TP-S-805

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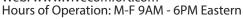
Technician Setup Menu

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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)	No
Multi-Stage Systems	No
Heat Only Systems	Yes
Cool Only Systems	Yes
Millivolt	Yes

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23 24 **Power Type**

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

A trained, experienced technician must install this product.

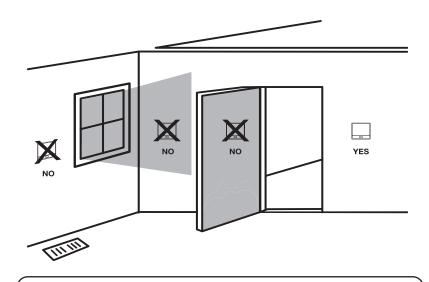
Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

Una version en espanol de este manual se puede descargar en la pagina web de la compania.

Installation Tips

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.



Do not install thermostat in these 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



Installation Tip

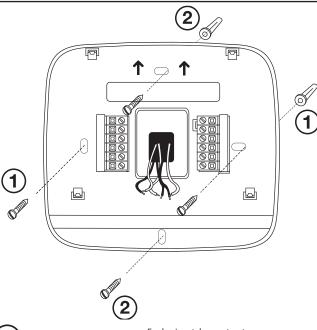
Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

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Rev. 2443

Installation Tips

Mount Thermostat



Horizontal Mount

For horizontal mount put one screw on the left and one screw on the right.

Vertical Mount

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



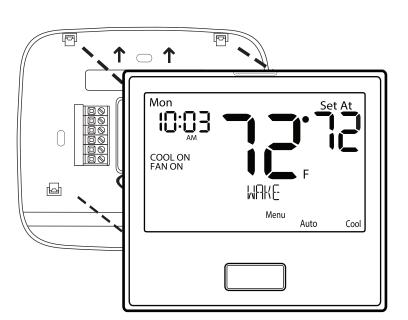
Installation Tip: Electrical Hazard

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.



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.

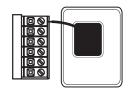
Note: To ensure a solid fit between the thermostat and the subbase:

- 1. Mount subbase to a flat wall
- **2.** Use screws provided
- 3. Drywall anchors should be flush with the wall
- 4. Wires should be pushed into the wall

Thermostat Quick Reference

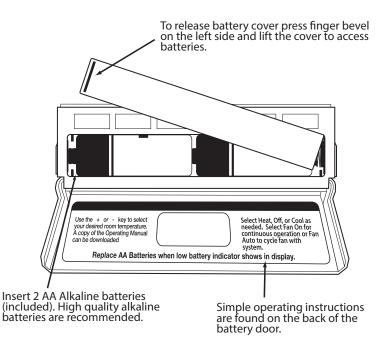
Battery Installation

Battery installation is recommended even if the thermostat is hardwired (C terminal connected). When the thermostat is hardwired and batteries are installed, the thermostat will activate a compressor delay of 5 minutes when it detects a power outage from the hardwired power supply.

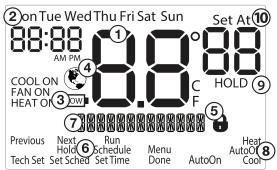


Important:

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



Getting to know your thermostat



- 1 Displays the current room temperature
- (2) Time and day of the week
- (3) Low Battery Indicator: Replace batteries when this indicator is shown.
- (4) Energy Efficient Globe: Indicates efficient setpoint temperature.
- (5) **Keypad Lockout:** Lock the thermostat
- (6) Program Menu Options: Show different options during programming.
- (7) Program Time Periods Residential: Uses 4 time periods WAKE, RETURN, LEAVE & SLEEP.
- 8 System Operation Indicators: If these or the Fan indicator are flashing, it means that the system is in a delay of some type (compressor delay, cooling fan delay, staging delay).
- **9 Hold:** is displayed when the thermostat program is permanently overridden.
- **10 Setpoint:** Displays the user selectable setpoint temperature.

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Wiring

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.

Wiring

Terminal Designations

This thermostat is shipped from the factory to operate a conventional heating and cooling system. This thermostat may also be configured for a heat pump system.

Wiring

- If you are replacing a thermostat, make note of the terminal 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** terminal.
- Loosen the terminal block screws. Insert wires then retighten the terminal block screws.
- **3.** Place nonflammable insulation into the wall opening to prevent drafts.



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.

