PRO1®

Pro1 Technologies
P.O. Box 3377
Springfield, MO 65808-3377

Toll Free: 888-776-1427
Web: www.pro1iaq.com
Hours of Operation: M-F 9AM - 6PM Eastern

T855S

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.

Thermostat Application Guide

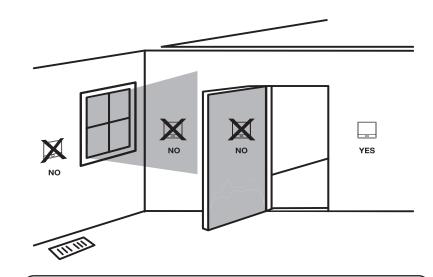| Description	
Gas or Oil Heat	Yes
Electric Furnace	Yes
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (With Aux. or Emergency Heat)	Yes
Multi-Stage Systems	Yes
Heat Only Systems	Yes
Cool Only Systems	Yes
Millivolt	Yes
Wired Remote Sensing	Yes

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.

Table of Contents

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.
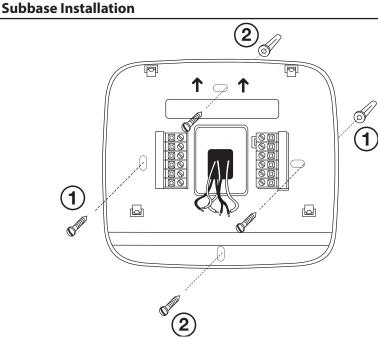
Rev. 1809

Subbase Installation

① Horizontal Mount — For horizontal mount put one screw on the left and one screw on the right.

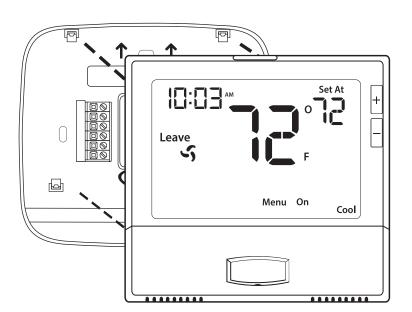② Vertical Mount — For vertical mount put one screw on the top and one screw on the bottom.

💡 **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.

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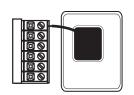
Note: To ensure a solid fit between the thermostat and the subbase:

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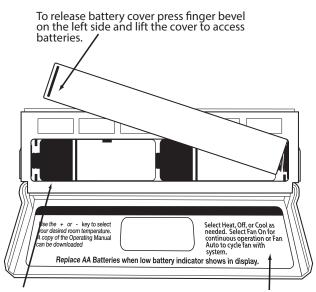4. Wires should be pushed into the wall

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.
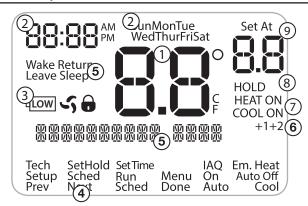
Important:

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

To release battery cover press finger bevel on the left side and lift the cover to access batteries.

Use the + or - key to select your desired room temperature. A copy of the Operating Manual can be downloaded

Select Heat, Off, or Cool as needed. Select Fan On for continuous operation or Fan Auto to cycle fan with system.

Replace AA Batteries when low battery indicator shows in display.

Insert 2 AA Alkaline batteries (included). High quality alkaline batteries are recommended.

Simple operating instructions are found on the back of the battery door.

Getting to know your thermostat

① **Indicates the current room temperature**

② **Time and day of the week / Outdoor Temperature if R251S is installed.**

③ **Low Battery Indicator:** Replace batteries when this indicator is shown.

④ **Program Menu Options:** Show different options during programming.

⑤ **Program Time Periods - Residential:** Uses 4 time periods - WAKE, RETURN, LEAVE & SLEEP. **Commercial:** Uses 2 or 4 time periods that appear in the text field - Occupied & Unoccupied.

⑥ **Staging Indicators:** +1 will appear in the display when second stage of heat or cool is on. +2 will appear for the third stage of heat.

⑦ **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).

⑧ **Hold:** is displayed when the thermostat program is permanently overridden.

⑨ **Setpoint:** Displays the user selectable setpoint temperature.

