



Pro1 Technologies

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

Toll Free : 888-776-1427  
Web: [www.pro1iaq.com](http://www.pro1iaq.com)  
Hours of Operation: M-F 9AM - 6PM EST

# T721i

## 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	No
Heat Only Systems	Yes
Cool Only Systems	Yes
Millivolt	No

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## 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.

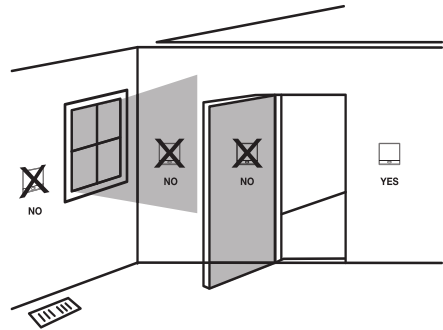
Una version en espanol de este manual se puede descargar en la pagina web de la compania.

## WIFI

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

## Wall Installation

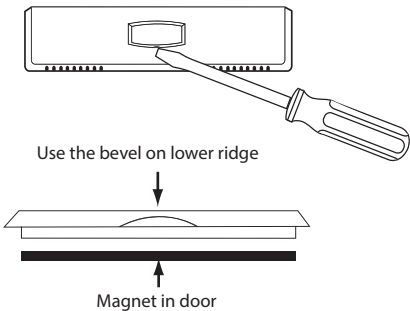
The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation. Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.



### 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



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.

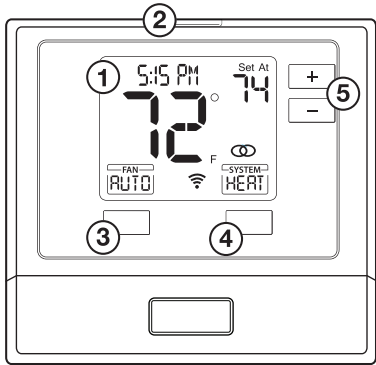
1 © U.S. Registered Trademark. Patents pending  
Copyright ©2020 All Rights Reserved.

Rev. 2048

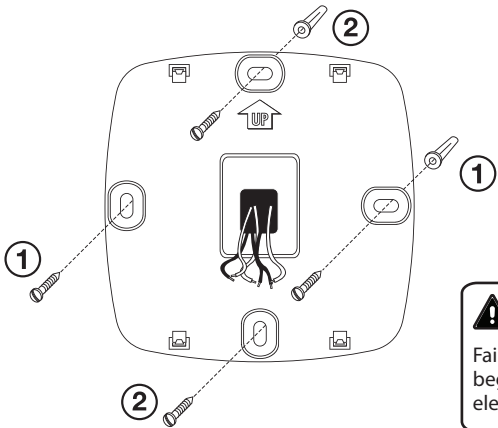
# THE POWER OF PARTNERSHIP

## Thermostat Quick Reference

## Subbase Installation



- 1 LCD
- 2 Glow in the dark light button
- 3 Fan button
- 4 System button
- 5 Temperature setpoint buttons



- 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

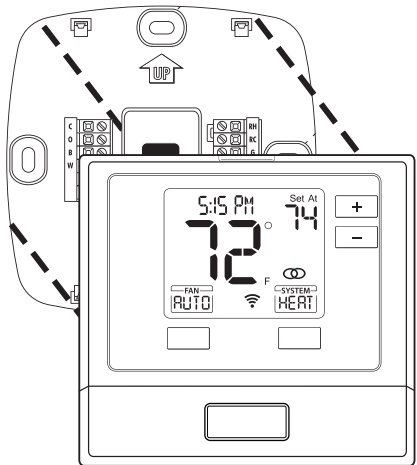
Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.

### ⚠ 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.

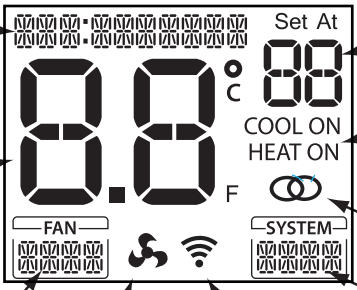
**NOTE:** To ensure a solid fit between the thermostat and subbase:  
1. Mount subbase on a flat wall.  
2. Use provided screws.  
3. Ensure drywall anchors are flush with wall.  
4. Push wires into wall.

## 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.

The top text field is used when programming is on to display the time. It is also used in multi-stage systems to display when emergency heat is being used.



Displays the currently selected setpoint temperature.

Indicates that the system is running. (flashing indicates a five minute compressor delay).

WIFI Connection Indicator

Indicates the current room temperature.

The bottom left text field displays the current fan setting.

Fan Indicator

WIFI signal strength

The bottom right text field displays the current system setting.

