VIVE
COMFORT

TP-N-851

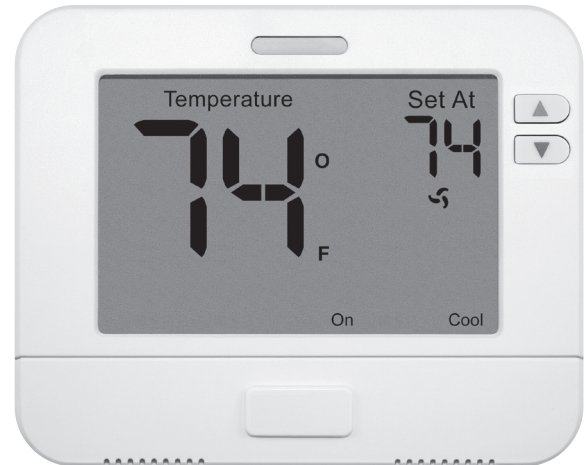**VIVE Comfort**
1111 S. Glenstone Ave., Suite 2-100
Springfield, MO 65804

Toll-Free: 1-800-776-1635   **Web:** www.vivecomfort.com
Hours of Operation: M-F 9AM - 6PM Eastern

Thermostat Applications 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

Power Type

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

Table of Contents — Page

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 versión en español de este manual se puede descargar en la página web de la compañía.

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.
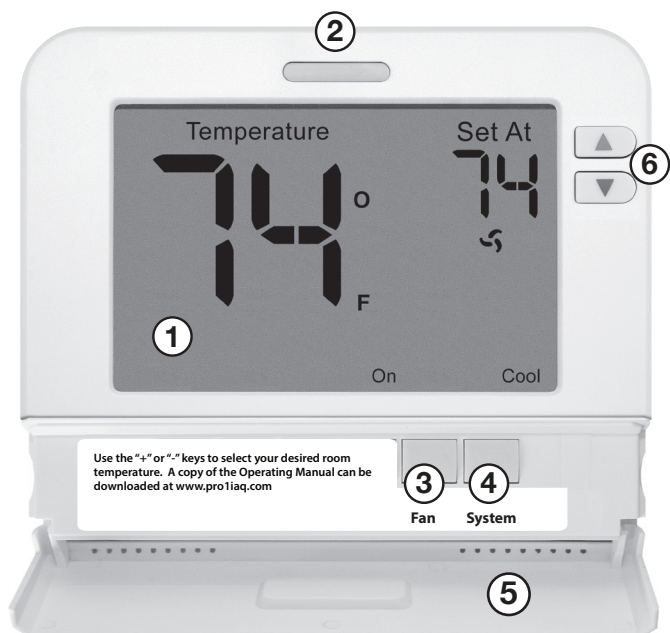
NO