Wiring Tips

C Terminal

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

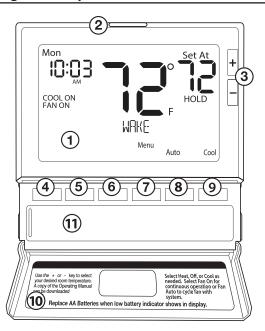
Wire Specifications

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

Terminal	1 Heat 1 Cool Conventional System	1 Heat 1 Cool Heat Pump System		
RC	Transformer power (cooling)	Transformer power (cooling)		
RH	Transformer power (heating)	Transformer power (heating)		
С	Transformer common	Transformer common		
В	N/A	Changeover valve energized in heating		
0	N/A	Changeover valve energized in cooling		
G	Fan relay	Fan relay		
W	Heat Relay	N/A		
Υ	Compressor Relay	1st Stage of heat and cool		

Thermostat Quick Reference

Getting to know your thermostat



- (1) LCD Display
- (2) Glow in the dark light button
- **3** Setpoint buttons
- **(4-6)** Program buttons
- (7) Menu button
- (8) Fan button
- (9) System button
- (10) Button/battery access door
- (11) Battery cover

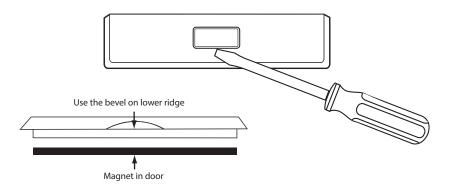


Important

The low battery icon is displayed when the AA battery power is low. Whenever the thermostat detects low battery voltage from the AA batteries, the low battery icon will begin flashing on the screen for 21 days (if the batteries are not changed). If the batteries are not changed 22 days after the thermostat detects low battery voltage, the thermostat screen will only show the flashing battery icon until buttons are pressed. If the batteries are not changed 43 days after the thermostat detects low battery voltage, the thermostat screen will only show the flashing battery icon until buttons are pressed and the set points will offset to 85°F/29°C in cooling and 55°F/13°C in heating. At this stage, set point changes can be made temporarily but, the set points will change back to defaulted values after a 4-hour period. The thermostat will continue to perform this low battery flashing, temperature offset condition until the internal voltage threshold is reached. When the thermostat internal voltage threshold is reached, all relays will be opened and the thermostat will become inoperable until new batteries are installed

About The 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 Diagrams

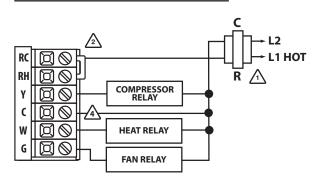
Wiring Diagrams

∕1 Power supply

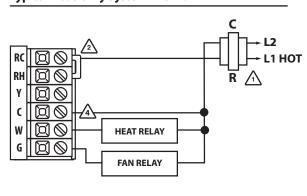
🛕 Factory-installed jumper. Remove only when installing on 2-transformer systems 👍 Optional 24 VAC common connection when thermostat is used in battery power mode

3 Use either O or B terminals for changeover valve

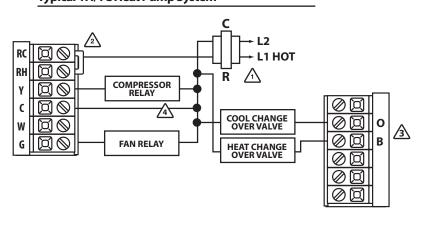
Typical 1H/1C System: 1 Transformer



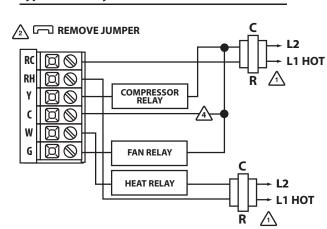
Typical Heat-Only System With Fan



Typical 1H/1C Heat Pump System



Typical 1H/1C System: 2 Transformer



(8)

Technician Setup Menu

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

- 1. Press the **MENU** button.
- 2. Press and hold the **TECH SET** button for 3 seconds. This 3 second press is designed so that homeowners do not accidentally access the installer settings.
- 3. Scroll through the installer options as desired using the table below.

Use the ____ or ___ keys to change settings and the **NEXT** or PREV key to move from one step to another. Note: Only press the DONE key when you want to exit the Technician Setup options.

