PRO1
Pro1 Technologies

T701i

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

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

Table of Contents

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° 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. 500 mA
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 4.4"H x 0.8"D

Power Type

Hardwire (24V Common Wire)

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.

WIFI

Frequency Range.............2.4 Ghz ISM radio band
WIFI Module...............................Supporting 802.11 B/G/N Standards

Installation Tips

Wall Installation

The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation. Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.
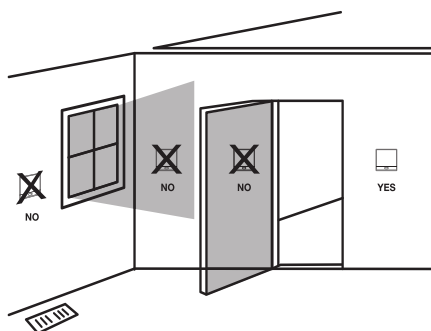
Do not install thermostat in locations:
- Close to hot or cold air ducts
- That are in direct sunlight
- With an outside wall behind the thermostat
- In areas that do not require conditioning
- Where there are dead spots or drafts (in corners or behind doors)
- Where there might be concealed chimneys or pipes

Removing The Private Label Badge

Use the bevel on lower ridge
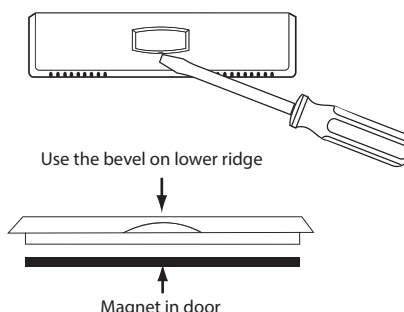
Magnet in door

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.**

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

THE POWER OF PARTNERSHIP

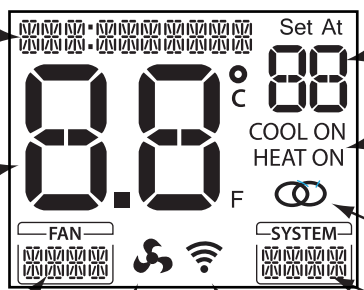## Thermostat Quick Reference

① LCD
② Glow in the dark light button
③ Fan button
④ System button
⑤ Easy change battery door
⑥ Temperature setpoint buttons

Top text field used in programming, will also show time of day when a schedule program is being used.

Indicates the current room temperature.

Bottom left text field used in programming and hold functions. Will also show current fan setting.

Fan Indicator

WIFI signal strength

Set At

Displays the user selectable setpoint temperature.

Indicates mode of system running. (Flashing indicates 5 min compressor delay).

WIFI Connection Indicator

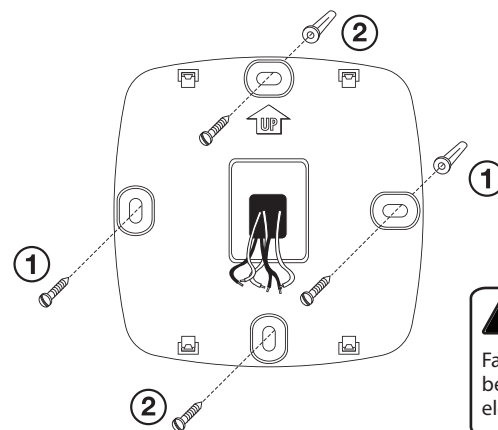Bottom right text field used in programming and hold functions. Will also show current system setting.

## 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.

⚠ Electrical Hazard

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

NOTE: To insure solid fit between themerostat and subbase:
1. Mount subbase on a flat wall.
2. Use provided screws.
3. Insure drywall archors are flush with wall.
4. Push wires into wall.