💡 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

⚠ 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

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 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.

Note:

In many heat pump systems with no emergency heat relay, a jumper can be installed between **E** and **W2** to turn thermostat into a single stage control for Emergency Heat Operation.

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. See the "heat pump" configuration step on page 17 of this manual to configure the thermostat for heat pump applications.
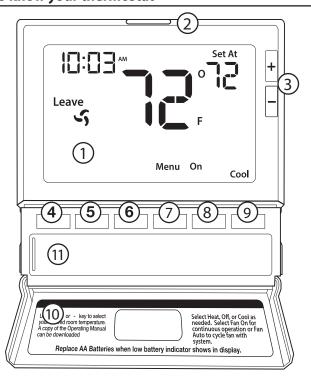
Terminal	2 Heat 2 Cool Conventional System	2 Heat 2 Cool Heat Pump System	3 Heat 2 Cool Heat Pump System
RC	Transformer power (cooling)	Transformer power (cooling)	Transformer power (cooling)
RH	Transformer power (heating)	Transformer power (heating)	Transformer power (heating)
C	Transformer common	Transformer 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 emergency heat	First stage of emergency heat
Y	First stage of cool	First stage of heat & 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, third stage of heat
S1/S2	Remote Sensor	Remote Sensor	Remote Sensor

Note:

Outdoor temperature sensor, Indoor temperature sensors, and Slab sensor wiring diagrams are located in R250S and R251S manuals. See page 18 in tech setup.

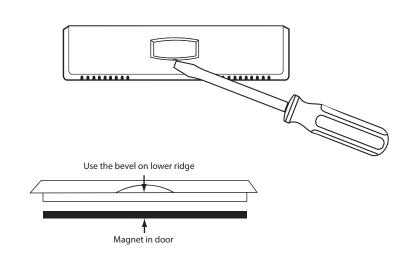## Thermostat Quick Reference

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

Private Label Badge

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.

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.**

Wiring Diagrams

1. **Power supply**
2. **Factory-installed jumper. Remove only when installing on 2-transformer systems**

Typical 2H/2C System: 1 Transformer

Typical Cool-Only System

Typical Heat Only System With Fan

Note:

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

Wiring Diagrams

3. **Use either O or B terminals for changeover valve**
4. **Optional 24 VAC common connection when thermostat is used in battery power mode**

Typical 2H/2C System: 2 Transformer

Typical Heat-Only System

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

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 SETUP** button for 3 seconds. This 3 second delay is designed so that homeowners do not accidentally access the installer settings.
3. Configure the installer options as desired using the table below.

   Use the [**+**] or [**-**] keys to change settings and the **NEXT STEP** or **PREV STEP** key to move from one step to another.
   Note: Only press the **DONE** key when you want to exit the Technician Setup options.
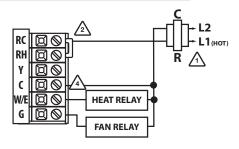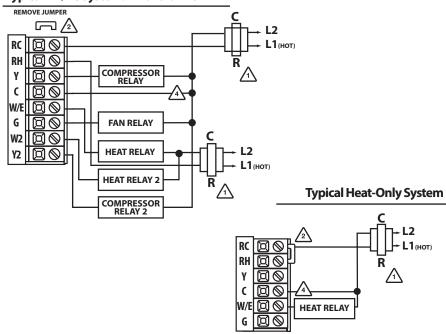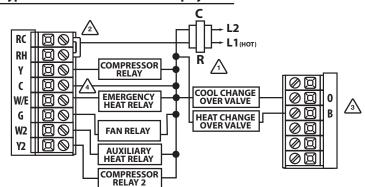
4. Press the **DONE** key to exit.

Tech Setup Steps		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.	OFF SE FILTER 0000	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 0° F CALIBRATE	You can adjust the room temperature display to read up to 4° above or below the factory calibrated reading.	0°F
Minimum Compressor On Time	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.	OFF ON AN MAIN COMP	You can set the minimum compressor run time to "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.	OFF

> **Keypad Lockout Note:** The selected keypad lockout functionality must be activated after exiting tech setup. If you do not perform this procedure, all keys will function freely. To lock the keypad hold down the [+] and [−] keys for 3 seconds. You will see a lock in the display. To unlock the display hold down the [+] and [−] keys for 3 seconds.