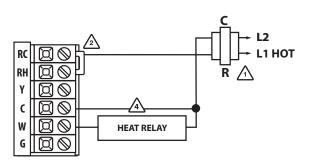
4. Press the **DONE** key to exit.

Tech Setup St	eps	LCD Will Show	Adjustment Options	Default
Filter Change Reminder	This feature will flash a reminder after the elapsed run time to remind the user to change the filter. A setting of "OFF" will disable this feature.	FILTER	You can adjust the filter change reminder from "OFF" to 2000 hours of runtime in 50 hour increments.	OFF
Room Temperature Calibration	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 IZRATE	You can adjust the room temperature display to read up to 4° above or below the factory calibrated reading.	0°F
Cooling Swing	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°

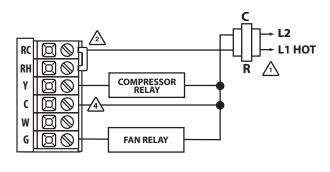
Swing Setting Tip

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.

Typical Heat-Only System



Typical Cool-Only System



remove the phone number from the display, hold the light button down



to change the IAQ Cell after

25,000 hrs.

IAQ Cell

Reminder

UEE

Technician Setup Menu				Technician Setup Menu					
Tech Setup St	eps	LCD Will Show	Adjustment Options	Default	Tech Setup Sto	eps	LCD Will Show	Adjustment Options	Default
Keypad Lockout	Keypad lockout allows you to configure the thermostat so some or all of the keys don't function.	KEY LOCKOUT	Use the 主 and 🖃 buttons to select OFF, BASC, PART, FULL OF - OFF= keypad lockout has been disabled. BA - BASIC = basic keypad lockout locks the menu key. PA - PARTIAL= partial keypad lockout, which locks all the keys except the or setpoint keys. FU - FULL= full keypad lockout, which locks out all the keys.	OFF	Display Light	selection. NOTE: The thermostat will need to 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	OL RURAS DI 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. 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.	OFF If Battery Powered LOW If
Heat Setpoint Limit	This feature allows you to set a maximum heating setpoint limit. The setpoint temperature cannot be raised above this value.	HERT L IN IT	Use the 🛨 or 🖃 key to select the maximum heat setpoint and the minimum cooling setpoint.	90°F		seconds. If the thermostat is hardwired this feature will default to LOW.	HARDH RE DILY	HIGH configures the display light to remain on at high intensity all the time.	Hardwired
Cool Setpoint Limit	This feature allows you to set a minimum cooling setpoint limit. The setpoint temperature cannot be lowered below this value.	COOL L IM IT	Use the 🛨 or 🖃 key to select the minimum cooling setpoint.	44°F	Contractor	This feature allows you to put your phone number in the display. You can choose ON or OFF. Notes: If contractor call number is selected ON, the phone number entered will		If selected ON, you will see the input screen after pressing NEXT STEP. Use the	OFF
°F or °C	This feature allows you to display temperatures in either Fahrenheit or Celsius.	F OR C SET	°F for Fahrenheit °C for Celsius	°F	Call Number	show in the display if there has been a continuous call for heating or cooling for 24 hours or if the light button is held down for 3 seconds. To remove the phone number from the display, hold the light button down for 3 seconds.	PHONE NUMBER	another. See note below for operation.	OFF
12 or 24 Hour Clock	You can select either a 12 or 24 hour clock setting.	ELBEK SET	Use the → or → key to select 12 or 24 hour clock.	12H	Humidity Pad Reminder	Enables a reminder for the user to change the humidity pad.	OFF	Use the 🛨 or 🖃 key to select OFF, 600, 1000, 1500, or 2000. These represent hours of heat operation.	OFF
	tor Call Number Note	ed ON, the n	hone number entered	l lliw h	UV Lamp	Enables a reminder for the user to change the UV light bulb.	OFF	Use the 🛨 or 🖃 key to select OFF, 1 YR, 2 YR	OFF
show in t	show in the display if there has been a continuous call for heating or cooling for 24 hours or if the light button is held down for 3 seconds. To								
	he nhone number from t				IAO Call	Enables a reminder for the user	ncc	Use the 🛨 or 🖃 buttons to	



for 3 seconds.

OFF

Use the 🛨 or 🖃 buttons to select OFF, or 25 (stands for 25,000 hours).

