

GC-THBD-0-1

Instruction Manual

Wired Thermostat

THEMOSTAT QUICK REFERENCE

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	No
Heat Only Systems	Yes
Heat Only Systems - Floor or Wall Furnace	Yes
Cool Only Systems	Yes
Millivolt Conventional Systems	Yes
Two Transformer Systems	No

Table of Contents

Page

Thermostat Quick Reference	2-3
Installation Tips	4-10
Wiring Dia grams	11-14
Technician Setup	15-19
Specifications	20

Power Type

Battery Power

Hardwire (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.

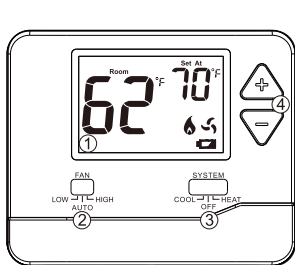
Genuine Comfort support

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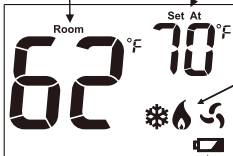
THEMOSTAT QUICK REFERENCE

Getting to know your thermostat



Indicates the current room temperature

Displays the user selectable setpoint temperature



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.

- ① LCD
- ② Fan Switch
- ③ System Switch
- ④ Setpoint Buttons



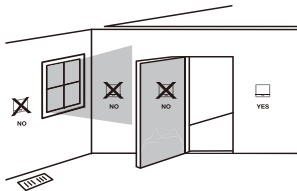
Caution:

When the battery icon  appears replace your 2x AAA batteries immediately. Failure to do so may result in your heating & cooling system becoming inoperable. Freezing or overheating can occur.

INSTALLATION TIPS

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.



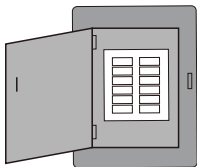
Installation Tip

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

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

1 Turn Off the Power of Your Heating/Cooling System



Circuit breaker
box

or



Heating/cooling system
power switch



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.



Warning:

This is a 24V AC low voltage thermostat. Do not install on voltages higher than 30V AC.

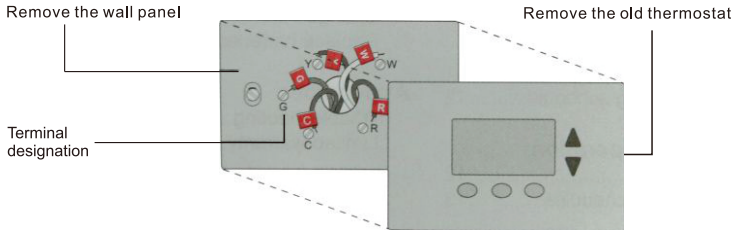


Do not short (jumper) across terminals on the gas valve or at the system control to test installation. This will damage the thermostat and void the warranty.

INSTALLATION TIPS

2 Remove Old Thermostat -(If Any)

Remove the old thermostat, Remove the old thermostat, Remember the function of the cable or port before disconnecting, and then remove the wall panel

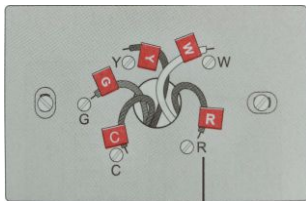


3 Label Wires with Tags

Label the wires using the supplied wire labels as you disconnect them.

Wiring Labels		Étiquettes de fils		Rótulos para los cables					
Apply these wiring labels to each wire with the appropriate terminal designation as you remove it from the existing thermostat.		Lorsque vous retirez les fils des bornes du thermostat existant, collez ces étiquettes sur chaque fil correspondant à la lettre de la borne.		Coloque estos rótulos, con la designación de las terminales, en cada cable al remover los cables del termostato actual.					
B	B	Y2	Y2	C	C	E	E	F	F
G	G	H	H	L	L	O	O	P	P
R	R	RC	RC	RH	RH	T	T	U	U
V/VR	V/VR	W	W	W1	W1	W2	W2	W3	W3
X	X	X1	X1	X2	X2	Y	Y	Y1	Y1
AUX	AUX								

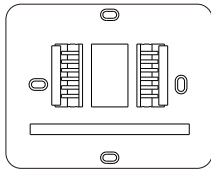
Wire Labels



Terminal designation

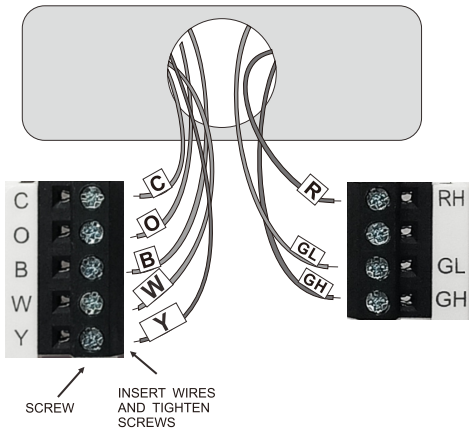
4. Remove the old wall panels

Remove the old wall panels so that the new ones can be installed.



