ACiQ

PROGRAMMABLE THERMOSTAT

INSTALLATION & OWNER'S MANUAL

Model: STN705

WARNING: DO NOT destroy or lose this manual. Please read the manual thoroughly before installing or operating the controller. Also, store the manual in a place that allows for easy retrieval and future reference. The actual shape and size of your product may vary.

VERSION DATE: 03-02-26

THERMOSTAT 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)	No
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	Yes

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Power Type

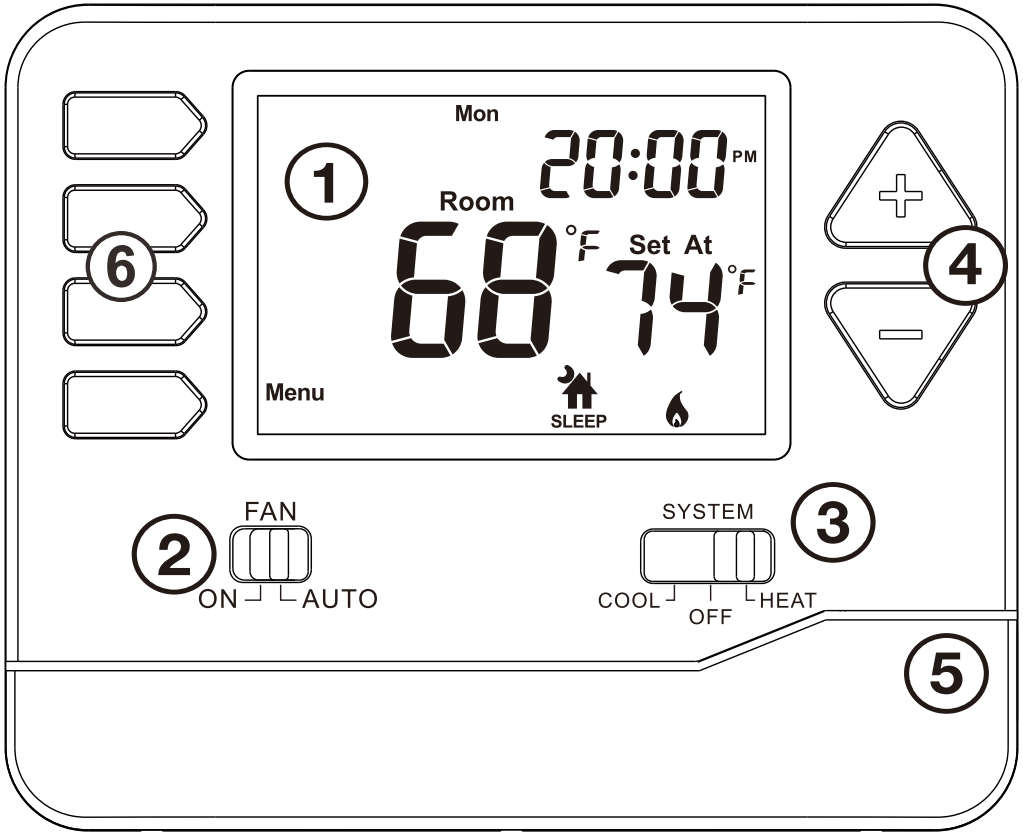
Battery Power

Hardwire (Common Wire)

IMPORTANT SAFETY INFORMATION WARNING:

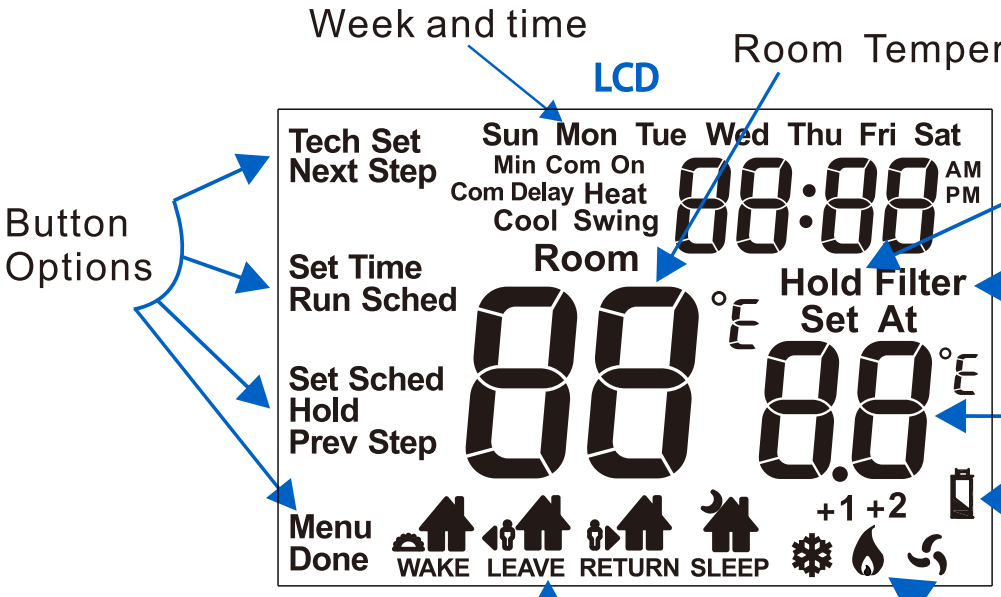
- Always turn off power at the main power source by unscrewing fuse or switching circuit breaker to the off position before installing, removing, cleaning, or servicing thermostat.
- Read all of the information in this manual before installing or programming this thermostat.
- This is a 24V AC low voltage thermostat. Do not install on voltages higher than 30V AC.
- All wiring must conform to local and national building and electrical codes and ordinances.
- 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.