NO

NO

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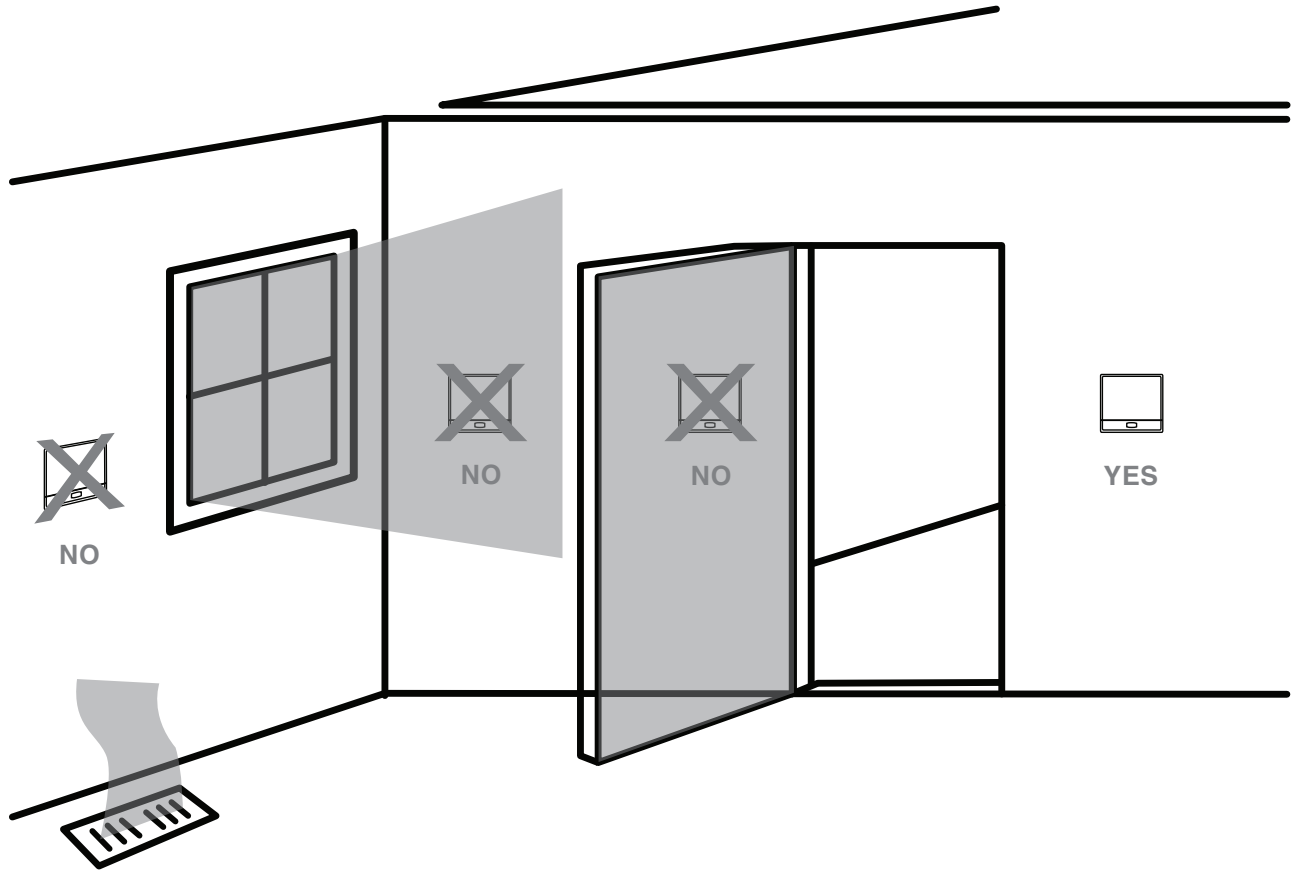
Do not install thermostat in locations:
• Close to hot or cold air ducts
• That are in direct sunlight
• With an outside wall behind the thermostat
• In areas that do not require conditioning
• Where there are dead spots or drafts (in corners or behind doors)
• Where there might be concealed chimneys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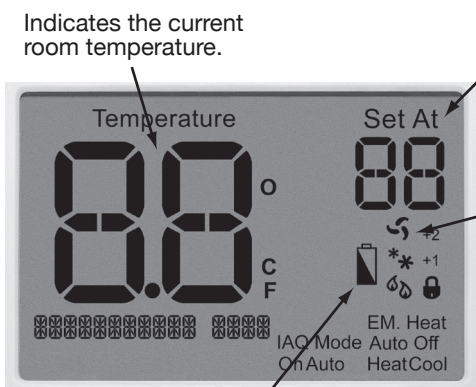
Installation Tip

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

THERMOSTAT QUICK REFERENCE

Getting to know your thermostat

Indicates the current room temperature.

Displays the user selectable setpoint temperature.

Temperature   Set At

System operation indicators:
The **COOL, HEAT** or **FAN** icon will display when the **COOL, HEAT** or **FAN** is on.

NOTE: The compressor delay feature is active if these icons are flashing. The compressor will not turn on until the 5 minute delay has elapsed.

Low Battery Indicator:
Replace batteries when indicator is shown.

Temperature   Set At

74°F

On   Cool

Use the "+" or "-" keys to select your desired room temperature. A copy of the Operating Manual can be downloaded at www.pro1iaq.com

Fan   System

① **LCD Display**

② **Glow in the Dark Light Button**

③ **Fan Switch**

④ **System Switch**

⑤ **Menu Button Access Door**

⑥ **Temperature Setpoint Buttons**

Important:

The low battery indicator is displayed when the AA battery power is low. If the user fails to replace the battery with in 21 days, the thermostat display will only show the low battery indicator as a final warning before the thermostat becomes inoperable. The batteries are located on the back of the Thermostat.

