

TP-N-751

Vive Comfort

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Hours of Operation: M-F 9AM - 6PM Eastern

Thermostat Application Guide

Description	
Gas or Oil Heat	Yes
Electric Furnace	Yes
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (With Aux. or Emergency Heat)	Yes
Multi-Stage Systems	Yes
Heat Only Systems	Yes
Cool Only Systems	Yes
Millivolt	Yes

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Power Type

Battery Power Hardwire (Common Wire) Hardwire (Common Wire) with Battery Backup

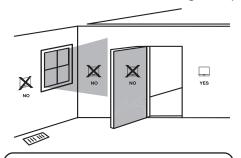
A trained, experienced technician must install this product.

Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

Una version en español de este manual se puede descargar en la pagina web de la compañia.

Wall Locations

The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation.



Installation Tip

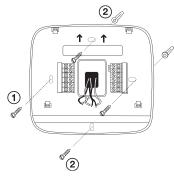
Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

Do not install thermostat in locations:

- Close to hot or cold air ducts
- That are in direct sunlight
- With an outside wall behind the thermostat
- In areas that do not require conditioning
- Where there are dead spots or drafts
- (in corners or behind doors)
- Where there might be concealed chimneys or pipes

Subbase Installation

- 1 Horizontal Mount
- ② Vertical Mount



For vertical mount put one screw on the top and one screw on the bottom. For horizontal mount put one screw on the

left and one screw on the right.

Installation Tip: **Electrical Hazard**

Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.



Mercury Notice

All of our products are mercury free. However, if the product you are replacing contains mercury, dispose of it properly. Your local waste management authority can give you instructions on recycling and proper disposal.



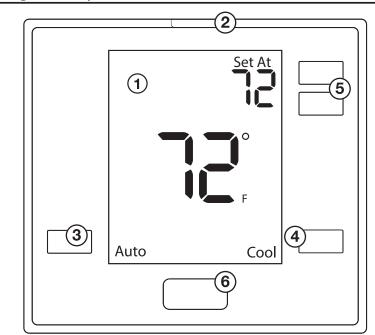
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Rev. 2040

Thermostat Quick Reference

Getting to know your thermostat



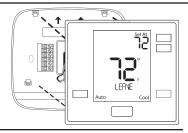
- (1) LCD Display
- **2**) Glow in the dark light button
- **3**) Fan Button
- **4**) System Button
- (5) Temperature Setpoint Buttons
- **(6)** Private Label Badge

Installation Tips

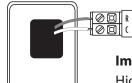
Mount Thermostat

Align the 4 tabs on the subbase with corresponding slots on the back of the thermostat, then push gently until the thermostat snaps in place.

® U.S. Registered Trademark. Patents pending



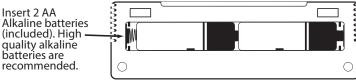
Battery Installation



Battery installation is optional if thermostat is hardwired (R and C terminal connected to 24V power).

Important:

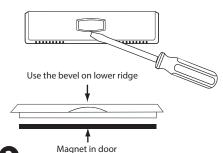
High quality alkaline batteries are recommended. Rechargeable batteries or low quality batteries do not guarantee a 1-year life span.



Located on the back of the thermostat.

About The Private Label Badge

All of our thermostats use the same universal magnetic badge. Visit the company website to learn more about our free private label program.



Gently slide a screwdriver into the bottom edge of the badge. Gently turn the screwdriver counter clockwise. The badge is held on by a magnet in the well of the battery door. The badge should pry off easily. DO NOT USE FORCE.

Wiring

Wiring

terminal.

block screws.

1. If you are replacing a thermostat, make note of the terminal

Loosen the terminal block screws. Insert wires then retighten terminal

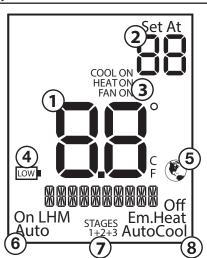
3. Place nonflammable insulation into

wall opening to prevent drafts.

connections on the thermostat that

is being replaced. In some cases the wiring connections will not be color coded. For example, the green wire may not be connected to the **G**

Getting to know your thermostat



- (1) Indicates the current room temperature
- (2) Setpoint: Displays the selected setpoint temperature.
- 3 System Operation Indicators: The COOL ON, HEAT ON or FAN ON will display when the COOL, HEAT, or FAN is on. The compressor delay feature is active if these are flashing
- (4) Low Battery Indicator: Replace batteries when this indicator is shown.
- (5) Globe: Globe is displayed if an energy efficient temperature has been selected.
- (6) Fan: Indicates the current fan setting.
- **Stages:** +1 will appear in the display when the first stage of heat or cool is on. +2 will appear for the second stage of heat.
- (8) System: Indicates current system mode setting.