Getting to know your thermostat



1. LCD Display
2. Fan Switch
3. System Switch
4. Temperature Setpoint Buttons
5. Switch face door(Use the finger bevel on the lower portion of the thermostat to open the casy access)
6. User Buttons

THERMOSTAT QUICK REFERENCE



Hold: Is displayed when thermostat program is permanently overridden

Filter Change Reminders Note

Displays the user selectable setpoint temperature

Low Battery Indicator:
When not connected to 24VAC , Replace batteries when this i ndicator flashes。

System Operation Indicators:
The ❄ 🔥 or 🌀 -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.

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

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.

Temporary and Permanent Hold Feature (if using programming)

Temporary Hold: The thermostat will display **HOLD** and **RUN SCHED** on the left of your screen when you press the or key. If you do nothing, the temperature will remain at this setpoint temporarily until next time period. Your program setpoint will then replace your temporary setpoint.

Permanent Hold: If you press the **HOLD** key at the left 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.

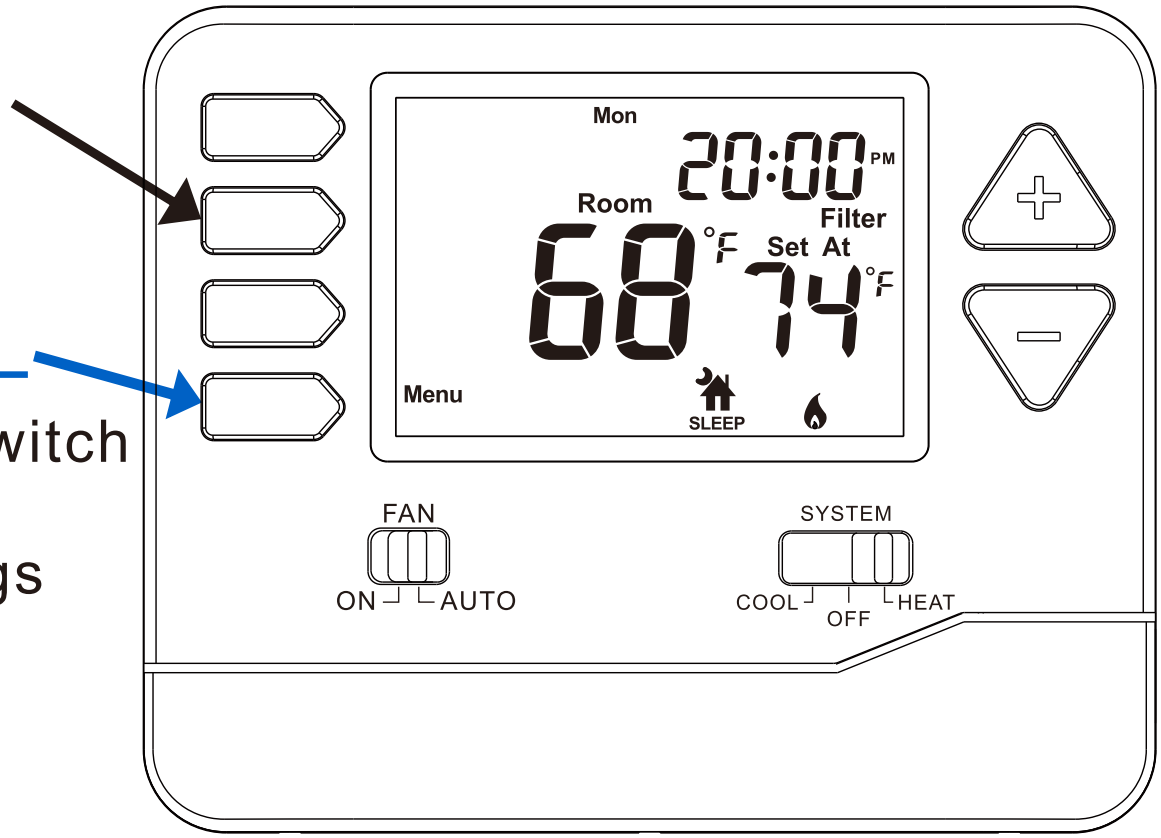
To return to program: Press the **RUN SCHED** key at the left of your screen to exit either temporary or permanent hold.

Filter Change Reminder

If your HVAC contractor has configured the thermostat to remind you when the air filter needs to be changed, you will see **FILTER** in the display when your air filter needs to be changed.

Resetting the filter change reminder:When **FILTER** reminder is displayed, you should change your air filter and reset the reminder by holding down the second button from the top left side of the thermostat (Clean) for 3 seconds.

Hold down 3 seconds, to reset filter reminder.

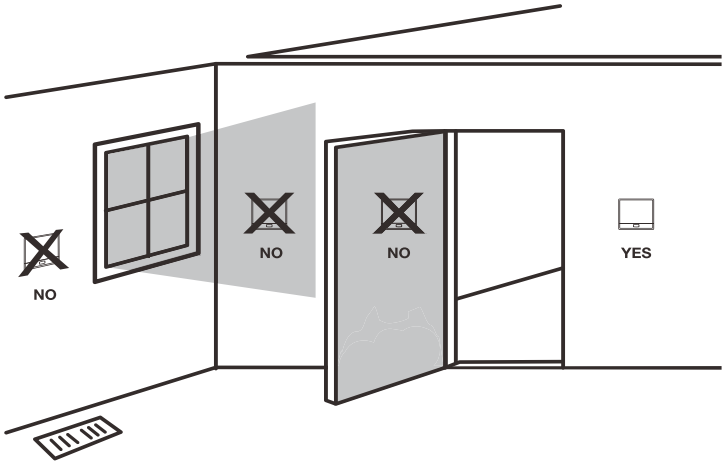


Factory data reset

Press Menu key and switch on the power supply to restore factory, Settings after normal display