Removing the private label badge

Use the bevel on lower ridge
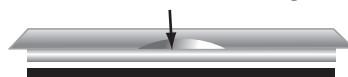
Magnet in door

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.

About the Badge

All our thermostats use the same universal magnetic badge.
Visit our website to learn more about our dealer imprinting programs.

Caution:
Electrical Hazard

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

Mercury Notice:

All of the our thermostats 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

For vertical mount put one screw bottom.

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

Vertical Mount

UP

C
O
B
W

RH
RC
G
Y

Horizontal Mount

Horizontal Mount

Vertical Mount
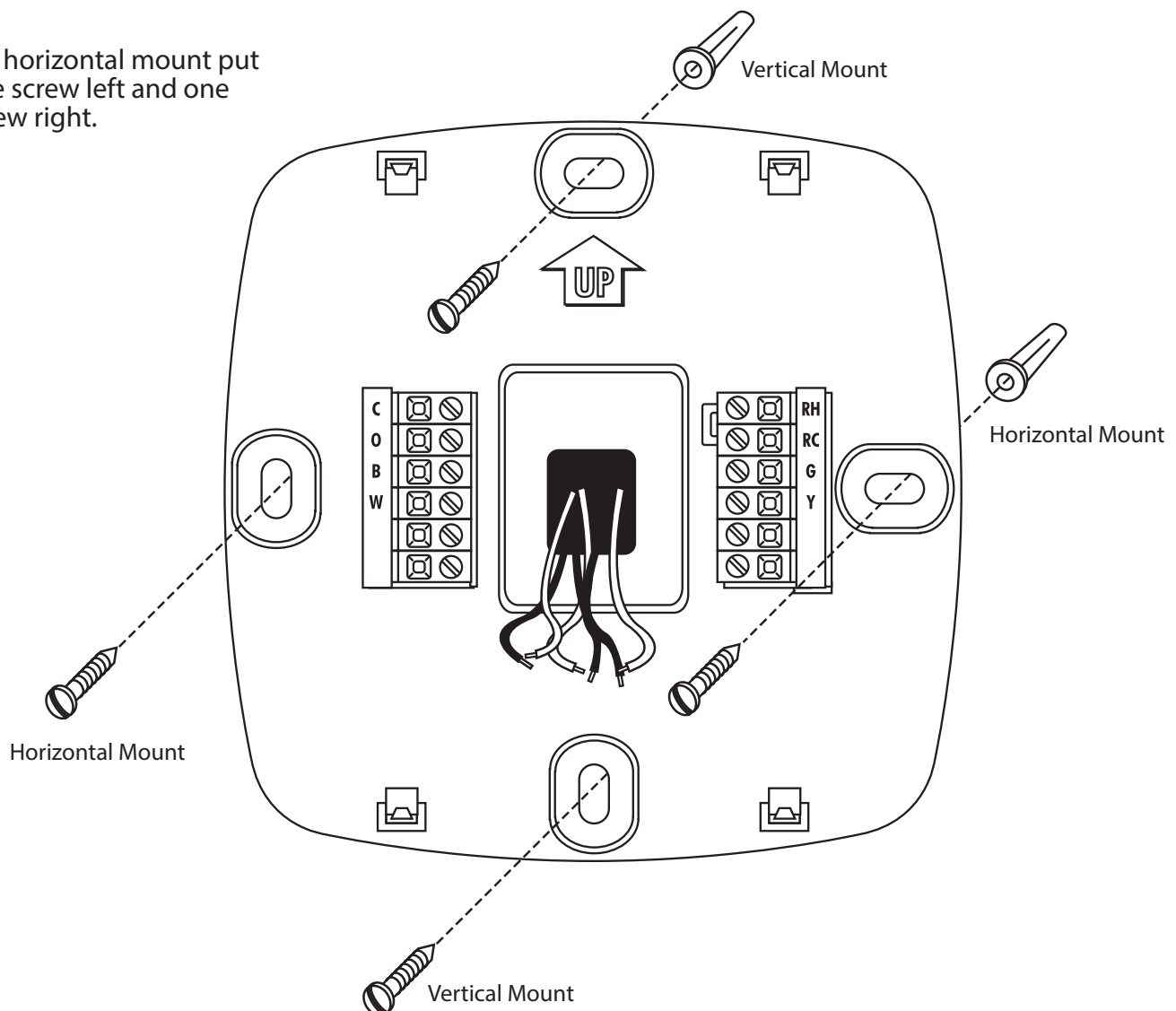
1. Power supply

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

3. Use either O or B terminals for changeover valve

4. Optional 24 VAC common connection when thermostat is hardwired with battery backup mode.
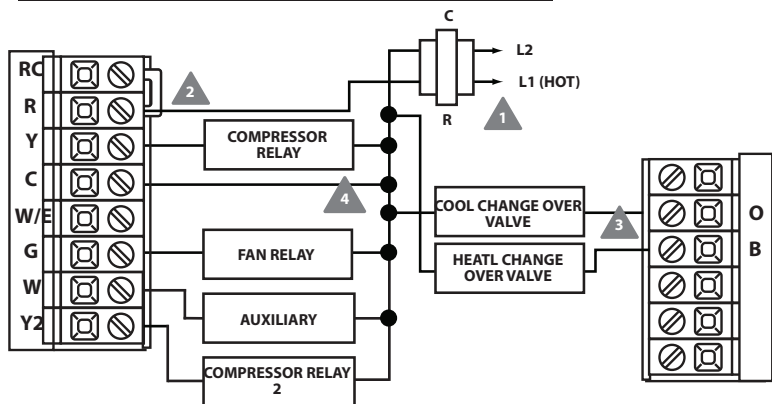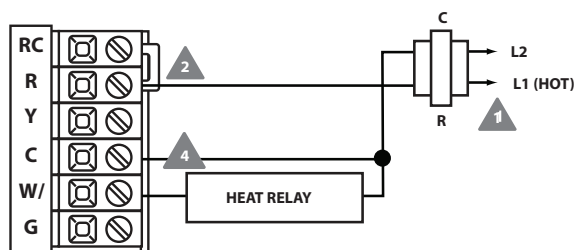
Typical 2H/2C system: 1 transformer
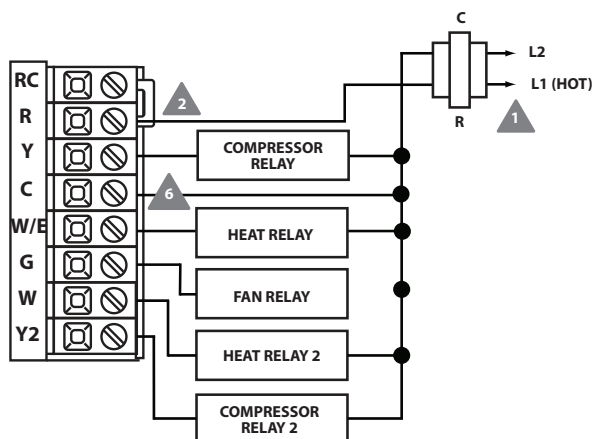
Typical 2H/2C system: 2 transformer
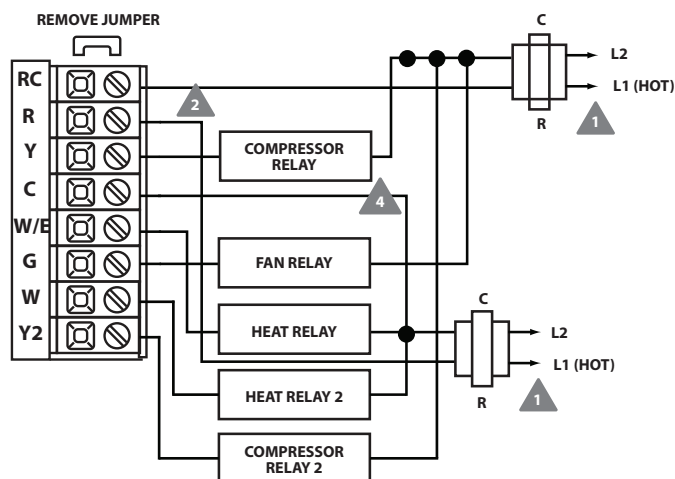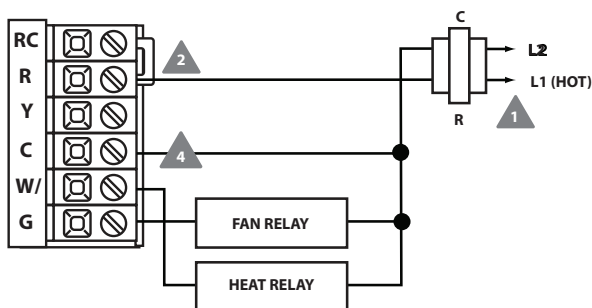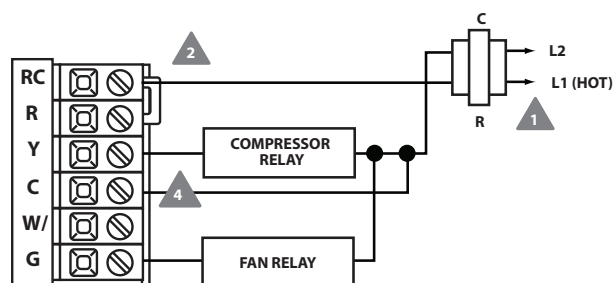