2 Heat 2 Cool Conventional System 2 Heat 1 Cool Heat Pump System 3 Heat 2 Cool Heat Pump System Terminal Transformer power Transformer power Transformer power **RC** (cooling) (cooling) (cooling) Transformer power Transformer power Transformer power RH (heating) (heating) (heating) C Transformer common Transformer common Transformer common Reverse Valve Reverse Valve Reverse Valve В Configurable Terminal Configurable Terminal Configurable Terminal Reverse Valve / Reverse Valve / Reverse Valve / 0 Configurable Terminal Configurable Terminal Configurable Terminal Fan relay Fan relay G Fan relay First stage of First stage of W/E First stage of heat emergency heat emergency heat Auxiliary heat relay, second stage of heat Auxiliary heat relay. Second stage of heat W₂ third/fourth stage of heat First stage of heat & cool First stage of heat & cool First stage of cool Second stage of cool Second stage of cool N/A Y2 & second stage of heat



Important

The low battery indicator is displayed when the AA battery power is low. If the user fails to replace the battery within 21 days, the screen will only show the low battery indicator but maintain all functionality. If the user fails to replace the batteries after an additional 21 days (days 22-42 since first "low battery" display) the setpoints will change to 55°F (Heating) and 85°F (Cooling). If the user adjusts the setpoint away from either of these, it will hold for 4 hours then return to either 55°F or 85°F. After day 63 the batteries must be replaced immediately to avoid freezing or overheating because the thermostat will shut the unit off until the batteries are changed.

Wiring Diagrams

Note: This thermostat is hardwire powered when the 24V transformer is connected to the Common and RC terminals of the thermostat.



Note: In many systems with no emergency heat relay a jumper can be used between E and W2.

Wiring Diagrams

Wiring Tips

C Terminal

The C (common wire) terminal does not have to be connected when the thermostat is powered by batteries.

Wire Specifications

Use shielded or non-shielded 18-22 gauge thermostat wire.



Installation Tip: Do not overtighten terminal block screws, as this can damage the terminal block. A damaged terminal block can keep the thermostat from fitting on the subbase correctly or cause system operation issues. **Max Torque = 6in-lbs.**



\ Power supply



ackslash Factory - installed jumper. Remove only when installing on a 2 transformer systems.

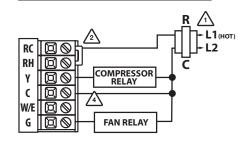


Use either O or B terminals for changeover valve.

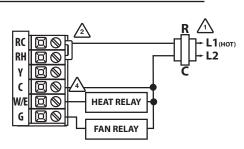


Optional 24 VAC common connection when thermostat is used in battery power mode.

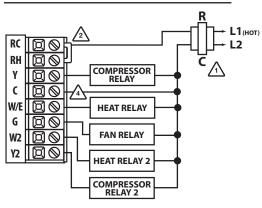
Typical Cool-Only System With Fan



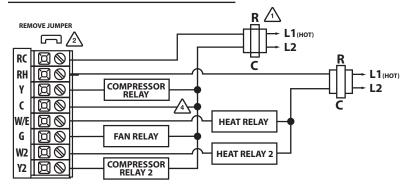
Typical Heat Only System With Fan



Typical 2H/2C System: 1 Transformer



Typical 2H/2C System: 2 Transformer



Caution: Electrical Hazard

Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.



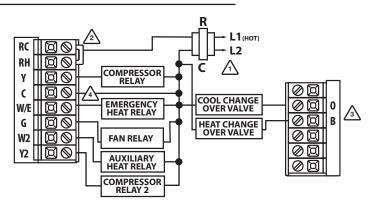
Warning:

All components of the control system and the thermostat installation must conform to Class II circuits per the NEC Code.



Tech Settings

Typical 3H/2C or 2H/1C Heat Pump System



Technician Setup Menu

This thermostat has a technician setup menu for easy installer configuration. To set up the thermostat for your particular application:

- 1. Hold down the + and buttons together for 3 seconds.
- 2. Use the + and buttons to modify a setting. Use the Fan button to go back a step and use the system button to go forward a step.
 3. To exit Tech Settings, press and hold the + and button together for
- 3. To exit Tech Settings, press and hold the + and button together for3 seconds or wait 60 seconds.