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

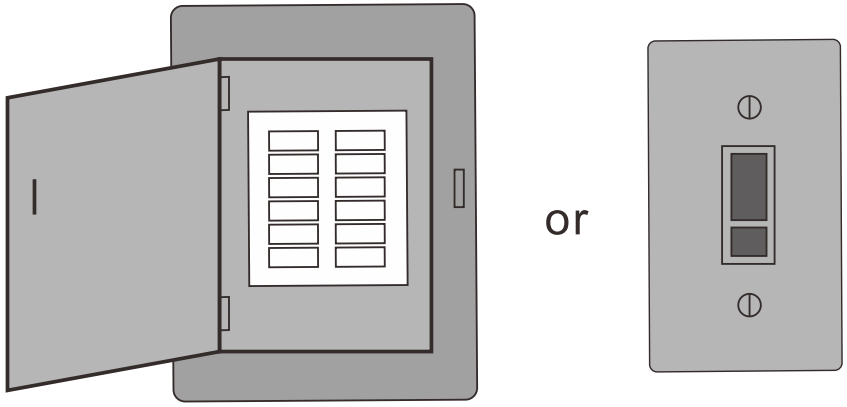
Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

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

INSTALLATION TIPS

1 Turn Off the Power of Your Heating/Cooling System



or

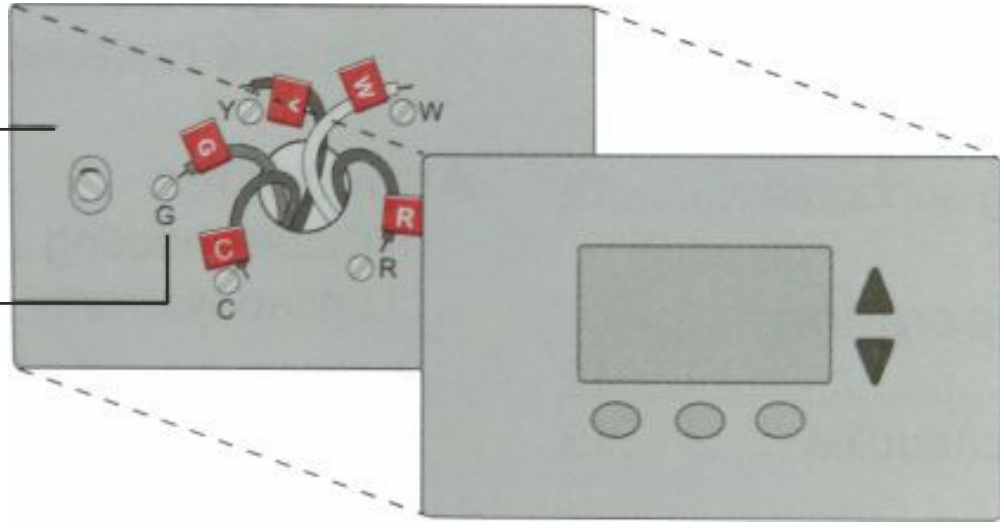
Circuit breaker box

Heating/cooling system power swich

2 Remove Old Thermostat -(If Any)

Remove the old thermostat , but leave the wallplate with wires attached.

Do not remove wallplate yet



Terminal designation

3 Label Wires with Tags

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

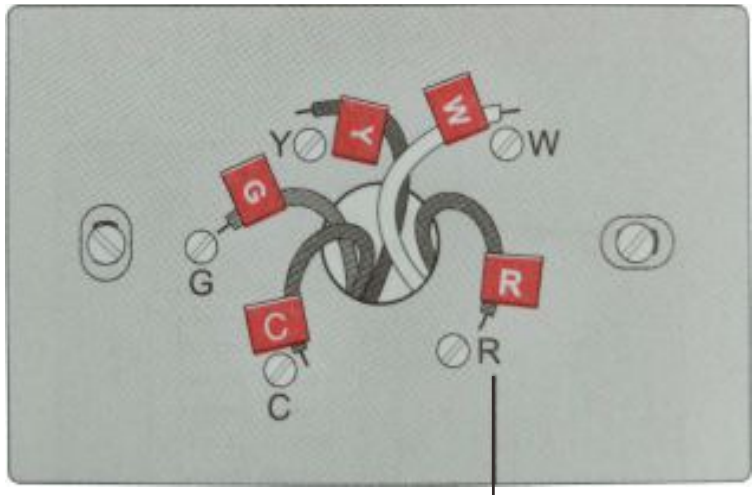
Wiring Labels
Apply these wiring labels to each wire with the appropriate terminal designation as you remove it from the existing thermostat.

Étiquettes de fils
Lorsque vous retirez les fils des bornes du thermostat existant, collez ces étiquettes sur chaque fil correspondant à la lettre de la borne.

Rótulos para los cables
Coloque estos rótulos, con la designación de las termina - les, 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								