Typical 3H/2C heat pump system

Typical heat-only system

Typical heat-only system with fan

Typical cool-only system

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

Wiring

1. 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.

2. Loosen the terminal block screws. Insert wires then retighten terminal block screws.

3. Place nonflammable insulation into wall opening to prevent drafts.

Warning

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

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

Terminal Designations

This thermostat is shipped from the factory to operate a conventional heating and cooling system. This thermostat will also operate a heat pump system. See the "heat pump" configuration step on page 8 of this manual to configure the thermostat for heat pump applications.

Terminal	2 Heat 2 Cool Conventional System	2 Heat 2 Cool Heat Pump System	3 Heat 2 Cool Heat Pump System
RC	Transformer Power (cooling)	Transformer Power (cooling)	Transformer Power (cooling)
RH	Transformer Power (heating)	Transformer Power (heating)	Transformer Power (heating)
C	Transformer common	Transformer common	Transformer common
B	Energized in heating	Heat pump changeover valve energized in heating	Heat pump changeover valve energized in heating
O	Energized in cooling	Heat pump changeover valve energized in cooling	Heat pump changeover valve energized in cooling
G	Fan relay	Fan relay	Fan relay
W/E	First stage of heat	First stage of heat	Emergency heat relay
Y	First stage of cool	First stage of cool	First stage of heat & cool
Y2	Second stage of cool	Second stage of cool	Second stage of cool & second stage of heat
W2	Second stage of heat	Auxiliary heat relay, second stage of heat	Auxiliary heat relay, thirdstage of heat

Wiring Tip

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

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

Technician Setup Menu

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

1. Press and hold ⌈ + ⌉ & ⌈ - ⌉ buttons for 3 seconds. This 3-second delay is designed so that homeowners do not accidentally access the installer settings.

2. Configure the installer options as desired, using the table below.

3. Use the ⌈ + ⌉ or ⌈ - ⌉ keys to change settings and the SYSTEM or FAN key to move from one option to another. Note: To exit the Technician Setup options press and hold the ⌈ + ⌉ & ⌈ - ⌉ keys for 3 seconds.

Tech Setup Steps						
Filter Change Reminder	Room Temperature Calibration	Minimum Compressor On Time	Compressor Short Cycle Delay	Cooling Swing	Heating Swing	Keypad Lockout
This feature will flash "FILT" in the display after the elapsed run time to remind the user to change the filter. A setting of "OFF" will disable this feature.	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.	This feature allows the installer to select the minimum run 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.	The compressor short cycle delay protects the compressor from "short cycling". This feature will not allow the compressor to be turned on for 5 minutes after it was turned off.	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.	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.	Keypad lockout allows you to configure the thermostat so that none or some of the keys do not function.
LCD Will Show						
F1 SE FILTER OFF	0° F CALIBRATE	An On MIN COMP OFF	CO OF COMP dELAY OFF	0.5 COOL SWING	0.4 HEAT SWING	OF KEY LOCK
Adjustment Options						
You can adjust the filter change reminder from "OFF" to 2000 hours of runtime in 50 hour increments.	You can adjust the room temperature display to ready -4°F to +4°F above or below the factory calibrated reading.	You can select the minimum compressor run time from "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.	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.	The cooling swing setting is adjustable from ±0.2°F to 2°F. For example: A swing setting of 0.5°F will turn the cooling on at approximately 0.5°F above the setpoint and turn the cooling off at approximately 0.5°F below the setpoint.	The heating swing setting is adjustable from ±0.2°F to 2°F. For example: A swing setting of 0.5°F will turn the heating on at approximately 0.5°F below the setpoint and turn the heating off at approximately 0.5°F below the setpoint.	OF = keypad lockout has been disabled. PA = partial keypad lockout, which locks all the keys except the ⌈ + ⌉ or ⌈ - ⌉ keys. FU = Full keypad lockout, which locks out all the keys. Note: keypad lockout instructions are below.
Factory Default Setting						
OFF	0 °F	OFF	ON	0.5 °F	0.4 °F	0°F

