

PRO¹ T925

Pro1 Technologies, Inc.

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

Thermostat Applications Guide

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

Power Type

Battery Power

Hardwire (Common Wire)

Hardwire (Common Wire) with Battery Backup

Table of Contents

Page

Installation Tips	2
Thermostat Quick Reference	3
Subbase Installation	4
Wiring	5
Technician Setup Menu	6-8
Mounting and Battery Installation	9
Programming The Thermostat	10-12
Specifications	13

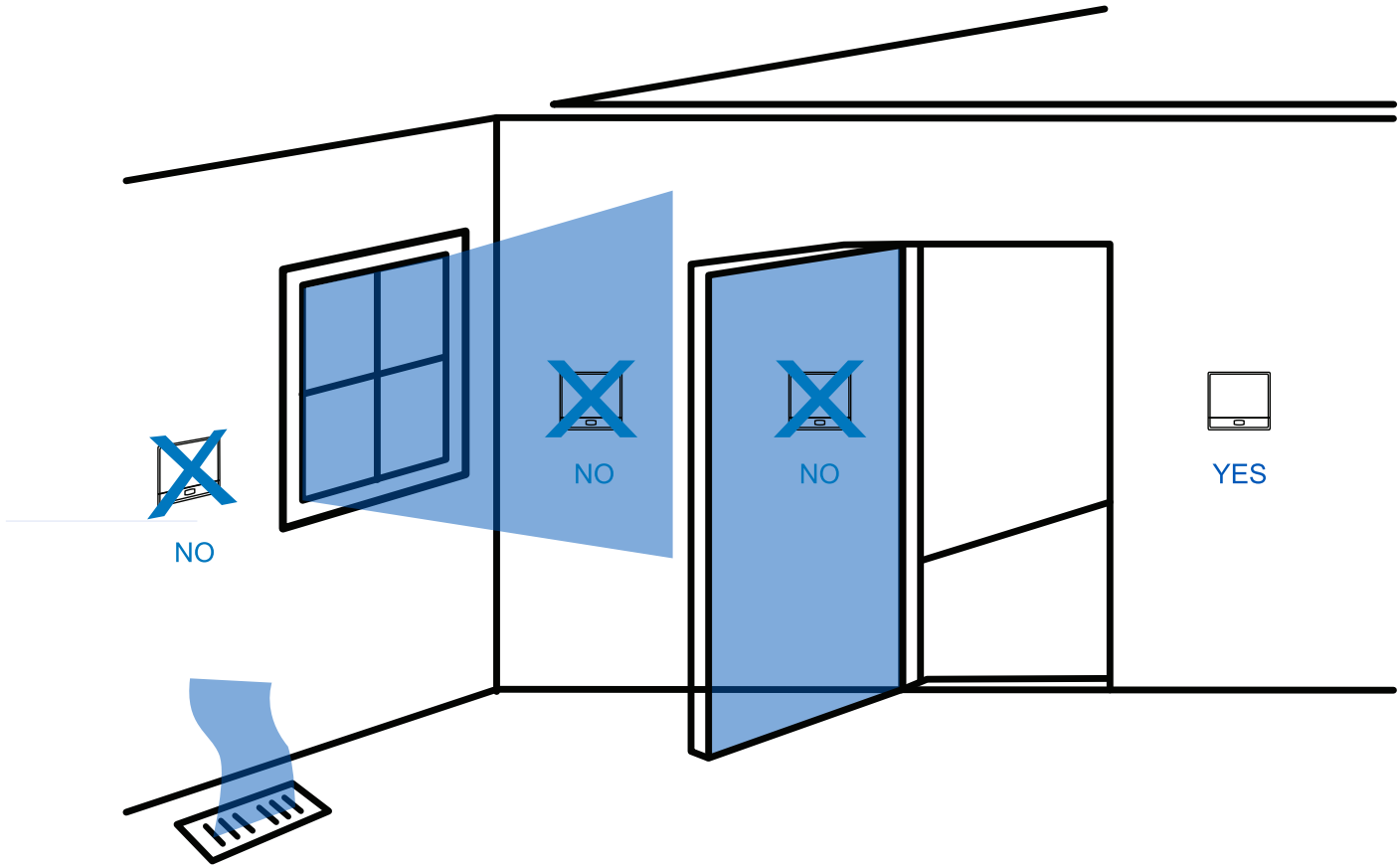
A trained, experienced technician must install this product.