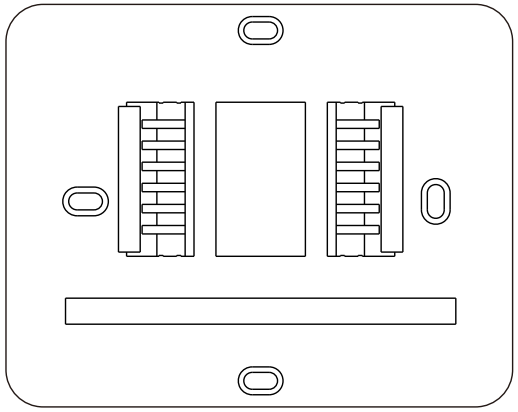
Wire Labels



Terminal designation

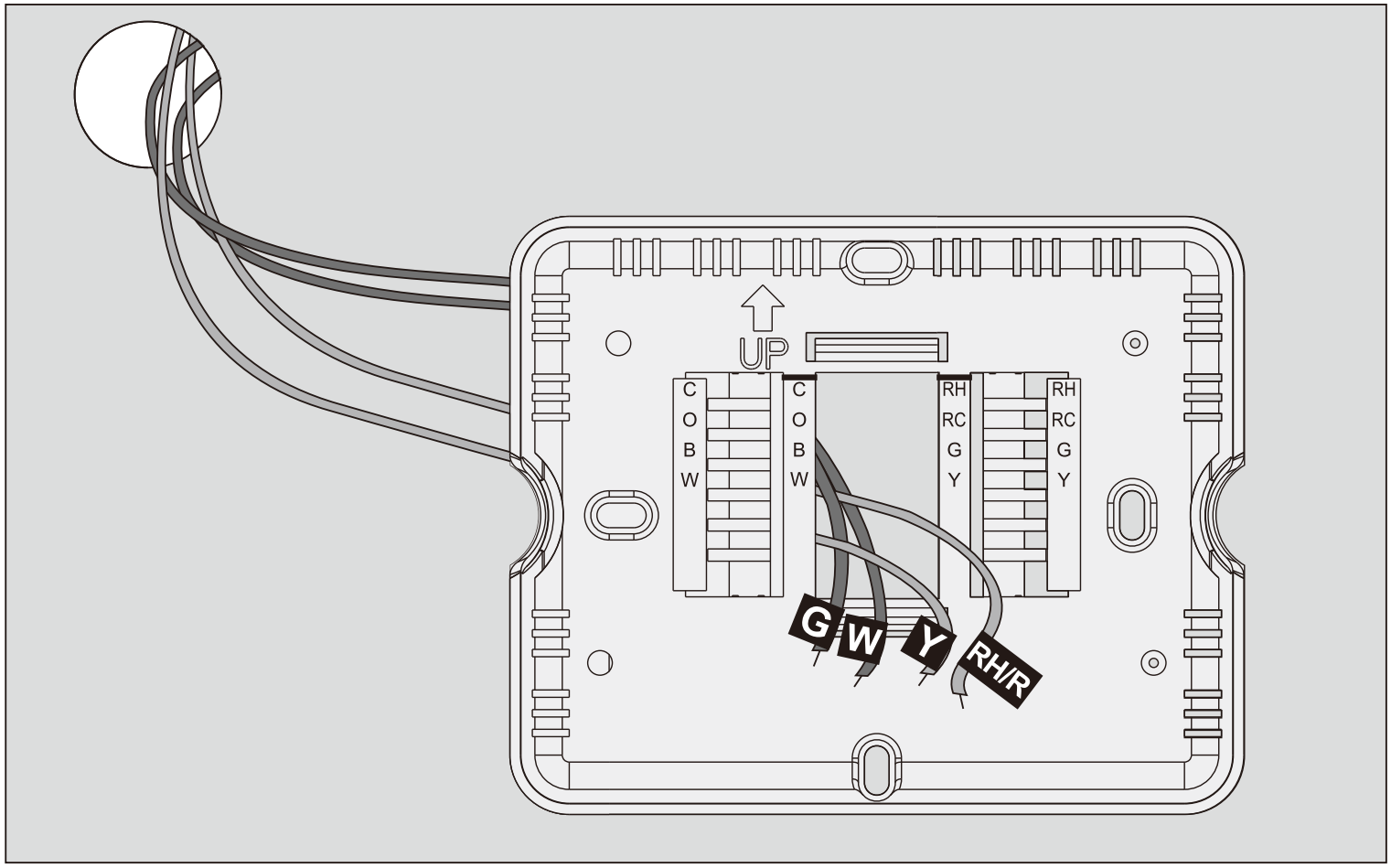
4.Remove the old wall panels

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



5 Mount New Wallplate

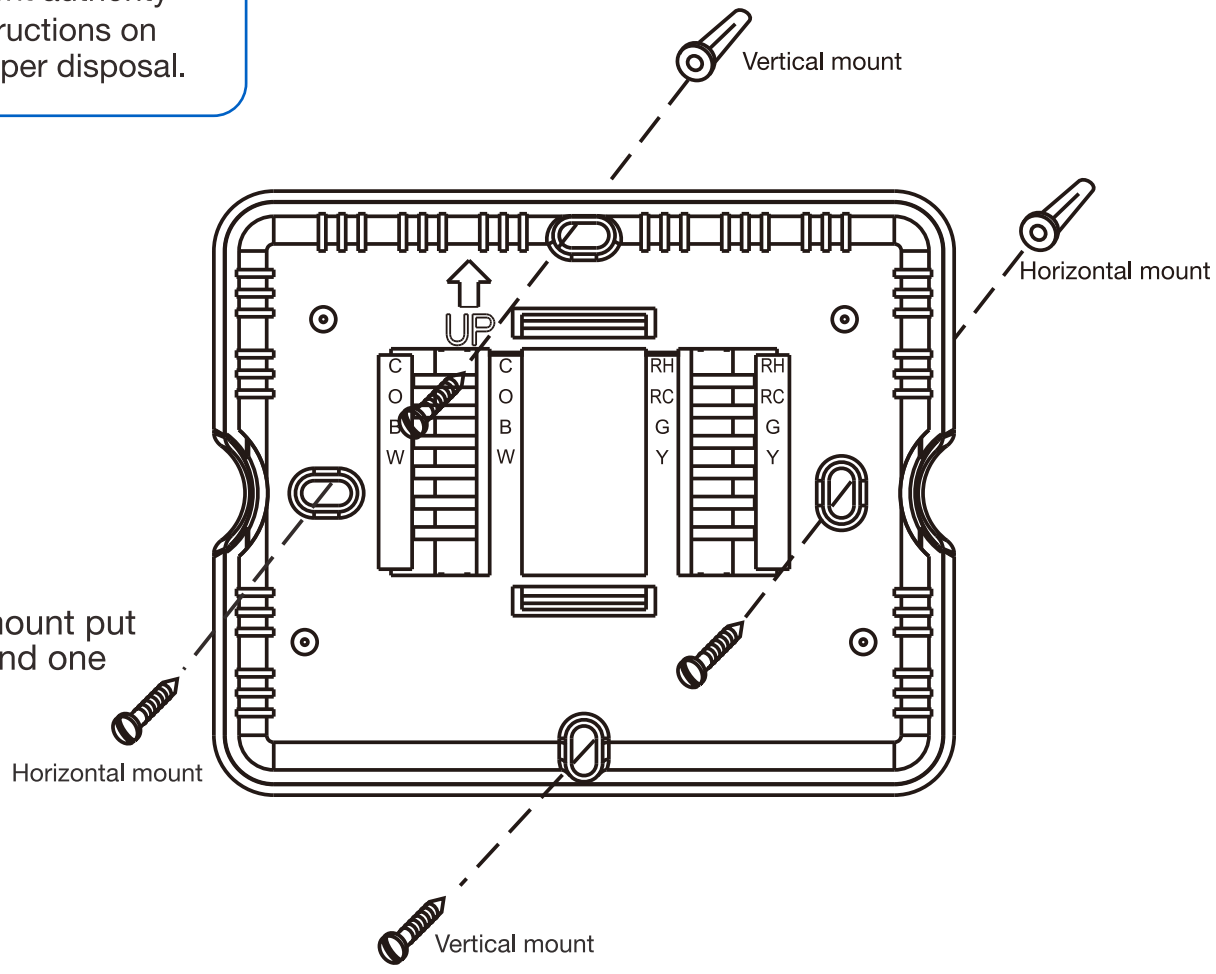
Mount the new wallplate using the included screws and anchors.