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Technician Setup Menu Technician Setup Menu									
Tech Setup Steps LCD Will:		LCD Will Show	Show Adjustment Options Default		Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Heating Swing	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 SAINS	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°	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
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	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.		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	OFF
	You can configure the system switch for the particular application. Heat - Off - Cool,	SYSTEM SET	Use the 🛨 or 🖃 buttons until the desired application is flashing. AUTO = (Auto				COOL FRN DL	seconds after satisfying a call for cool.	
System Set	Heat - Off, Cool - Off, Heat - Off - Cool – Auto.	AutoOff Heat Cool	Changeover)	OFF		You can configure this thermostat to have a 7 day program, a 5+1+1 program or No program.		Use the 🛨 and 🖃 button to select 7d for 7 day, 5d for 5+1+1, or 0d for non-programmable.	
	Select GAS to have the system control the fan during a call for	5RS	Use <u>+</u> and <u>-</u> buttons to change the setting.			Note: If 7d is selected, in set schedule you will program all seven days individually.			
Electric or Gas Fan Operation	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.	FAN SET		GAS	Program Options	If 5d is selected, in set schedule you will program Monday — Friday together and Saturday and Sunday individually.	58		5d
	This feature allows the installer to select the minimum run time for the compressor. For		You can set the minimum compressor run time to "OFF", "3", "4", or "5" minutes.			If 0d is selected the thermostat becomes non-programmable and the Set Schedule button goes away in Menu.	PROGRAM		
Minimum Compressor On Time	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	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	Pro Recovery	This feature will start heating and cooling early to bring the building temperature to its programmed setpoint by the beginning of the WAKE, RETURN and OCCUPIED		Use the → or → key to select on or off.	ON
Keypa	d Lockout Note: The sele	ected keypa	d lockout functionality	y must		time periods.	8600%E84		

Programming

Set Time

Follow the steps below to set the day of the week and current time:

procedure, all keys will function freely. To lock the keypad hold down the \pm and - keys for 3 seconds. You will see a lock in the display. To unlock the display hold down the \pm and - keys for 3 seconds.

- 1. Press the **MENU** button.
- 2. Press SET TIME.
- 3. Day of the week is flashing. Use the select the current day of the week.
- 4. Press NEXT.
- 5. The current hour is flashing. Use the + or key to select the current hour. When using 12-hour time, make sure the correct a.m. or p.m. choice is selected.
- **6.** Press **NEXT.**
- 7. Minutes are now flashing. Use the ____ key to select current minutes.
- 8. Press **DONE** when completed.

Programming

All our programmable thermostats are shipped with an energy saving default program. You can customize this default program by following the instructions in the set program schedule section starting on page 22.

Your thermostat can be programmed to have each day of the week programmed uniquely (7 days), all the weekdays the same with a separate program for Saturday and a separate program for Sunday (5+1+1), or non-programmable.

This thermostat has a programmable fan feature, which allows you to run the fan continually during any time period.

Once a reminder has been turned on and set, the elapsed time can be checked by navigating to its tech setup step. The elapsed time will then appear in the text field. It can also be reset at that time by holding down the set time/run sched button for 3 seconds. Resetting an expired reminder can be done without entering tech setup, by holding down the set time/run sched button for 3 seconds from the home screen.

Programming

Set Program Schedule For Four Time Periods

To customize your 5+1+1 Program schedule, follow these steps: Weekday:

- 1. Select **HEAT** or **COOL** with the system switch. **Note:** You have to program heat and cool each separately.
- Press the **MENU** button (If menu does not appear first press RUN SCHED).
- **3.** Press **SET SCHED**. **Note:** Monday-Friday is displayed and the **WAKE** icon is shown. You are now programming the **WAKE** time period for the weekday setting.
- **4.** Time is flashing. Use the + or key to make your time selection for the weekday WAKE time period. Note: If you want the fan to run continuously during this time period, select ON with the FAN key. I
- 5. Press NEXT.
- **6.** The setpoint temperature is flashing. Use the + or key to make your setpoint selection for the weekday **WAKE** period.
- 7. Press NEXT.
- **8.** Repeat steps 4 through 7 for the weekday **LEAVE** time period, for the weekday **RETURN** time period, and for the weekday **SLEEP** time period.

Saturday:

Repeat steps 4 through 7 for the Saturday **WAKE** time period, for the Saturday **LEAVE** time period, for the Saturday **RETURN** time period, and for the Saturday **SLEEP** time period.