13

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Compressor Short Cycle Delay	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 last turned off.	ON OF CO 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 "OF" to remove this delay.	ON
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.	dFCO 0.5 COOL SWING	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°
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.	dFHE 0.4 HEAT SWING	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°
Keypad Lockout	Keypad lockout allows you to configure the thermostat so that some or all of the keys don't function.	PA KEY LOCK	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. See Keypad Lockout Note	OF

> **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.

14

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Heat Pump	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.	OFF HEAT PUMP	OFF configures the thermostat for non heat pump systems. ON configures the thermostat for heat pump systems.	OFF
System Set	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.	HEAT OFF COOL SYSTEM SET	Use the [+] or [−] key until the desired application is flashing. AUTO= (Auto Changeover)	HEAT OFF COOL
Dual Fuel Auxiliary for Heat Pump *Will only appear if Heat Pump setting is turned ON*	For Dual Fuel applications (Gas/Fossil fuel Auxiliary Heat), turn this setting ON to LOCKOUT the Heat Pump (Y) when Auxiliary Heat (W2) is on. If desired - This can also be used with Electric Auxiliary.	ON AG GAS AUX	**OFF** Will allow Y(1st stage of Heat) and W2 (Aux Heat) to run together if called for. **ON** Will de-energize Y terminal 45 seconds after a call for Auxiliary Heat (W2).	OFF
Stages of Heat	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 This feature is shown only if the HEAT PUMP technician setup step is ON.	2H2C	Use the [+] or [−] key to change between 2 or 3 stages of heat. 2 heat will use Y1 as first stage and W2 as auxiliary. 3 heat will use Y1 as the first stage, Y2 as the second stage and W2 as the auxiliary.	2 STAGES

> **A Note about IAQ Mode**
> This programmable/selectable mode will operate the fan 1-4 cycles per hour, 1-45 minutes per cycle. Once programmed in tech setup, to enable this mode select "IAQ" with the fan key. Disable this mode by selecting "ON" or "AUTO" with the fan key.

17

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
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.	OFF COOL FAN DL	You can set the cooling fan delay to 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 and will run for that many seconds after satisfying a call for cool.	OFF
IAQ Mode Cycle	This feature will configure the fan to run a selected number of cycles per hour. Note: This mode can be enabled or disabled at anytime during normal operation by selecting IAQ mode with the fan key.	OFF IAQ MODE CYCLE	Select OFF, 1, 2, 3 or 4 with the [+] or [−] keys. This sets the number of cycles per hour that the IAQ fan mode will operate.	OFF
IAQ Mode Minutes	This allows you to select the minimum number of minutes that the fan will run per IAQ mode cycle. The thermostat will keep track of fan runtime from normal heat and cool operation. If additional fan runtime is needed, the thermostat will run the fan to satisfy the IAQ mode minutes.	1 IAQ MODE MINUT	Select 1, 5, 10, 15, 20, 30 or 45 minutes. When IAQ fan mode is enabled, it will ensure the fan runs at least the selected number of minutes per IAQ Mode Cycle. This step will not appear if previous step is set to "OFF".	1
Remote Sensor Operation	You can configure the thermostat for one of three remote sensor applications: 0 No Sensor, 1 Indoor, 2 Outdoor, 3 Floor.	1 REMOTE MODE	Use the [+] or [−] keys to select one of three options. View the S1/S2 terminal chart on next page for an explanation of these options.	0
Local Temp Sensor	You can disable the sensor on the T855S thermostat. At least one R251S indoor remote sensor must be connected to disable the local T855S sensor. **Note:** Will only show if remote sensor is set to 1.	ON LOCAL TEMP	ON enables local T855S sensor. OFF disables local T855S sensor.	ON
Number of Indoor Remotes	Enables the use of up to sixteen indoor sensors R251S. **Note:** Will only show Remote Sensor is set to 1 and Local Temp Sensor is set to on.	1 NUMBER OF REMO	You can use 1, 4, 9, or 16 indoor sensors. Refer to the R251S Install Manual for detailed connection information.	ON