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.



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
- Where appliances could radiate heat

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.

INSTALLATION MANUAL

THERMOSTAT QUICK REFERENCE

Getting to know your thermostat



- ② Glow in the Dark Light Button
- ③ Fan Button
- ④ System Button
- ⑤ Temperature Setpoint Buttons
- ⑥ Menu Button



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 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.

① LCD

Days of the week and time

Indicates the current room temperature.

Displays the user selectable setpoint temperature.

HOLD is displayed when thermostat program is permanently overridden.

COOL HEAT FAN

System operation indicators: The COOL, HEAT or FAN icon will display when the COOL, HEAT or FAN is on. EM.HEAT is only used if heat pump is inoperable.

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.

+1 will appear in the display when second stage of heat or cool is on.

+2 will appear in the display when third stage of heat is on.

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

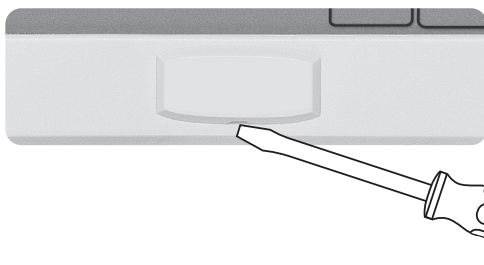
Programmable Time Period Icons: This thermostat has 4 programmable time periods per day.

Clean Display: Pressing CLEAN DISPLAY will allow 30 seconds to clean the display. The keys will be inoperable during this time. CLEAN will appear if your contractor has programmed a filter change reminder. Press CLEAN when filter has been replaced to reset the filter change reminder timer.

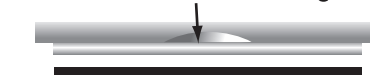
Program Menu Options Shows different options during programming.

Mon Tue Wed Thu Fri Sat Sun
AM PM
Set At
Temperature
WAKE LEAVE RETURN SLEEP
Clean Display
Technician Setup Next Step Set Time Fun Schedule Set Schedule Hold Previous Step Menu Done Auto On IAQ Mode

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. The badge should pry off easily. **Do not use force.**