6 Connect Wires

Simply match wire labels to the letters on the thermostat.

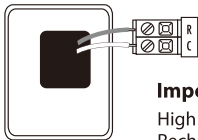


Installation Tip

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.

INSTALLATION TIPS

7 Battery Installation

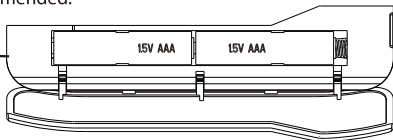


Battery installation is optional if used with AC power (the C terminal is connected). During power outages, the batteries will save settings and power the display.

Important:

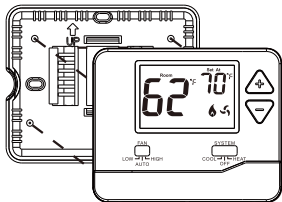
High quality alkaline batteries are recommended. Rechargeable batteries or low quality batteries are not recommended.

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



8 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.



Terminal Designations

Terminal	1 Heat 1 Cool Conventional System	1 Heat 1 Cool Heat Pump System
R	Transformer power	Transformer power
C	Transformer common port	Transformer common port
B	Power on in heating mode	Power on in heating mode
GL	Fan Relay, Low	Fan Relay, Low
GH	Fan Relay, High	Fan Relay, High
W	First stage of heat	Second stage of heat
Y	First stage of cool	First stage of heat & cool

Wiring Tips

Common wire

The C (common wire) is optional when the thermostat is powered by batteries.

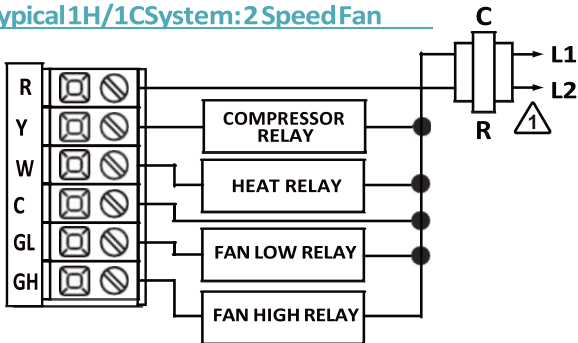
Wire Specifications

Use 18- to 22-gauge thermostat wire. Shielded wire is not required.

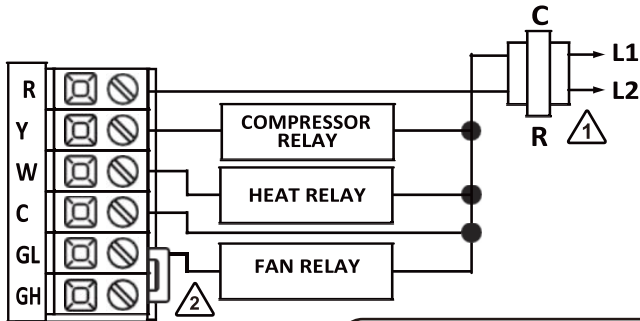
WIRING DIAGRAMS

- 1 Power supply
- 2 Jumper (not supplied) to connect GL and GH terminals.
- 3 Thermostat must be set to O and B to match the changeover valve, O is the cool changeover valve, B is the heat changeover valve.
- 4 The Aux Heat Relay is energized as the second stage of heat.

Typical 1H/1C System: 2 Speed Fan



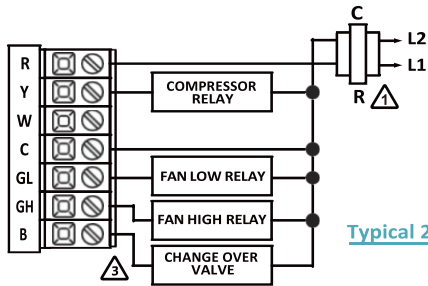
Typical 1H/1C System: 1 Speed Fan

**Note:**

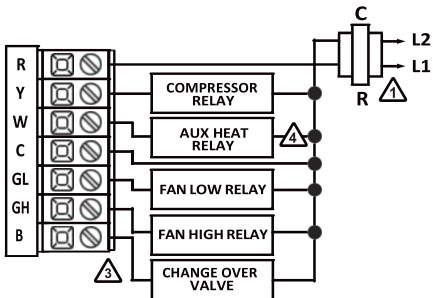
Most PTAC systems support two speed fan operation. In a single speed fan PTAC system or conventional single speed fan system, a jumper should be installed between GL and GH on the thermostat.