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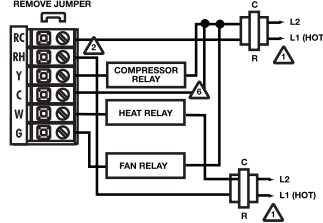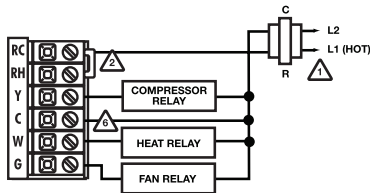
Mount Thermostat
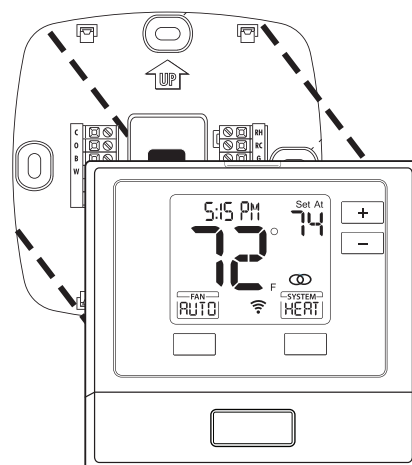
Align the 4 tabs on the subbase with corresponding slots on the back of the thermostat, then push gently until the thermostat snaps in place.

① Power Supply

② Factory-installed jumper, remove only when installing on 2-installer system.

③ Use either O or B terminals for changeover value.

④ Use a small piece of wire (not included) to connect W and Y terminals.

⑤ Set fan operation to electric

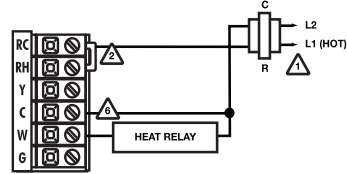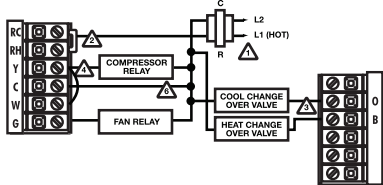⑥ A 24 VAC 500mA common connection is required with this thermostat.

Typical 1H/1C system: 1 transformer
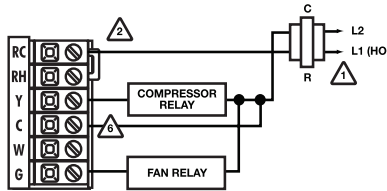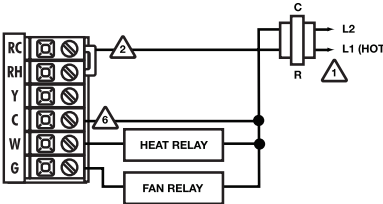
Typical 1H/1C system: 2 transformers

Typical 1H/1C heat pump system

Typical heat only systems w/o fan

Typical heat only system

Typical cool-only sytem

Replacement Thermostat 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.

4. This thermostat requires a 24V common wire to the C terminal.

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.

Installation Tip   Max Torque = 6in-lbs.

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.

Wiring Chart

For all systems, the following terminals are wired according to whether you have a single or dual transformer system as shown:

	RH	RC	C	G
SINGLE TRANSFORMER SYSTEM	24 VAC HOT JUMPER SHOULD REMAIN INSTALLED		24 VAC Common 500mA	Blower / Fan
DUAL TRANSFORMER SYSTEM	24 VAC-Heat *REMOVE PROVIDED JUMPER	24 VAC-Cool *REMOVE PROVIDED JUMPER	24 VAC Common 500mA *FROM COOL TRANSFORMER	Blower / Fan

*FAILURE TO REMOVE PROVIDED JUMPER ON DUAL TRANSFORMER INSTALLATIONS COULD CAUSE SEVERE DAMAGE TO HVAC SYSTEMS

O Terminal	Heat pump changeover valve-- Energized during cooling
B Terminal	Heat pump changeover valve-- Energized during heating

Note: Devices such as a float switch that mechanically break circuits should be installed so that they break the control wire (Y) not the power (R). Interrupting the power circuit will shut off power to the thermostat completely and not allow it to operate.

If using in Heat Pump without Auxiliary or Emergency heat application, please see wiring diagram on previous page.