18

Tech Setup Steps	LCD Will Show	Adjustment Options	Default
Heating Temperature Setpoint Limit	90 HE	Use the + or − key to select the maximum heat setpoint.	90°F
Cooling Temperature Setpoint Limit	44 CO	Use the + or − key to select the minimum cool setpoint.	44°F
°F or °C	of 78°F	°F for Fahrenheit °C for Celsius	°F
12 or 24 Hour Clock	12H	Use the + or − key to select 12 or 24 hour clock.	12 HOUR CLOCK
Fan Operation	ELE	GAS or ELEC	GAS
Morning Recovery	on MORN RECOV	Use the + or − key to turn on or off.	ON
Program Options	5d PROGRAM	Use the + or − key to select **7d** for 7 day, **5d** for 5+1+1, or **0d** for nonprogrammable.	5d
Time Periods	4 4 TIME PERIODS	Use the + or − key to select **4**, **2c**, or **4c** time periods per day.	4

Feature descriptions:
- **Heating Temperature Setpoint Limit**: This feature allows you to set a maximum heating setpoint limit. The setpoint temperature cannot be raised above this value.
- **Cooling Temperature Setpoint Limit**: This feature allows you to set a minimum cooling setpoint limit. The setpoint temperature cannot be lowered below this value.
- **°F or °C**: This feature allows you to display temperatures in either Fahrenheit or Celsius.
- **12 or 24 Hour Clock**: You can select either a 12 or 24 hour clock setting.
- **Fan Operation**: 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. **Note:** If heat pump is set to "ON" this step will not show, and will default to ELEC.
- **Morning Recovery**: This feature will start heating early to bring the building temperature to its programmed setpoint by the beginning of the WAKE, OCCUPIED time period.
- **Program Options**: You can configure this thermostat to have a 7 day program, a 5+1+1 program or as nonprogrammable.
- **Time Periods**: You can configure this thermostat to have 2 or 4 programmable time periods per day. 4 time periods are Wake, Leave, Return & Sleep. 2C time periods are Occupied & Unoccupied. 4C time periods are Occupied 1, Unoccupied 1, Occupied 2, & Unoccupied 2.

Tech Setup Steps	LCD Will Show	Adjustment Options	Default
Pre-Occupancy Fan	OFF PRE OCCUPY FAN	You can select the pre-occupancy fan from OFF, 1, 2, or 3 hours. If 1, 2, or 3 is selected, the fan will turn on that many hours prior to the scheduled occupied time period.	OFF
Display Light	on dL	Use the + or − key to to turn on or off. OFF configures the display light to come on when the light key or any button is pressed. ON configures the display light to stay on.	OFF
Contractor Call Number	OFF	If selected ON, you will see the input screen after pressing **NEXT STEP**. Use the + or − key to select the desired number and the **FAN** or **SYSTEM** key to move from one character to another. See note below for operation.	OFF
Beep	on b	If ON is selected the beep will sound. If OFF is selected there is no sound.	ON

Feature descriptions:
- **Pre-Occupancy Fan**: The pre-occupancy fan settings will energize the fan before the occupied time to provide ventilation prior to scheduled occupancy. This feature only shows if the technician setup step for time periods is set to 2C or 4C.
- **Display Light**: The display light can be configured to stay on all the time or come on when any key is pressed. NOTE: HARDWIRE ONLY Keeping the display light continually "ON" will greatly reduce battery life.
- **Contractor Call Number**: Allows you to put your phone number in the display. You can choose ON or OFF.
- **Beep**: When any key is pressed an audible beep will sound. You can choose ON or OFF.

Contractor Call Number Note
If contractor call number is selected ON, the phone number entered 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.

Tech Setup Steps	LCD Will Show	Adjustment Options	Default
Balance Point Temp Only shows if Heat Pump is turned ON and Remote Sensor is set to 2. *Requires Outdoor Sensor*	no bAL PoINT	Use the + or − key to select NO (to not use this feature), or 10, 20, 30, 35, 40, 45, or 50 degrees.	NO

Feature description:
An outdoor temperature **ABOVE** this setting will LOCKOUT the auxiliary heat terminal (W2), and ONLY ALLOW the heat pump/compressor terminals (Y's) to energize.