WIRING DIAGRAMS

Typical 1H/1C Heat Pump System: 2 Speed Fan



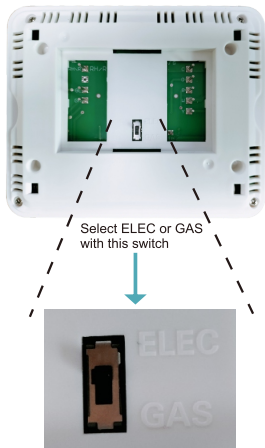
Typical 2H/1C Heat Pump System: 2 Speed Fan



Fan Operation Setup

Electric: The thermostat operation jumper pin should be put in the ELEC position. This setting allows the thermostat to operate the fan during a call for heat. Most PTAC systems will require ELEC Fan Operation Setup.

Gas: For systems that control the fan during a call for heat, put the jumper pin into the GAS position.



●Restore factory Settings:

Press and hold the “-” button, turn on the power, and release the factory Settings after the display is normal.

●HEAT SWING

Select HEAT with the system switch, hold down the + and - buttons together for 3 seconds to access the HEAT SWING setting. Use the + or - key to adjust the swing from $\pm 0.2^{\circ}\text{F}$ to $\pm 2^{\circ}\text{F}$. Wait approximately 15 seconds or slide the system switch to return to normal operation .

●COOL SWING





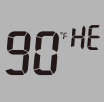



Select COOL with the system switch, hold down the + and - buttons together for 3 seconds to access the COOL SWING setting. Use the + or - key to adjust the swing from $\pm 0.2^{\circ}\text{F}$ to $\pm 2^{\circ}\text{F}$. Wait approximately 15 seconds or slide the system switch to return to normal operation.

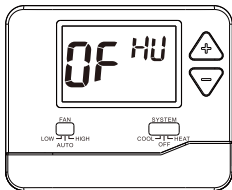
Technician Setup Menu

1. Set the thermostat system switch to OFF.
2. To enter Tech Setup Menu, press and hold “+” and “-” together for 3 seconds.
3. Use “+” and “-” to select desired setting for each option.
4. Tap “+” and “-” together to move next option.
5. To exit Tech Setup Menu, move system switch or wait for 15 seconds.

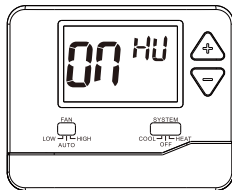
Tech Setup Steps	LCD Will Show	Adjustment Options	Default
Room Temperature Calibration	<p>Calibration</p>	You can adjust the room temperature display to read up to 4° above or below the factory calibrated reading.	
F or C		F for Fahrenheit C for Celsius	

TECHNICIAN SETUP

Tech Setup Steps	LCD Will Show	Adjustment Options	Default
<p>Compressor Short Cycle Delay</p>	<p>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.</p> 	<p>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.</p>	
<p>Heat Pump</p>	<p>When turned on the thermostat will operate a heat pump. Y will be the first stage of heat & cool, W will be the second stage of heat.</p> 	<p>OFF configures the thermostat for non heat pump systems. ON configures the thermostat for heat pump systems.</p>	
<p>Heating Temperature Setpoint Limit</p>	<p>This feature allows you to set a maximum heat setpoint value. The setpoint temperature cannot be raised above this value.</p> 	<p>Use the \square and \square key to select the maximum heat setpoint. Range 44°F- 90°F 7°C- 32°C</p>	
<p>Cooling Temperature Setpoint Limit</p>	<p>This feature allows you to set a minimum cool setpoint valve. The setpoint temperature cannot be lowered below this value.</p> 	<p>Use the \square and \square key to select the minimum cool setpoint. Range 44°F- 90°F 7°C- 32°C</p>	



Heat pump default
off and on



Switching Between Display and Thermostat Modes

To switch between display mode (controlling the PTAC unit through the main display on the unit) and thermostat mode (controlling the PTAC unit through the thermostat on the wall) press and hold both the "HEAT" and "+" buttons on your PTAC if you have a Genuine Comfort 42", 32", or 26" model or press and hold both the "VTAC MODE" and "+" buttons if you have a Genuine Comfort VTAC model.

SPECIFICATIONS

Specifications

The display range of temperature ...	32°F to 99°F (0°C to 40°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 AAA Alkaline batteries
Operating ambient	32°F to +105°F (0°C to +41°C)
Operating humidity	90% non-condensing maximum
Dimensions of thermostat	120 x 98 x 28MM

Instruction Manual