence), patent infringement, or otherwise, even if advised of the possibility of such damages. Additionally, this limited warranty does not cover scratches, abrasions, or deterioration due to the use of paints, solvents or other chemicals.

Further, the terms and conditions of this One (1)-Year Limited Electronics and Mechanical Warranty do not apply to Purchased Product when: (1) used in common area applications (2) used for purposes for which it was not designed or intended; (3) subjected to alteration, modification, abuse, misuse, negligence or accident, improper storage, improper installation or maintenance or operation or unauthorized repair; (4) used in violation of written instructions provided for Purchased Product; (5) subjected to improper temperature, humidity or other environmental conditions; or (6) damaged as a result of acts of God.

This One (1)-Year Limited Electronics and Mechanical Warranty is the only express warranty Trane makes on this product. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE ONE-YEAR DURATION OF THIS WARRANTY. IF THIS PURCHASED PRODUCT IS CONSIDERED A CONSUMER PRODUCT, SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS LIMITATION MAY NOT APPLY TO YOU. REFER TO YOUR LOCAL LAWS FOR YOUR SPECIFIC RIGHTS UNDER THIS WARRANTY.

Additional items: Trane does not authorize any person to create for it any obligation or liability in connection with the Purchased Product. Trane's maximum liability hereunder is limited to the Original Purchase Price of the Purchased Product. No action arising out of any claimed breach of this warranty by Trane may be brought by the Original Purchaser more than one (1) year after the cause of action has arisen.

If you have a claim under this warranty, please return the Purchased Product to place of purchase for replacement or refund of the Original Purchase Price in exchange for the return of the Purchased Product, including sales receipt or other dated proof of purchase. Contact Nexia Home Intelligence Customer Service at 877-288-7707 in U.S.A. and Canada for assistance with set-up and installation, or questions regarding your warranty claim.

**FCC Compliance Statement**

## FCC Compliance Statement

Models XL624, Silver XM, XR524

FCC ID: WIBTZW012 IC: 9374A-XR624

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

Les changements ou modifications non approuvés expressément par la partie responsable de la conformité pourrait annuler l'autorité de l'utilisateur à faire fonctionner l'équipement..

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**IC Notice**

IC 9374A-XR624

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.





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Trane has a policy of continuous product and product data improvement and it reserves the right to change design and specifications without notice.

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