About the private label badge

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



Caution: Electrical Hazard

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

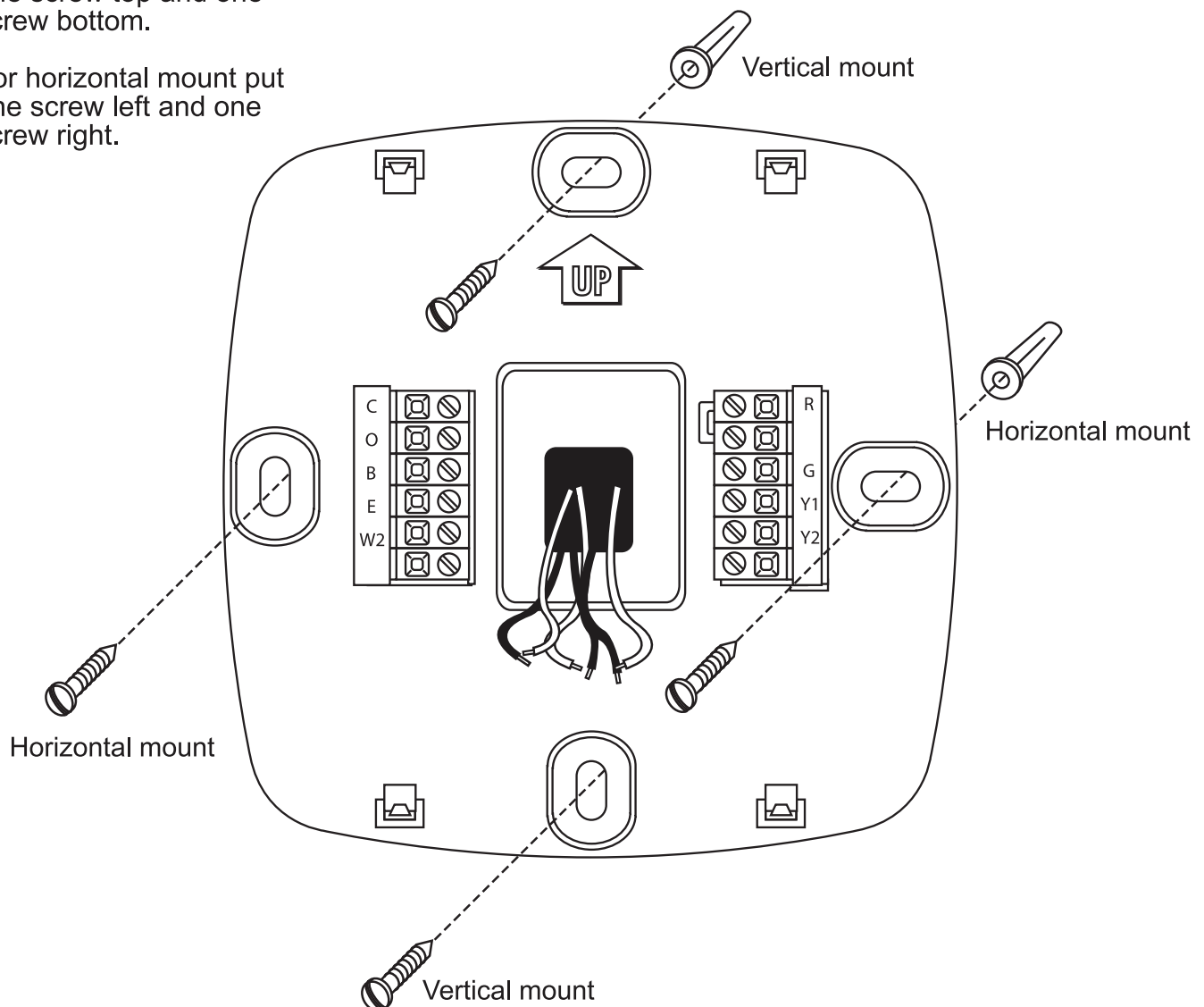


Mercury Notice:

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.

For vertical mount put one screw top and one screw bottom.

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



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 Code.

L Terminal:

If the "L" terminal is used then the "C" terminal must be connected.

Note:

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

Terminal Designations

This thermostat is shipped from the factory to operate a 2 heat, 2 cool heat pump system. This thermostat will also operate a 3 heat, 2 cool heat pump system if the first and second stage of heating is from the compressor(s). See the "stages of heat" configuration step on page 8 of this manual to configure the thermostat for 3 heat applications.

Terminal	2 Heat, 2 Cool Configuration	3 Heat, 2 Cool Configuration
R	Transformer power	Transformer power
C	Transformer common	Transformer common
B	Heat pump changeover valve energized in heating	Heat pump changeover valve energized in heating
O	Heat pump changeover valve energized in cooling	Heat pump changeover valve energized in cooling
G	Fan relay	Fan relay

Terminal	2 Heat, 2 Cool Configuration	3 Heat, 2 Cool Configuration
E	Emergency heat relay	Emergency heat relay
Y1	First stage of heat & cool	First stage of heat & cool
Y2	Second stage of cool	Second stage of cool & second stage of heat
W2	Auxiliary heat relay, second stage of heat	Auxiliary heat relay, third stage of heat
L	Malfunctioning light	Malfunctioning light

Brand	24V Common	24V Hot	Changeover in Cooling	Changeover in Heating	Fan	Emergency Heat	Compressor	Auxiliary Heat	Malfunction Light
Pro1	C (optional)	R	O	B	G	E	Y	W2	L
Arco/Snyder	C	R	O		G	E	Y	W1	X
B.D.P.	C	R	O		G	E	Y	W1	F
Carrier	C	R	O		G	E	Y	W2	L
Coleman	BLCK	RED	V		G		Y	W2	
G.E.	B	R	O		G	X2	Y	W	
Heil-Quaker	B	R	O		G		Y	W2	
Honeywell	C	R	O	B	G	E	Y	Aux	L
Janitrol	C	R	O		G	E	Y	W2	
Lennox	X	V/VR	R		F	E	M	Y	L
Magic Chef	C	R	O		G	E	Y	W	
Rheem	X	R		B	G	E	Y	W2	L
Ruud	X	R		B	G	E	Y	W2	L
Trane	B	R	O		G	X2	Y	W	F
Weatherking	C	R	Y1		G		W1	E	
Wesco	C	R	Y1		G	E	W1	W2	
Westinghouse	X	R/V	O	Z	G/F	E	Y/C	W/H2	
White-Rodgers	C	R	O	B	G	E	Y	W2	L
York	B	R	O		G		Y	W	

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 MENU button
2. Press and hold TECHNICIAN 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 PREVIOUS STEP key to move from one option to another. Note: Only press DONE key when you want to exit the Technician Setup options.