An outdoor temperature **BELOW** this setting can perform 2 different ways, depending on the previous *Gas Aux/Dual Fuel setting.*

1. If Gas Aux/Dual Fuel is set **OFF** (Default-typical Electric Aux setting) This will allow both heat pump (Y's) and auxiliary heat (W2) to run together.

2. If Gas Aux/Dual Fuel is set **ON** (typical Gas Auxilary/Dual Fuel setting) This will LOCKOUT the heat pump (Y's) and ONLY ALLOW the auxiliary heat (W2) to energize

S1 / S2 Terminal

Options	Mode	Description	Requires
1	Indoor	The local and remote temperatures are averaged.	R251S
2	Outdoor	The outdoor temperature is flashed in clock.	R250S
3	Floor	The floor temperature is shown in tech.	R250S

Tech Setup Steps	LCD Will Show	Adjustment Options	Default
Balance Point Run Time	no bAL RUN TIME	15, 30, 45, 60, 75, 90 minutes NO	NO
Floor Temperature	1 76 FLOORTEMP	N/A	NA
Floor High Limit	86 HIGH LIMIT	Use the + or − keys to select the High Limit for the floor sensor. 35 - 120 degrees.	86
Floor Low Limit	50 LO LIMIT	Use the + or − keys to select the Low Limit for the floor sensor. 35 - 120 degrees.	50

Feature descriptions:
- **Balance Point Run Time**: Balance point run time will allow the W2 auxiliary terminal to energize even if outdoor temperature is above selected balance point temperature. If enabled, auxiliary will energize for the current cycle after the balance point run time has expired. **Note:** Only shows if Balance Point is set to an outdoor temperature.
- **Floor Temperature**: The temperature of the floor sensor will be displayed. **Note:** Only shows when REOP is set to 3.
- **Floor High Limit**: This setting allows you to set a maximum floor temperature limit for heat. Heat will be locked out when the floor temperature is above this value. **Note:** Only shows when REOP is set to 3.
- **Floor Low Limit**: This setting allows you to set a minimum floor temperature limit for heat. Heat will turn on automatically when the floor temperature is below this value. **Note:** Only shows when REOP is set to 3.

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Satisfy Setpoint	This feature allows the thermostat to keep multiple stages of heat or cool energized until the setpoint is satisfied.	ON SS STAGING	Use the + or − key to turn on or off.	OFF
Staging Delay	This feature allows a delay to occur if an additional stage is needed. This allows the previous stage extra time to satisfy the setpoint. **Note:** Will not show if using outdoor sensor with balance point temperature.	5 STAGING d1	Use the + or − key to select OFF, 5, 10, 15, 30, 45, 60, or 90 minutes.	OFF
Humidity Pad Reminder	Enables a reminder for the user to change the humidity pad.	OFF HUM PAD 2000	Use the + or − key to select OFF, 600, 1000, 1500, or 2000. These represent hours of heat operation.	OFF
UV Lamp Reminder	Enables a reminder for the user to change the UV light bulb.	OFF UV LAMP 00000	Use the + or − key to select OFF, 1YEAR, 2YEAR.	OFF
IAQ Cell Reminder	Enables a reminder for the user to change the PHI Cell after 25,000 hrs.	250 IAQ CELL 25000	Use the + or − key to select OFF, or 250 (stands for 25,000 hours).	OFF

Reminders
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.

Staging Delay Note: This step will not appear if using an outdoor balance point temperature.

Set Time

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

1. Press the **MENU** button.

2. Press **SET TIME.**

3. Day of the week is flashing. Use the [+] or [−] key to 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 [+] or [−] 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 24.

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. For the 7-day and 5+1+1 programming modes, there are three time period options.