Drill 3/16-in. holes for drywall
Drill 3/16-in. holes for plaster

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.

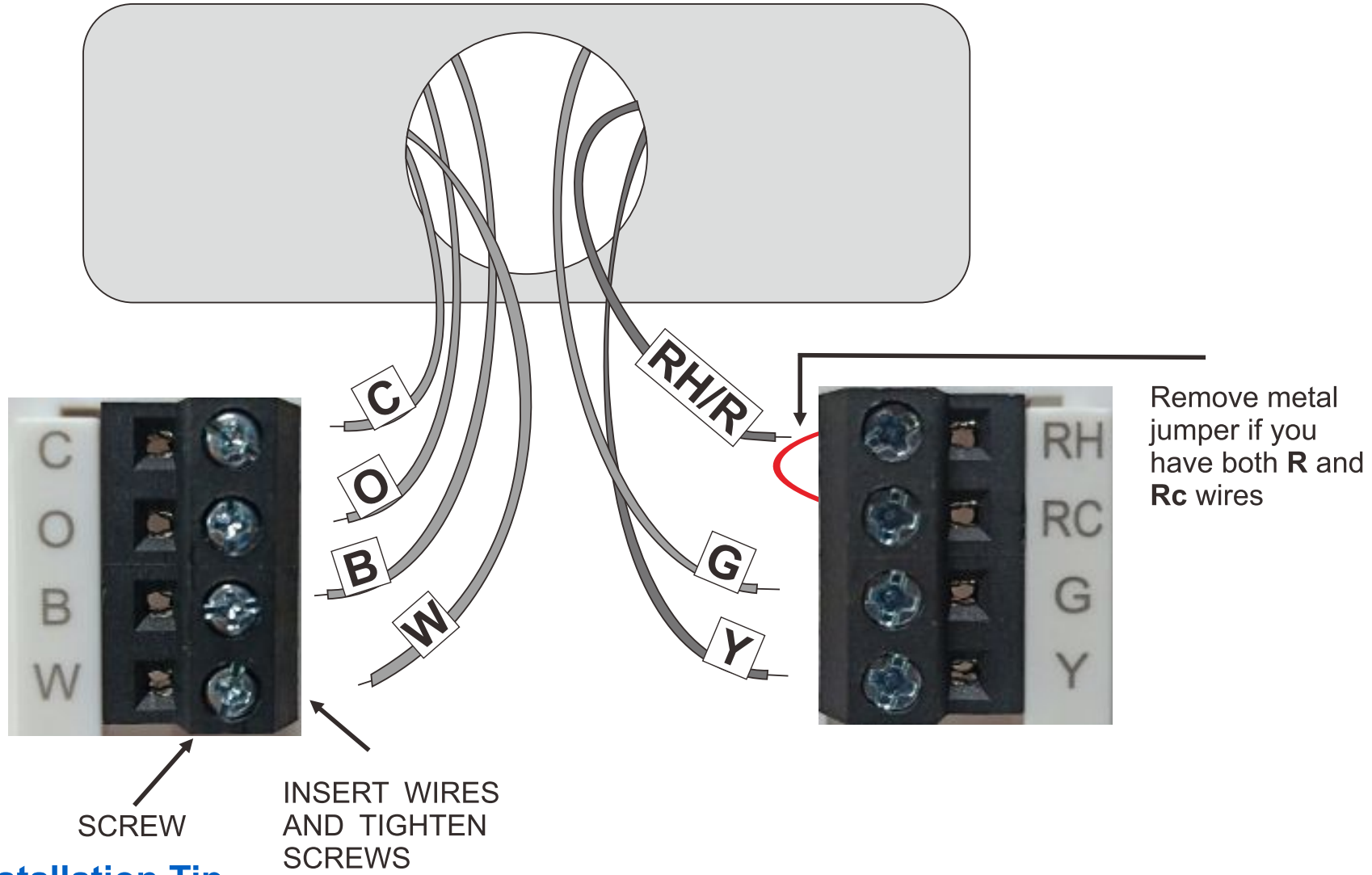


For horizontal mount put one screw left and one screw right.