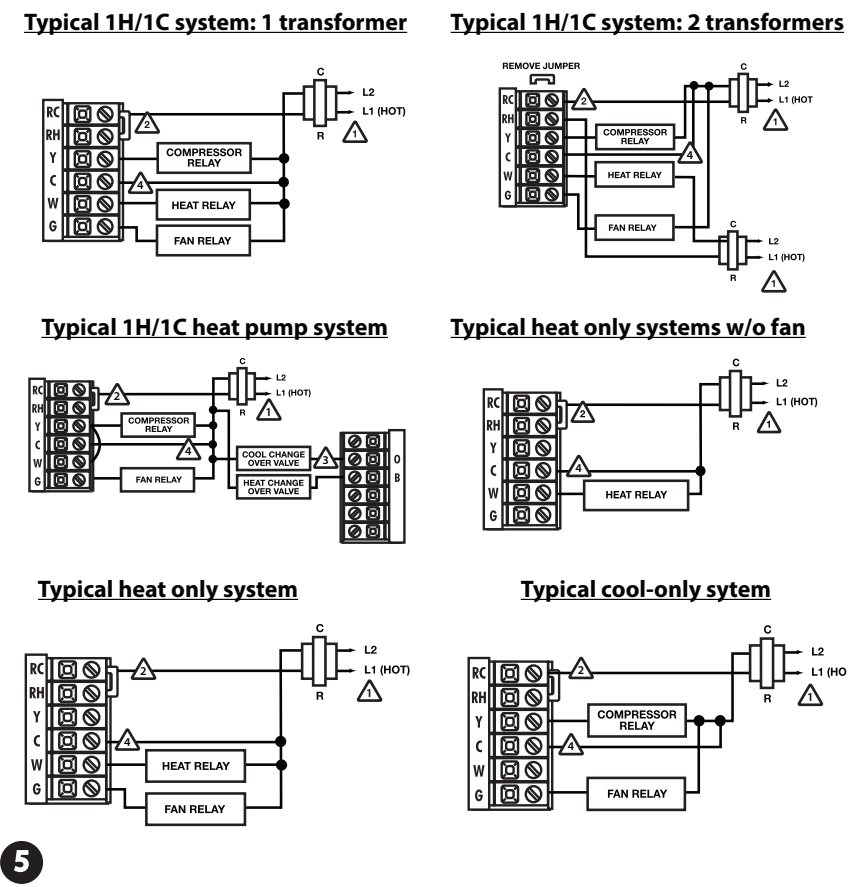
- 1

Power Supply
- 2

Factory-installed jumper, remove only when installing on 2-transformer system.
- 3

Use either O or B terminals for changeover valve.
- 4

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



Technician Setup Menu

Technician Setup Menu

To enter tech setup:

1. Press and hold the + and - buttons for 3 seconds.
2. Press and hold the TECH button.
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	Room Temperature Calibration 0	You can adjust the room temperature display to read 4° above or below the factory calibrated reading.	0
Compressor Short Cycle Delay	COMP DELAY ON	Selecting "ON" will not allow the compressor to be turned on for 5 minutes after the last time the compressor was switched off. Select "OFF" to remove this delay.	ON
Cooling Swing	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	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.	0.5 °F
Heat Pump	HEAT PUMP ON	ON - Configured to operate heat pump system. OFF - Configured to operate conventional system See page 5 for terminal designations.	ON
Emergency Heat <small>(Only displayed if Heat Pump is set to ON.)</small>	HEAT PUMP ON	ON - Enables Emergency Heat OFF - Disables Emergency Heat.	ON

Swing Setting Tip

Tech settings continued on next page ...

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.

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.

💡

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

<b>O Terminal</b>	Heat pump changeover valve-- Energized during cooling
<b>B Terminal</b>	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.

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Technician Setup Menu

Tech Setup Steps	LCD Will Show	Adjustment Options	Default
Emergency Heat Stages <small>(Only displayed if Emergency Heat is set to ON)</small>	E HEAT STG 1	Use the  or  key to select 1-stage or 2-stage operation.	1
Dual Fuel Auxiliary for Heat Pump <small>(Only displayed if Heat Pump is set to ON)</small>	DUAL FUEL OFF	<b>OFF</b> will allow Y(1st stage of Heat) and W2 (Aux Heat) to run together if called for. <b>ON</b> Will de-energize Y terminal 45 seconds after a call for Auxiliary Heat (W2).	OFF
Satisfy Setpoint	SATISFY SP OFF	This feature allows the thermostat to keep multiple stages of heat energized until setpoint is satisfied.	OFF
Staging Delay	STG DELAY OFF	This feature allows a delay to occur when a second stage is needed. This allows the previous stage extra time to satisfy setpoint.	OFF
Minimum Compressor On Time	MIN COMP OFF	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
Heating Setpoint Limit	HEAT LIMIT 90	This feature allows you to set a maximum heat setpoint value. The setpoint temperature cannot be raised above this value.	90
Cooling Setpoint Limit	COOL LIMIT 44	This feature allows you to set a minimum cool setpoint value. The setpoint temperature cannot be raised above this value.	44

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WIFI Setup

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Technician Setup Menu

Tech Setup Steps

°F or °C

This feature allows you to display temperature in either Fahrenheit or Celsius.

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.

Programmable

You can configure this thermostat to accept a programmed schedule from the mobile App.

LCD Will Show

F OR C

DISP L LIGHT

PROGRAMMABLE

F

OF

OF

Adjustment Options

°F for Fahrenheit

AUTO "AU" - Any key ON  
ON - light always on  
OFF - light on when any button is pressed

Select "OF" to configure the thermostat for NON-Program-mable. (Time of day will NOT appear on display).  
  
Select "ON" to configure the thermostat for programmable operation, from the app.

Default

°F

OFF

OFF

Operation of the FAN & SYSTEM button when connected to WIFI and running a programmable 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.

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WIFI Setup

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Technician Setup Menu

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

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

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.

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

2. Press the WIFI button on the lower right.

3. The top of the display will show: "WIFI IDLE" if NOT connected to WIFI and "CONNECTED" if connected.

4. If the NEXT button is pressed, top of display will show:  
The firmware and software versions that are installed on the thermostat.

5. If the NEXT button is pressed again, the top of the display will show:  
The SSID # of the thermostat. if NEXT is pressed again, you will return to step 3.

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

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

3. The top of display will show: "RESET WIFI"

4. Press and hold the YES button on the lower left.  
After a 5 second countdown, the thermostat will reset.  
  
Or press NO to exit

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

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