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 last 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						
						
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 ±0.4°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 ±0.4°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 above the setpoint.	Pick PA or FU 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 Settings						
OFF	0 °F	OFF	ON	0.8 °F	0.8 °F	PA

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

TECH SETUP
STEPS CONTINUED
ON THE NEXT PAGE



Tech Setup Steps (Continued from the previous page)

Heating Temperature	Cooling Temperature	°F or °C	12 or 24 Hour Clock	Morning Recovery	Program Options	Display Light
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	You can select either a 12 or 24 hour clock setting.	This feature turns your system on before the WAKE programming time to ensure the environment is at the WAKE setpoint when the WAKE time period begins. This recovery changes over time based on the previous days experience.	You can configure this thermostat to have a 7 day program, a 5+1+1 program or nonprogrammable.	The display light can be configured to come on when any key is pressed or only when the light key is pressed.
LCD Will Show						
						
Adjustment Options						
Use the ◀ or ▶ key to select the maximum heat setpoint.	Use the ◀ or ▶ key to select the minimum cool setpoint.	°F for Fahrenheit °C for Celsius	Use the ◀ or ▶ key to select 12 or 24 hour clock.	Use the ◀ or ▶ key to turn on or off.	Use the ◀ or ▶ key to select 7d for 7 day, 5d for 5+1+1, or 0d for nonprogrammable.	OFF configures display light to come on only with the light key, which will save battery power. ON configures the display light to come on when any key is pressed.
Factory Default Settings						
90 °F	44 °F	°F	12 Hour Clock	ON	5d	ON

TECH SETUP
STEPS CONTINUED
ON THE NEXT PAGE



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 69.0°F. The second stage will turn off at 69.5°F and the first will turn off at 70.5°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)

Contractor Call Number	Beep	System Switch	Gas Auxiliary for Heat Pump	Stages of Heat	Satisfy Setpoint	Staging Delay
Allows you to put your phone number in the display. Select ON to use this feature then press NEXT STEP .	When any key is pressed an audible beep will sound. There is an ON or an OFF .	You can configure the system switch for the particular application: Heat Off Cool Em Heat or Heat Off Cool Auto Em Heat	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 heating system. 2H 2C = 2 heat, 2 cool 3H 2C = 3 heat, 2 cool	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 needed. This allows the previous stage extra time to satisfy setpoint.
LCD Will Show						
Adjustment Options						
Use the ◀ or ▶ key to move from one character to another. Use the ▲ or ▼ key to change the flashing character to your desired number.	If ON is selected the beep will sound. If OFF is selected, there is no sound.	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.	Use the + or - key to turn on or off.	Use the + or - key to select OFF, 5, 10, 15, 30, 45, 60, 90.
Factory Default Settings						
OFF	ON	Heat - Off - Cool	OFF	2 heat stages	OFF	OFF

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.

INSTALLATION MANUAL

MOUNT THERMOSTAT & BATTERY INSTALLATION

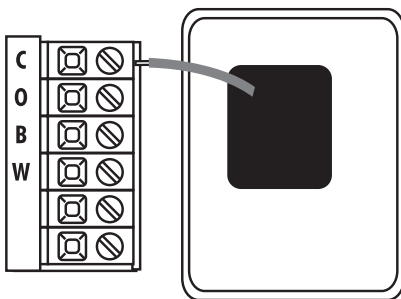
Mount Thermostat

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).

Set Time

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

1. Press MENU
2. Press SET TIME
3. Day of the week will be flashing. Use the or key below the time setting to select the current day of the week.
4. Press NEXT STEP
5. The current hour is flashing. Use the or key below the time setting 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 STEP
7. Minutes are now flashing. Use the or key below the time setting to select current minutes.
8. Press DONE when completed

Programming

All programmable Pro1 thermostats are shipped with an energy saving pre-program. You can customize this default program by following the Set Program Schedule.