INSTALLATION TIPS

6 Connect Wires

Simply match wire labels to the letters on the thermostat.

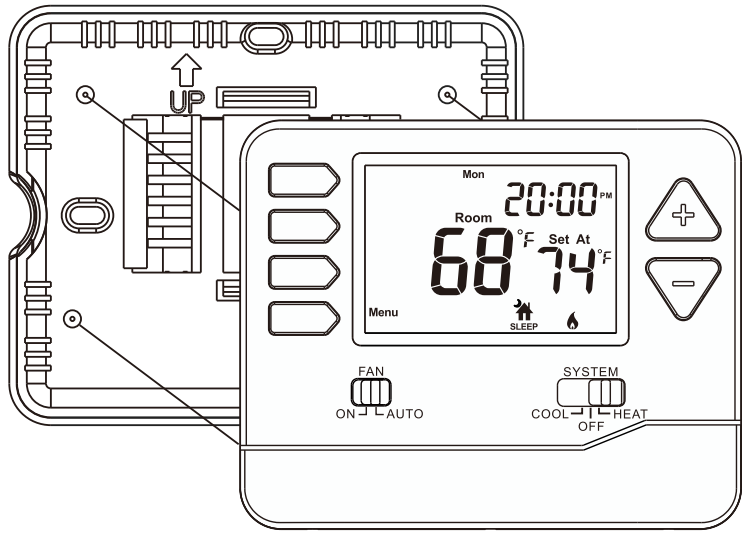


Installation Tip

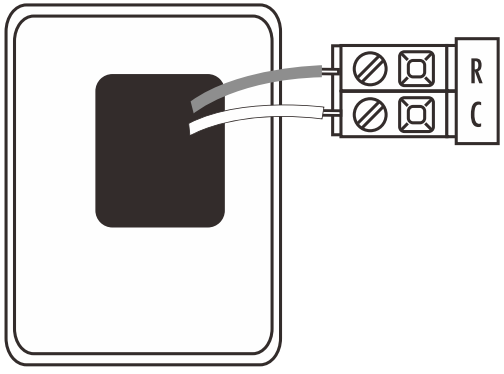
Do not overtighten terminal block screws, as this can damage the terminal block. A damaged terminal block can keep the thermostat from fitting on the subbase correctly or cause system operation issues. Max Torque = 6in-lbs.

7 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

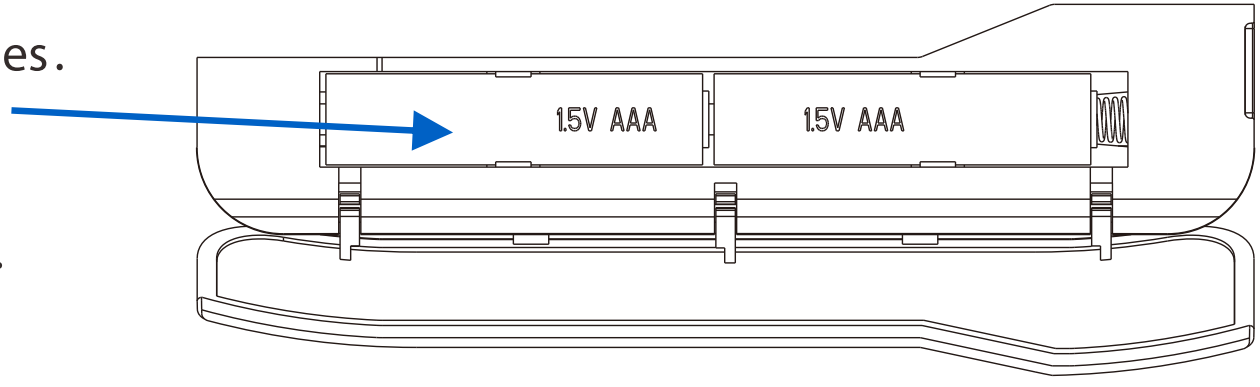


Battery installation is optional if used with AC power (the C terminal is connected). During power outages, the batteries will save settings and power the display.

Important:

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

Insert 2 AAA Alkaline batteries. High quality alkaline batteries are recommended.



Terminal	1 Heat 1 Cool Conventional System
RC	COOL=RC to Y O FAN=RC TO G
RH	24VAC(system power supply) HEAT=RH TO W B
C	COMMON 24VAC (system power supply)
B	REVVALVE HEAT
O	REVVALVE COOL
G	FAN RELAY
W	HEAT RELAY
Y	COOL RELAY

Wiring Tips

Common wire

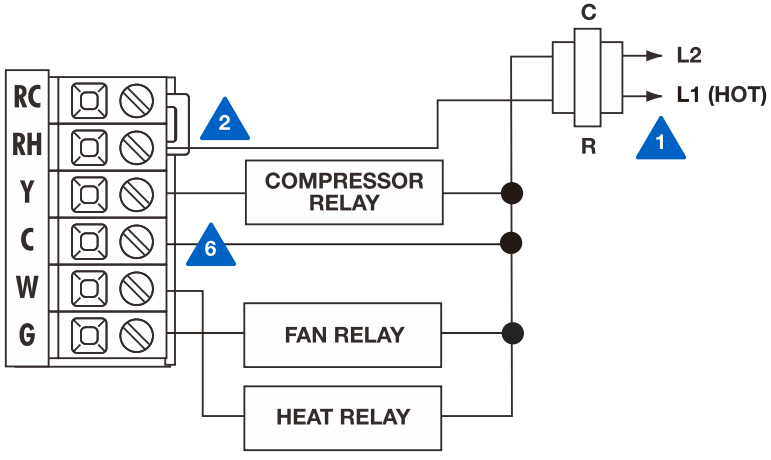
The C (common wire) is optional when the thermostat is powered by batteries.