Sunday:

Repeat steps 4 through 7 for the Sunday WAKE time period, for the Sunday **LEAVE** time period, for the Sunday **RETURN** time period, and for the Sunday **SLEEP** time period.



Programming

To customize your 7 day Program schedule, follow these steps:

Monday:

- 1. Select **HEAT** or **COOL** with the **SYSTEM** key. **Note:** You have to program heat and cool each separately.
- 2. Press the **MENU** button (If menu does not appear first, press **RUN SCHED**).
- **3.** Press **SET SCHED**. **Note:** Monday is displayed and the **WAKE** icon is shown. You are now programming the **WAKE** time period for that day.
- 4. Time is flashing. Use the + or key to make your time selection for that day's WAKE time period.

 Note: If you want the fan to run continuously during this time period, select ON with the FAN key. If you want to use IAQ mode during this time period, select IAQ with the FAN key.
- 5. Press NEXT.
- **6.** The setpoint temperature is flashing. Use the to make your setpoint selection for that day's **WAKE** period.
- 7. Press NEXT.
- **8.** Repeat steps 4 through 7 for that day's **LEAVE** time period, for that day's **RETURN** time period, and for that day's **SLEEP** time period.

Repeat steps 4 through 8 for the remaining days of the week.

A Note About Auto Changeover:

In Auto you have the ability to switch between Auto Heat or Auto Cool by pressing the system key. This can be done once the current mode has reached its setpoint. For example: in Auto Heat, the heat setpoint must be satisfied before the thermostat will allow you to switch to Auto Cool. You can switch out of Auto by holding down the system key. To get back into Auto, you must toggle the system key to Auto.

Factory Default Program									
Day of the Week	Events	Time	Setpoint Temperature (HEAT)	Setpoint Temperature (COOL)					
	Wake	6 AM	70°F (21°C)	78°F (26°C)					
Wookday	Leave	8 AM	62°F (17°C)	85°F (29°C)					
Weekday	Return	6 PM	70°F (21°C)	78°F (26°C)					
	Sleep	10 PM	62°F (17°C)	82°F (28°C)					
	Wake	6 AM	70°F (21°C)	78°F (26°C)					
Saturday	Leave	8 AM	62°F (17°C)	85°F (29°C)					
	Return	6 PM	70°F (21°C)	78°F (26°C)					
	Sleep	10 PM	62°F (17°C)	82°F (28°C)					
	Wake	6 AM	70°F (21°C)	78°F (26°C)					
Sunday	Leave	8 AM	62°F (17°C)	85°F (29°C)					
	Return	6 PM	70°F (21°C)	78°F (26°C)					
	Sleep	10 PM	62°F (17°C)	82°F (28°C)					

A Note About Programmable Fan:

The programmable fan feature will run the fan continuously during any time period it is programmed to be on. This is the best way to keep the air circulated and to eliminate hot and cold spots in your building.



Features



Specifications

Specifications

Resetting The Filter Change Reminder: When the reminder is displayed, you should change your air filter and reset the reminder by holding down the 3rd button from the left side of the thermostat for 3 seconds.

If the filter change reminder is enabled, you will see a reminder in

the display when your air filter needs changed. The reminder will

be shown in the display after your system has run long enough to

This thermostat also has other maintenance reminders (UV lamp, and IAQ Cell), that are reset with the same procedure.

Temporary & Permanent Hold Feature

Filter Change & Other Reminders

require an air filter change.

Temporary Hold: The thermostat will display **HOLD** and **RUN SCHED** on the bottom of the screen when you press the +/ - or fan key. If you do nothing, the temperature will remain at this setpoint temporarily for 4 hours. The program will resume after the temporary hold is over.

Permanent Hold: With a temporary hold set, If you press the **HOLD** key at the bottom of your screen, you will see **HOLD** appear below the setpoint temperature in the display. The thermostat will now permanently stay at this setpoint and can be adjusted using the **+** or **-** keys.

To Return To Program: Press the **RUN SCHEDULE** key at the bottom of the screen to exit temporary and permanent holds.

Warranty Information



Please Register Your Thermostat Here

Warranty Registration

Your new thermostat has a 5 year limited warranty. You must register your thermostat within 60 days of installation. Without this registration the warranty period will begin on date of manufacture. For warranty issues please contact the HVAC professional that installed this product. Please register your new thermostat online.

www.vivecomfort.com/warranty