Tech S	etup Sto	eps	LCD Will Show	ill Show Adjustment Options		
Roo Tempe Calibr	rature	This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70° and you would like it to read 72° then select +2.	CAL IBRATE	You can adjust the room temperature display to read up to 4° above or below the factory calibrated reading.	0°F	
Coo Sw		The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	0.5 COOL SAINS	The cooling swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the cooling on at approximately 0.5° above the setpoint and turn the cooling off at approximately 0.5° below the setpoint.	0.5°	
Hea Swi		The swing setting often called "cycle rate", "differential", or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	HERT SHING	The heating swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the heating on at approximately 0.5° below the setpoint and turn the heating off at 0.5° above the setpoint.	0.4°	

Swing Setting Tip

Temperature swing, sometimes called differential or cycle rate, can be customized for this individual application. For most applications choose a swing setting that is as long as possible without making the occupants uncomfortable.

Note:

In many systems with no emergency heat relay a jumper can be installed between W/E and W2.

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Tech Settings					
Tech Settings	;	LCD Will Show	Adjustment Options	Default	
PTAC Mode	This setting allows the thermostat to operate a PTAC. This will allow for multiple fan speeds selectable in the next two tech settings.	PTRC MODE	Use the 🕒 and 🕣 buttons to select ON/OFF.	OFF	
PTAC Fan Speeds (Only displayed if PTAC mode is ON)	This setting allows you to choose the number of fan speeds the thermostat will control. G = Low Speed Fan B/0 = Medieum Speed Fan Y2 = High Speed Fan	FRIN SPEEDS	Use the 主 and 🖃 buttons to select , 2 or 3. 1. Speeds: ON, Auto 2. Speeds: Low, High, Auto 3. Speeds: Low, Med, High, Auto	2	
PTAC Medium Fan Speed Terminal (Only displayed if PTAC mode is ON and PTAC fan speeds is set to 3)	This setting will select the terminal for medium fan speed operations. The selected terminal cannot be used for reversing valve operations when heat pump is enabled.	MED FRN TERM	Use the 🛨 and 🖃 buttons to select 0/B terminals.	0	
Heat Pump	When turned on the thermostat will operate a heat pump. EM. Heat will show as an option in the system switch tech setting. Use the → and → button to adjust.	HERT PUMP	OFF configures the thermostat for conventional systems. ON configures the thermostat for heat pump systems.	OFF	

Swing Setting Tip

The second stage will turn on at 2x the swing setting. The second stage will turn off when 1x the swing is reached. For example, if the swing setting is .5 degrees for heating and the thermostat is set at 70°F, the first stage will turn on at approximately 69.5°F. The second stage will turn on at 69°F. The second stage will turn off at 69.5°F and the first will turn off at 70.5°F. If the third stage is used, it will turn on at 68.5°F and turn off at approximately 69°F.

Tec	h Se	etti	ngs

heat or cool)

Tech Settings	;	LCD Will Show	Adjustment Options	Default
System Stages	This setting allows you to select the number of heat and cool stages.	ZHZC SET STRGES	Use the → and → buttons to select 1H/1C, 1H/2C, 2H/1C, 2H/2C, 3H/1C, 3H/2C, 4H/2C. Note: Heat and cool choices are limited based on conventional, heat pump, or PTAC system configuration.	2H
System Set	You can configure the system switch for the particular application. Heat - Off - Cool, Heat - Off, Cool - Off, Heat - Off - Cool — Auto. Note: Emergency Heat is available in heat pump mode only.	SYSTEM SET Off Em.Heat AutoCool	Use the + or - buttons until the desired application is flashing. AUTO = (Auto Changeover)	Heat Off Cool
Dual Fuel Auxiliary For Heat Pump (Only displayed if heat pump is set to ON)	This setting allows the system to run Gas, Oil, Propane or any other types of auxiliary heat. The thermostat will default to electric auxiliary heat in heat pump applications.	DURL FUEL	Use the 🛨 and 🗀 buttons to select ON/OFF.	OFF
Electric or Gas Fan Operation (Only displayed if heat pump is set to OFF)	Select GAS to have the system control the fan during a call for heat, select Electric to have the thermostat control the fan during a call for heat. Note: If heat pump is set to "ON" this step will not show, and will default to ELECTRIC.	GRS FRN SET	Use 🛨 and 🗀 buttons to change the setting.	GAS
Satisfy Setpoint Staging (Only displayed if there are more than one stage of	This feature allows the thermostat to keep multiple stages of heat or cool energized until the setpoint is satisfied.	OF	Use the 🛨 or 🖃 buttons to turn on of off.	OFF