Wire Specifications

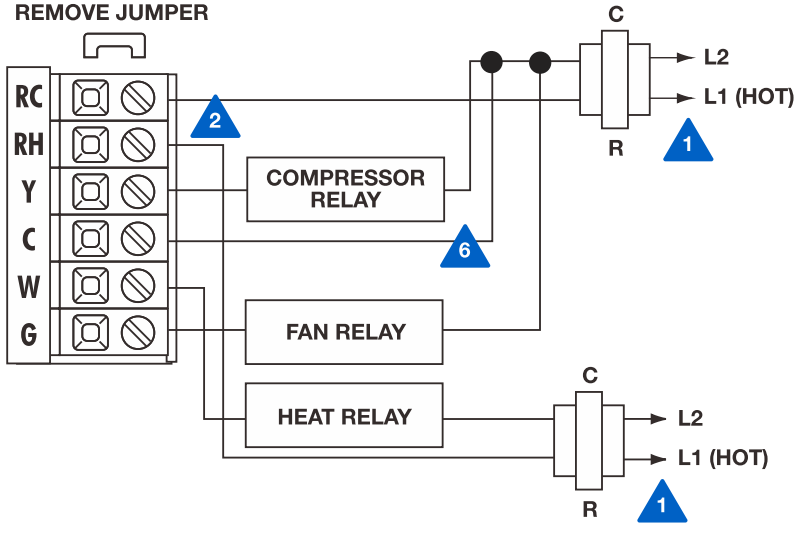
Use 18- to 22-gauge thermostat wire. Shielded wire is not required.

1. Power supply
2. Factory-installed jumper. Remove only when installing on 2-transformer systems.
3. Use either O or B terminals for changeover valve
4. Use a small piece of wire (not supplied) to connect W and Y terminals
5. Set fan operation switch to electric
6. Optional 24 VAC common connection when thermostat is used in battery power mode