Your thermostat can be programmed to have each day of the week programmed uniquely (7 days), all the weekdays the same, a separate program for Saturday, and a separate program for Sunday (5+1+1), or nonprogrammable. There are four time periods for each program (WAKE, LEAVE, RETURN, SLEEP). This thermostat has a programmable fan feature, which allows you to run the fan continuously during any time period.

Factory Default Program				
Day of the Week	Events	Time	Setpoint Temperature (Heat)	Setpoint Temperature (Cool)
Weekday	Wake	6 a.m.	70° F (21° C)	75° F (24° C)
	Leave	8 a.m.	62° F (17° C)	83° F (28° C)
	Return	6 p.m.	70° F (21° C)	75° F (24° C)
	Sleep	10 p.m.	62° F (17° C)	78° F (26° C)
Saturday	Wake	8 a.m.	70° F (21° C)	75° F (24° C)
	Leave	10 a.m.	62° F (17° C)	83° F (28° C)
	Return	6 p.m.	70° F (21° C)	75° F (24° C)
	Sleep	11 p.m.	62° F (17° C)	78° F (26° C)
Sunday	Wake	8 a.m.	70° F (21° C)	75° F (24° C)
	Leave	10 a.m.	62° F (17° C)	83° F (28° C)
	Return	6 p.m.	70° F (21° C)	75° F (24° C)
	Sleep	11 p.m.	62° F (17° C)	78° F (26° C)

INSTALLATION MANUAL

PROGRAMMING THE THERMOSTAT

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

Programming Table				
Day of the Week	Events	Time	Setpoint Temperature (Heat)	Setpoint Temperature (Cool)
Weekday	Wake 			
	Leave 			
	Return 			
	Sleep 			
Saturday	Wake 			
	Leave 			
	Return 			
	Sleep 			
Sunday	Wake 			
	Leave 			
	Return 			
	Sleep 			

Set Program Schedule

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

Weekday:

1. Select HEAT or COOL using the SYSTEM key.
Note: You have to program heat and cool each separately.
2. Press MENU
3. Press SET SCHEDULE Note: Monday-Friday is displayed and the WAKE icon is shown. You are now programming the WAKE time period for the weekday setting.
4. Use the  or  key below the time setting 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.
5. Use the  or  temperature setpoint keys on the right side of your screen to make your temperature selection for the weekday WAKE period.
6. Press NEXT STEP
7. Repeat steps 4 through 6 for weekday LEAVE time period, for weekday RETURN time period, and for weekday SLEEP time period.

Saturday:

8. Repeat steps 4 through 6 for Saturday WAKE time period, for Saturday LEAVE time period, for Saturday RETURN time period, and for Saturday SLEEP time period.

Sunday:

9. Repeat steps 4 through 6 for Sunday WAKE time period, for Sunday LEAVE time period, for Sunday RETURN time period, and for Sunday SLEEP time period.

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

1. Select HEAT or COOL using the SYSTEM key. You have to program heat and cool each separately.
2. Press MENU
3. Press SET SCHEDULE
Note: Monday is displayed and the WAKE icon is shown. You are now programming the WAKE time period for the Monday setting.
4. Use the  or  key below the time setting 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.
5. Use the  or  temperature setpoint keys on the right side of your screen to make your temperature selection for the weekday WAKE period.
6. Press NEXT STEP
7. Repeat steps 4 thru 6 for Monday LEAVE time period, for Monday RETURN time period, and for Monday SLEEP time period.
8. Repeat steps 4 thru 7 for each of the remaining days in the week.

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 set-point. 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.

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 & cold spots in your building.

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
Display accuracy	± 1°F
Swing (cycle rate or differential)	Heating is adjustable from 0.2°F to 2.0°F Cooling is adjustable from 0.2°F to 2.0°F
Power source	18 to 30 VAC, NEC Class II, 50/60 Hz for hardwire (common wire) Battery power from 2 AA Alkaline Energizer batteries
Operating ambient	32° to +105° (0° to +41°C)
Operating humidity	90% non-condensing maximum
Dimensions of thermostat	4.7"W x 4.4"H x 1.1"D