SS STR6 ING

Tech Sett	tings				Tech Sett	ings			
Tech Settings	;	LCD Will Show	Adjustment Options	Default	Tech Settings	5	LCD Will Show	Adjustment Options	Default
Staging Delay (Only displayed	This feature allows a delay to occur if an additional stage is needed. This allows the previous stage extra time to satisfy the setpoint.		Use the 🛨 or 🖃 key to select OFF, 5, 10, 15, 30, 45, 60, or 90 minutes.	OFF	Heat Setpoint Limit	This feature allows you to set a maximum heating setpoint limit. The setpoint temperature cannot be raised above this value.	HERT LIMIT	Use the 🛨 or 🖃 key to select the maximum heat setpoint and the minimum cooling setpoint.	90°F
if there are more than one stage of heat or cool)	Note: Will not show if using outdoor sensor with balance point temperature.	STRG ING DELRY			Cool Setpoint Limit	This feature allows you to set a minimum cooling setpoint limit. The setpoint temperature cannot be lowered below this value.		Use the 🛨 or 🗀 key to select the minimum cooling setpoint.	44°F
	This feature allows the installer to select the minimum run		You can set the minimum compressor run time to		LIIIII		COOL LIMIT		
Minimum Compressor On Time	time for the compressor. For example, a setting of 4 will force the compressor to run for at least 4 minutes every time the compressor turns on, regardless of the room temperature.	M IN COMP ON	"OFF", "3", "4", or "5" minutes. If 3, 4 or 5 is selected, the compressor will run for at least the selected time before turning off. Use the and buttons to change the setting.	OFF	°For°C	This feature allows you to display temperatures in either Fahrenheit or Celsius.	F DR C SET	°F for Fahrenheit °C for Celsius	°F
Compressor Short Cycle Delay	The compressor short cycle delay protects the compressor from "short cycling". This feature will not altlow the compressor to be turned on for 5 minutes after it was last turned off.	COMP DELAY	Selecting "ON" will not allow the compressor to be turned on for 5 minutes after the last time the compressor was on. Select "OFF" to remove this delay. Use the 🛨 and 🖃 buttons to change the setting.	ON	Display	The display light can be configured to stay on all the time or turn on when any key is pressed. There are LOW and HIGH selections for continuous ON selection. NOTE: The thermostat will need to	GL RURAS ON LIT	Use the 🛨 and 🖃 buttons to select OFF, LOW, or HIGH. OFF configures the display light to come on when the light key or any button is pressed.	OFF If Battery Powered
Cooling Fan Delay	The cooling fan delay setting will delay the fan from coming on in cool mode and keep it running after the compressor shuts off for a short time to save energy in some systems.	COOL FRN DL	You can set the cooling fan delay to OFF, 10, 30, 60 or 90 seconds. If 10, 30, 60, or 90 is selected the fan will not turn on for that many seconds when there is a call for cool and will run for that many seconds after satisfying a call for cool.	OFF	Light	be hardwired in order for the LOW and HIGH display light functions to work properly. "ALWAYS ON LIT" will alternate in the text field with "HARDWIRE ONLY" when HIGH is selected. These prompts will alternate every three seconds. If the thermostat is hardwired this feature will default to LOW.	HRDIR OLY	LOW configures the display light to stay on at a low intensity constantly. When a button is pressed, the display light will transition to high intensity. HIGH configures the display light to remain on at high intensity all the time.	LOW If Hardwired

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Specifications

Specifications

Tech Settings

The display range of temperature 41°E to 05°E (5°C to 35°C)
The display range of temperature 41°F to 95°F (5°C to 35°C) The control range of temperature 44°F to 90°F (7°C to 32°C)
Load Rating 1 amp per terminal, 1.5 amp
maximum all terminals combined
Swing (cycle rate or differential) Heating is adjustable from 0.2° to 2.0°
Cooling is adjustable from 0.2° to 2.0°
Power source18 to 30 VAC, NEC Class II, 50/60 Hz
for hardwire
Battery power from 2 AA Alkaline
batteries
Operating ambient
Operating humidity 90% non-condensing maximum
Dimensions of thermostat