Note: To lock the keypad hold down the **SYSTEM** and **FAN** keys for 3 seconds. You will see a lock in the display. To unlock the keypad hold down **SYSTEM** and **FAN** keys for 3 seconds.

Tech Setup Steps (Continued from the previous page)

Heating Temperature Setpoint Limit	Cooling Temperature Setpoint Limit	ºF or ºC	Fan Operation	Always On Light Menu Setup	Contractor Call Number On or Off	Contractor Call Number
This feature allows you to set a maximum heat setpoint value. The setpoint temperature cannot be raised above this value.	This feature allows you to set a minimum cool setpoint value. The setpoint temperature cannot be lowered below this value.	Select F for Fahrenheit temperature read out or select C for Celsius read out.	Select GAS for systems that control the fan during a call for heat. Select ELEC to have the thermostat control the fan during a call for heat.	The display light can be configured to stay on at all times or come on when any key is pressed. NOTE: HARDWIRED ONLY Keeping the display light continually "ON" will greatly reduce battery life.	Allows you to select whether or not you want to add your phone number to the thermostat display. You can choose ON or OFF.	Allows you to put you phone number in the display.

LCD Will Show

HE 90 HEAT LIMIT	CO 44 COOL LIMIT	Temperature 74º ºF F OR C SET	FAN SET GAS	dL ON ALWAYS ON LITE	PHONE NUM OFF	0000000000 CALL

Adjustment Options

Use the + or − key to select the maximum heat setpoint.	Use the + or − key to select the maximum cool setpoint.	ºF for Fahrenheit ºC for Celsius	GAS or ELEC	OFF configures display light to come on when the light key or any other key is pressed. ON configures the display to stay on. Use the + or − key to turn on or off.	If selected ON, you will see the input screen after pressing SYSTEM key and moving to the next step. See note below on operation.	Use the + key to step through each number left to right and the − key to cycle through each of the numbers.

Factory Default Setting

90ºF	44ºF	ºF	GAS	ON	OFF	0000000000

Note: If Contractor Call Number is selected ON, your phone number will 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.
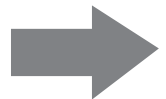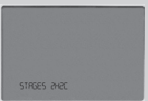
A Note About Auto Changeover:
If in Auto you have the ability to switch between Auto Heat or Auto Cool by pressing the System key. This can be done once the current mode has reached its setpoint. For example: if in Auto Heat, the heat setpoint must be satisfied before the thermostat will allow you to 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.

Tech Setup Steps (Continued from the previous page)
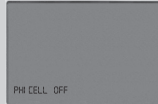
Beep	Heat Pump	System Switch	Gas Auxiliary for Heat Pump	Stages of Heat	Cooling Fan Delay
When any key is pressed an audible beep will sound. You can choose ON or an OFF.	When turned on the thermostat will operate a heat pump. 1. EM. Heat will show as an option in the system switch. 2. Y will be first stage of heat & cool, W/E will be emergency heat relay & W2 will be auxiliary heat relay.	You can configure the system switch for the particular application: Heat - Off- Cool Heat – Off, Cool – Off Heat – Off – Cool-Auto Note: EM. Heat will show if in heat pump mode.	Gas Auxiliary for Heat Pump This option will turn the heat pump off 45 seconds after the auxiliary heat relay turns on. For 2 heat applications, the first stage will turn off 45 seconds after the auxiliary stage turns on. For 3 heat applications, the first and second stage will turn off 45 seconds after the auxiliary stage turns on.	You can configure the thermostat to operate a 3 stage heat pump system. 2H 2C = 2 heat, 2 cool 3H 2C = 3 heat, 2 cool	The cooling fan delay setting will delay the fan from coming on in cool-mode and keep running after the compressor shuts off for a short time to save energy in some systems.