Typical 1H/1C system: 1 transformer

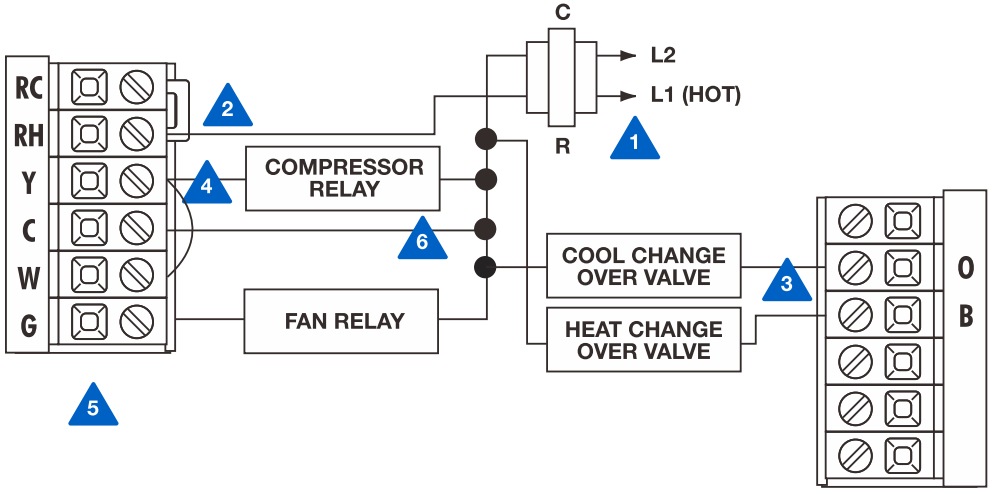


Typical 1H/1C system: 2 transformer

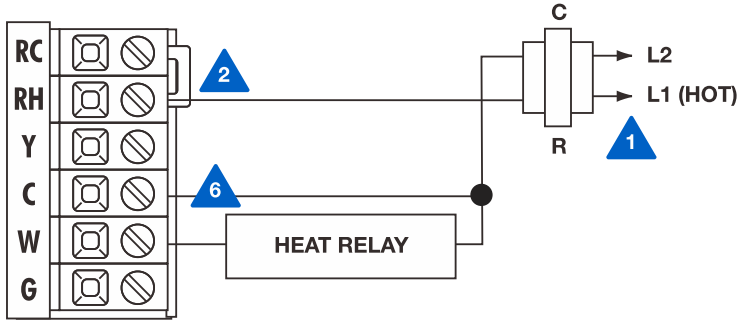


WIRING DIAGRAMS

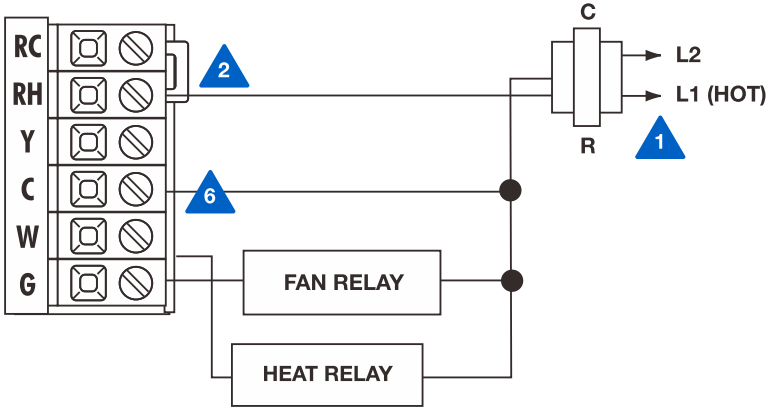
Typical 1H/1C heat pump system



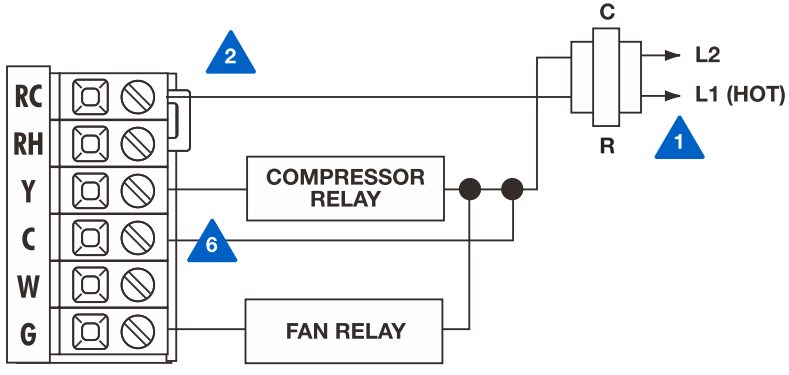
Typical heat-only system



Typical heat-only system with fan

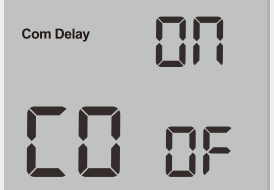


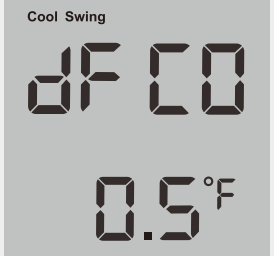
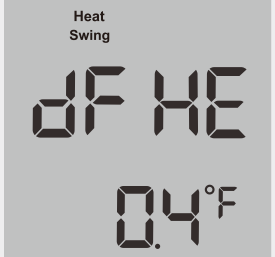
Typical cool-only system



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

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Filter Change Reminder	This feature will flash a reminder in the display after the elapsed run time to remind the user to change the filter. A setting of "OFF" will disable this feature.		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° degrees and you would like it to read 72° then select +2.		You can adjust the room temperature display to read 4° above or below the factory calibrated reading.	0

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
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.		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.	OFF
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.		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

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
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.		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.		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 approximately 0.5° above the setpoint.	0.4

TECHNICIAN SETUP

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
F° or C°	Select F for Fahrenheit read out or select C for Celsius read out.		°F for Fahrenheit °C for Celsiust	°F
12 or 24 Hour Clock	You can select either 12 or 24 hour clock setting.		Use the [-] or [+] key to select 12 or 24 hour clock.	
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.		ELEC = Electric for thermostat control GAS = Gas for system control	
Program Options	You can configure this thermostat to have a 7 day program, a 5+1+1 program or nonprogrammable.		Use the [-] or [+] key to select **7d** for 7 day, **5d** for 5+1+1, or **0d** for non-programmable.	

Set Time

1. Press the **MENU** button
2. Press **SET TIME**
3. Day of the week will be flashing. Use the + or − key to select the current day of the week.
4. Press **NEXT STEP**
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 STEP**
7. Minutes are now flashing. Use the + or − key to select current minutes.
8. Press **DONE** when completed.

Set Program Schedule 5+1+1 or 7Day

To customize your program schedule, follow these steps:

1. Select **HEAT** or **COOL** with the system switch. **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-Friday or **(Monday if in 7 Day)** is displayed and the **WAKE** icon is shown. You are now programming the wake time period for that day.
4. Time is flashing. Use the or key to make your time selection for that day's **WAKE** time period.
5. Press **NEXT STEP**
6. The setpoint temperature is flashing. Use the or key to make your setpoint selection for that day's **WAKE** time period.
7. Press **NEXT STEP**
8. Repeat steps 4 thru 7 for that day's **LEAVE** time period, **RETURN** time period, and **SLEEP** time period.

Continued on next page...

Set Program Schedule 5+1+1 or 7Day

Saturday:

Repeat steps 4 through 7 for the Saturday **WAKE** time period, **LEAVE** time period, **RETURN** time period, and for the Saturday **SLEEP** time period.

Sunday:

Repeat steps 4 through 7 for the Sunday **WAKE** time period, **LEAVE** time period, **RETURN** time period, and for the Sunday **SLEEP** time period.

Programming

All of our programmable thermostats are shipped with an energy saving pre-program. Your thermostat can be programmed to have all the weekdays the same, a seperate program for Saturday, and a seperate program for Sunday. There are four time periods for each program (**WAKE, LEAVE, RETURN, SLEEP).**

Factory Default Program				
Day of the Week	**Events**	**Time**	**Setpoint Temperature (HEAT)**	**Setpoint Temperature (COOL)**
Weekday	Wake	6:00	70˚F (21˚C)	75˚F (24˚C)
	Leave	8:00	62˚F (17˚C)	83˚F (29˚C)
	Return	18:00	70˚F (21˚C)	75˚F (24˚C)
	Sleep	22:00	62˚F (17˚C)	78˚F (26˚C)
Saturday	Wake	8:00	70˚F (21˚C)	75˚F (24˚C)
	Leave	8:00	62˚F (17˚C)	83˚F (29˚C)
	Return	18:00	70˚F (21˚C)	75˚F (24˚C)
	Sleep	23:00	62˚F (17˚C)	78˚F (26˚C)
Sunday	Wake	8:00	70˚F (21˚C)	75˚F (24˚C)
	Leave	10:00	62˚F (17˚C)	83˚F (29˚C)
	Return	18:00	70˚F (21˚C)	75˚F (24˚C)
	Sleep	23:00	62˚F (17˚C)	78˚F (26˚C)

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
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 AAA Alkaline Energizer batteries
Operating ambient	32°F to +105°F (0°C to +41°C)
Operating humidity	90% non-condensing maximum
Dimensions of thermostat	4.72”W x 3.86”H x 0.98”D

Instruction Manual