Technician Setup Menu

To enter tech setup:

1. Press and hold the + and - buttons for 3 seconds.
2. Press TECH button at lower left.
3. Configure the installer options as desired using the table below. Use the + or - buttons to change settings and the PREV and NEXT buttons to move from one step to another.
4. To exit tech setup: press and hold the + and - buttons for 3 seconds, or wait 20 seconds.

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Room Temperature Calibration	This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70 degrees and you would like it to read 72 then select +2.	0	You can adjust the room temperature display to read 4° above or below the factory calibrated reading.	0
Compressor Short Cycle Display	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.	COMP DELAY OF	Selecting "On" will not allow the compressor to be turned on	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.	COOL SWING 0.5	The cooling swing setting is adjustable from 0.2° to 2°. A swing setting of 0.5° will begin cooling at approximately 0.5° above the setpoint and stop approximately 0.5° below the setpoint.	0.5 °F
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.	HEAT SWING 0.4	The heating swing setting is adjustable from 0.2° to 2°. A swing setting of 0.5° will begin heating at approximately 0.5° below the setpoint and begin approximately 0.5° above the setpoint.	0.4 °F
°F or °C	This feature allows you to display temperature in either Fahrenheit or Celsius.	F OR C F	°F for Fahrenheit / °C for Celsius	°F
12 or 24 Hour Clock	You can select either 12 or 24 hour clock setting.	12/24H 12	Use the + and - key to select 12 or 24 hour clock.	0
Display Light	The display light can be configured to operate 3 different ways. To come on only when the Light Key is pressed, when Any Key is pressed, or stay on ALL of the time.	DISP LIGHT AU	AUTO "AU" - Any key ON / ON "On" - Always ON / OFF "OF" - Only light key ON	AUTO

Tech settings continued on next page ...

Swing Setting Tip

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

Technician Setup Menu

Tech Setup continued:

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Programmable	You can configure this thermostat to accept a programmed schedule from the mobile App, if it's WiFi communication is set up through your home network.	PROGRAMABLE OF	You can adjust the room temperature display to read 4° above or below the factory calibrated reading.	OFF
System Set	You can configure the system for your particular application. HEAT-OFF-COOL HEAT-OFF COOL-OFF	SYS MODE HC	Selecting "On" will not allow the compressor to be turned on	Heat Off Cool
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. Select OFF to have no appearance or control of the fan.	FAN OPER GS	GAS - "GS", ELE - "EL", OFF - "OF" OFF is available if heat only was selected in previous step.	GAS

Operation of fan button & button when connected to WIFI and running a programmed schedule from the app.

When the set at temperature is changed while an app schedule is running, the thermostat will enter a temporary hold, and the Fan and System buttons change to RUN and HOLD for 5 seconds. If you wish to enter PERMANENT HOLD press the HOLD button at this time.

If you don't press the HOLD button within the 5 seconds, it will remain in temporary hold for 4 hours.

When connected to WIFI you may also have the ability to turn programming ON or OFF by pressing and holding the FAN button for 3 seconds, while the FAN BOX appears.

These WIFI Technician steps/ options used for information and trouble-shooting. They are not used for installation or initial setup.

The only normal function you would use this step for would be to RESET WIFI provisioning. For example: If you replaced your home WIFI router and need to connect via a different network.

Follow these steps to enter the WIFI-technical information menu.

Follow these steps to enter the WIFI-technical information menu.

1. Press and hold the + and - buttons for 3 seconds.

2. Press WIFI button at lower right.

3. Top of display will show:

"WIFI NOTOK" if **NOT** connected to WIFI. **"WIFI OK"** if connected to WIFI.

4. IF **NEXT** button is pressed, top of display will show:

The firmware and software versions that are installed on the thermostat. You can scroll through them with the + and - buttons.

5. IF **NEXT** button is pressed again, top of display will show:

The SSID # of the thermostat. if **NEXT** is pressed again, you will return to step 4.

1. Go through steps 1 and 2 from the WIFI menu at left.

2. Press and hold the TECH button at lower left for 3 seconds.

3. Top of display will show:

"RESET WIFI"

4. Press the **YES** button at lower left.

After a 5 second countdown, the thermostat will reset.

Or press **NO** to exit

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