1. "4" Residential **(WAKE, LEAVE, RETURN, SLEEP)**

2. "2C" Commercial **(OCCUPIED, UNOCCUPIED)**

3. "4C" Commercial **(OCCUPIED 1, UNOCCUPIED 1, OCCUPIED 2, UNOCCUPIED 2)**

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

Custom Program				
Day of the Week	**Events**	**Time**	**Setpoint Temperature (HEAT)**	**Setpoint Temperature (COOL)**
Weekday	Wake/OCC1			
	Leave/UNOCC1			
	Return/OCC2			
	Sleep/UNOCC2			
	Occupied			
	Unoccupied			
Saturday	Wake/OCC1			
	Leave/UNOCC1			
	Return/OCC2			
	Sleep/UNOCC2			
	Occupied			
	Unoccupied			
Sunday	Wake/OCC1			
	LeaveUNOCC1			
	Return/OCC2			
	Sleep/UNOCC2			
	Occupied			
	Unoccupied			

Set Program Schedule For Four Time Periods
(WAKE, LEAVE, RETURN, SLEEP or OCCUPIED 1, UNOCCUPIED1, OCCUPIED 2, UNOCCUPIED 2)

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.

2. 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/OCC1** icon is shown. You are now programming the **WAKE/OCC1** time period for the weekday setting.

4. Time is flashing. Use the [+] or [−] key to make your time selection for the weekday **WAKE/OCC1** 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 [+] or [−] key to make your setpoint selection for the weekday **WAKE/OCC1** period.

7. Press **NEXT.**

8. Repeat steps 4 through 7 for the weekday **LEAVE/UNOCC1** time period, for the weekday **RETURN/OCC2** time period, and for the weekday **SLEEP/UNOCC2** time period.

Saturday:

Repeat steps 4 through 7 for the Saturday **WAKE/OCC1** time period, for the Saturday **LEAVE/UNOCC1** time period, for the Saturday **RETURN/OCC2** time period, and for the Saturday **SLEEP/UNOCC2** time period.

Sunday:

Repeat steps 4 through 7 for the Sunday **WAKE/OCC1** time period, for the Sunday **LEAVE/UNOCC1** time period, for the Sunday **RETURN/OCC2** time period, and for the Sunday **SLEEP/UNOCC2** time period.

Default Programming

Default Programming

Factory Default Program				
Day of the Week	**Events**	**Time**	**Setpoint Temperature (HEAT)**	**Setpoint Temperature (COOL)**
Weekday	Wake/OCC1	6 AM	70˚F (21˚C)	75˚F (24˚C)
	Leave/UNOCC1	8 AM	62˚F (17˚C)	83˚F (28˚C)
	Return/OCC2	6 PM	70˚F (21˚C)	75˚F (24˚C)
	Sleep/UNOCC2	10 PM	62˚F (17˚C)	78˚F (26˚C)
Saturday	Wake/OCC1	6 AM	70˚F (21˚C)	75˚F (24˚C)
	Leave/UNOCC1	8 AM	62˚F (17˚C)	83˚F (28˚C)
	Return/OCC2	6 PM	70˚F (21˚C)	75˚F (24˚C)
	Sleep/UNOCC2	10 PM	62˚F (17˚C)	78˚F (26˚C)
Sunday	Wake/OCC1	6 AM	70˚F (21˚C)	75˚F (24˚C)
	LeaveUNOCC1	8 AM	62˚F (17˚C)	83˚F (28˚C)
	Return/OCC2	6 PM	70˚F (21˚C)	75˚F (24˚C)
	Sleep/UNOCC2	10 PM	62˚F (17˚C)	78˚F (26˚C)

Factory Default Program for 2 Time Periods				
Day of the Week	**Events**	**Time**	**Setpoint Temperature (HEAT)**	**Setpoint Temperature (COOL)**
Weekday	OCCUPIED	8 AM	70˚F (21˚C)	78˚F (26˚C)
	UNOCCUPIED	6 PM	62˚F (17˚C)	83˚F (28˚C)
Saturday	OCCUPIED	8 AM	70˚F (21˚C)	78˚F (26˚C)
	UNOCCUPIED	6 PM	62˚F (17˚C)	83˚F (28˚C)
Sunday	OCCUPIED	8 AM	70˚F (21˚C)	78˚F (26˚C)
	UNOCCUPIED	6 PM	62˚F (17˚C)	83˚F (28˚C)

You can use the table on the next page to plan your customized program schedule if using 5+1+1.