LCD Will Show

b bEEP ON	HEAT PUMP OFF	SYSTEM SET Heat Off Cool	A6 GAS AUX OFF	STAGES 2H2C	OF COOL FAN dL

Adjustment Options

If ON is selected the beep will sound. If OFF is selected there is no sound	OFF configures the thermostat for non heat pump systems. ON configures the thermostat for heat pump systems.	Use the [+] or [−] key until the desired application is flashing.	For heat pump systems that are "dual fuel" (use a gas furnace for auxiliary stage heat) you can turn this feature on to turn off the heat pump when the auxiliary stage of heating has been called for.	Use the [+] or [−] key to change between 2 heat and 3 heat. 2 heat will use Y1 as first stage and W2 as auxiliary. 3 heat will use Y1 as first stage, Y2 as second stage and W2 as auxiliary.	You can select the Cooling Fan Delay from "OFF", "15", "30", "60", or "90" seconds. If 15, 30, 60 or 90 is selected the fan will not turn on for that many seconds when there is a call for cool will run for that many seconds after satisfying a call for cool.

Factory Default Settings

ON	OFF	Heat – Off – Cool	OFF	2 Stages	OFF

Swing Setting Tip

The Second stage will turn on at 2x the swing setting. The second stage will turn off when the 1x the swing is reached. For example, if the swing setting is .8 degrees for heating and the thermostat is set at 70°F, the first stage will turn on at approximately 69.2°F. The second stage will turn on at 68.4°F. The second stage will turn off at 69.2°F and the first will turn off at 70.8°F. If third stage is used, it will turn on at 3x the swing and turn off at approximately 2x the swing.

Tech Setup Steps (Continued from the previous page)

Satisfy Setpoint	Staging Delay	Humidity Pad Reminder	UV Lamp Reminder	IAQ Cell Reminder
This feature allows the thermostat to keep multiple stages of heat or cool energized until setpoint is satisfied.	This feature allows a delay to occur when a second and third stage is needed. This allows the previous stage extra time to satisfy setpoint.	This will remind the user to change the humidity pad.	Will remind the user to change the UV light bulb.	Will remind the user to change the IAQ Cell after 25,000 hrs.

LCD Will Show

SS STAGING OFF	OF STAGING dL	HUM PAd OFF	UV LAMP OFF	PHI CELL OFF

Adjustment Options

| Use the + or − key to turn on or off. | Use the + or − key to select YES, 5, 10, 15, 30, 45, 60, 90. | Use the + or − key to select OFF, 600, 1000, 1500, 2000. | Use the + or − key to select OFF, 1YEAR, 2YEAR. | Use the + or − key to select OFF, 250. (Stands for 25000 hours) |

Factory Default Settings
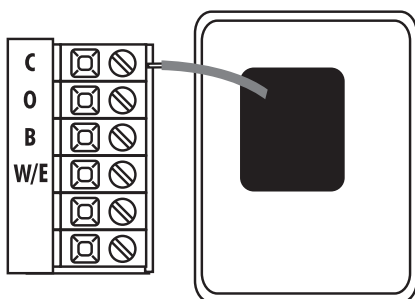
| OFF | OFF | OFF | OFF | OFF |

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.

Battery Installation

Battery installation is optional if thermostat is hardwired (C terminal connected).

On the back of the thermostat insert 2 AA Alkaline batteries (included).

Specifications

The display range of temperature	41ºF to 95ºF (5ºC to 35ºC)
The control range of temperature	44ºF to 90ºF (7ºC to 32ºC)
Load rating	1 amp per terminal, 1.5 amp maximum all terminals combined
Display accuracy	± 1ºF
Swing (cycle rate or differential)	Heating is adjustable from 0.2ºF to 2.0ºF
	Cooling is adjustable from 0.2ºF to 2.0ºF
Power source	18 to 30 VAC, NEC Class II, 50/60 Hz for hardwire (common wire)
	Battery power from 2 AA Alkaline batteries
Operating ambient	32ºF to +105ºF (0º to +41ºC)
Operating humidity	90% non-condensing maximum
Dimensions of thermostat	5.7"W x 4.4"H x 1.1"D