To customize your 7 day 4 time period 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/OCC1** icon is shown. You are now programming the **WAKE/OCC1** time period for that day.

4. Time is flashing. Use the ⊞ or ⊟ key to make your time selection for that day's **WAKE/OCC1** 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 ⊞ or ⊟ key to make your setpoint selection for that day's **WAKE/OCC1** period.

7. Press **NEXT**.

8. Repeat steps 4 through 7 for that day's **LEAVE/UNOCC1** time period, for that day's **RETURN/OCC2** time period, and for that day's **SLEEP/UNOCC2** 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: 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.

Set Program Schedule For Two Time Periods (OCCUPIED, UNOCCUPIED)

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

Weekday:

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-Friday is displayed and the **OCCUPIED** text is shown. You are now programming the **OCCUPIED** time period for that day.

4. Time is flashing. Use the ⊞ or ⊟ key to make your time selection for the weekday **OCCUPIED** 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 ⊞ or ⊟ key to make your setpoint selection for the weekday **OCCUPIED** period.

7. Press **NEXT**.

8. Repeat steps 4 through 7 for the weekday **UNOCCUPIED** time period.

Saturday:
Repeat steps 4 through 7 for the Saturday **OCCUPIED** time period and for the Saturday **UNOCCUPIED** time period.

Sunday:
Repeat steps 4 through 7 for the Sunday **OCCUPIED** time period, and for the Sunday **UNOCCUPIED** time period.

Programming

To customize your 7 day 2 time period program schedule, follow these steps:

Monday:

1. Select **HEAT** or **COOL** with the **SYSTEM** key.
   Note: You have to program heat and cool each seperately.

2. Press the **MENU** button (If menu does not appear first press **RUN SCHED**).

3. Press **SET SCHED**. **Note:** Monday is displayed and the **OCCUPIED** text is shown. You are now programming the **OCCUPIED** time period for that day.

4. Time is flashing. Use the [**+**] or [**−**] key to make your time selection for that day's **OCCUPIED** 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 [**+**] or [**−**] key to make your setpoint selection for that day's **OCCUPIED** period.

7. Press **NEXT**.

8. Repeat steps 4 through 7 for that day's **UNOCCUPIED** time period.

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

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. If using **IAQ** mode, set fan to **IAQ** for any time period.

Features

Filter Change & Other Reminders

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 require an air filter change.

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.

Use the + or − key to select
your desired room temperature.
A copy of the Operating Manual
can be downloaded.

Select Heat, Off, or Cool as
needed. Select Fan On for
continuous operation of Fan.
Auto to cycle fan with
system.

Replace AA Batteries when low battery indicator shows in display.

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

Temporary & Permanent Hold Feature

Temporary Hold: The thermostat will display **HOLD** and **RUN SCHED** on the bottom of the screen when you press the [**+**] or [**−**] key. If you do nothing, the temperature will remain at this setpoint temporarily for 4 hours. The program setpoint will then replace the temporary setpoint.

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 SCHED** key at the bottom of the screen to exit temporary and permanent holds.

Remote Sensor Operation

Remote Sensor Operation Options

Option #1 - Indoor / Local Temperature Sensor "ON":

1. The displayed room temperature will display the average temperature of the thermostat and all remote sensors.

2. By pressing the far left (Prev Step) button, the average temperature of just the remote sensor(s) will be displayed briefly in the clock field.

Option #1 - Indoor / Local Temperature Sensor OFF":

1. The displayed room temperature will only show the average temperature of the remote sensor(s).

Option #2 - Outdoor:

1. The outdoor temperature will alternate briefly with the clock display.

Option #3 (Floor)

1. By pressing the far left (Prev. Step) button, the temperature of the floor sensor will be displayed briefly in the clock field.

Specifications

Specifications

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 source	18 to 30 VAC, NEC Class II, 50/60 Hz for hardwire Battery power from 2 AA Alkaline batteries
Operating ambient	32˚F to +105˚F (0˚C to +41˚C)
Operating humidity	90% non-condensing maximum
Dimensions of thermostat	4.7"W x 4.3" H x 0.9"D