INSTALLATION

What You Need

This thermostat includes two #8 slotted screws and two wall anchors for mounting. To install your thermostat, you should have the following tools and materials.

- Slotted Screwdriver(s)
- Small Phillips screwdriver
- Hammer
- Electric drill and 3/16" bit
- Two 1.5 V (AA) size alkaline batteries

Remove Old Thermostat

CAUTION: Do not remove any wiring from existing thermostat before reading the instructions carefully. Wires must be labeled prior to removal.

IMPORTANT! Turn off the power to the furnace at the main power panel or at the furnace.

Remove existing thermostat cover and thermostat. See Figure 1. Some thermostats will have screws or other locking devices that must first be removed. Once the wall mounting plate is exposed, look for wires.

If wires are not visible, they may be connected to the back of the wallplate. Again, look for screws, tabs, etc. Some models have doors that open to expose wires and mounting screws. See Figure 1.

Typical Home Thermostats

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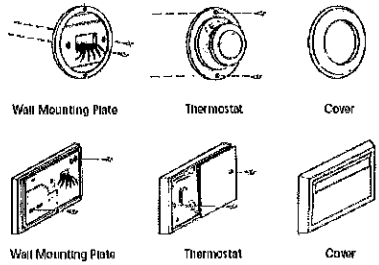


Wire Labeling

- Each wire coming from the wall to the existing thermostat is connected to a terminal point on that thermostat. Each of these terminal points is usually marked with a code letter as shown in Table A below.
- The number of wires in your system can be as few as two (for heat only systems), as many as eight, or any number in between. If you follow the labeling procedures correctly, you do not have to be concerned about how many wires there are.
- There is often no terminal marking on the existing thermostat of two wire, heat only systems. Just connect either of the wires to the Rh terminal, then connect the other wire to the W terminal to complete the circuit.
- IMPORTANT! BEFORE DISCONNECTING ANY WIRES, APPLY THE SELF-ADHESIVE LABELS PROVIDED TO THE WIRE AS SHOWN IN TABLE A BELOW. (For example, attach the label marked W to the wire that goes to the W or H terminal on your existing thermostat.) IGNORE THE COLOR OF THE WIRES since these do not always comply with the standard.
- After labeling wires, disconnect them from the existing thermostat terminals.
- Remove existing wallplate. To make sure wires do not fall back into wall opening, you may want to tape them to the wall.
- If hole in wall is larger than necessary for wires, seal this hole with insulating material so that no hot or cold air can enter the back of the thermostat from the wall. This air could cause a false thermostat reading.

If the code letter on your existing thermostat is. . .	then mark the wire with label shown. . .	and connect to thermostat terminal shown
RH, R, VR or 4 24 Volt		
RC, VC 24 Volt Cool		

Mount Wallplate and Thermostat

- Remove the wallplate from your thermostat by pressing the release tab on the bottom of the thermostat. See Figure 2.

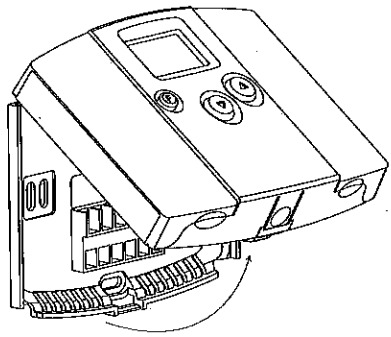


Figure 2

- Position wallplate on wall and pull existing wires through large opening. Then level for appearance. Mark holes for plastic anchors provided, if your existing holes do not line up with those on the wallplate.
- Drill holes with 3/16" bit and gently tap anchors into the holes until flush with wall.
- Reposition wallplate to wall, pulling wires through large opening. Insert mounting screws provided into wall anchor and tighten. See Figure 3.

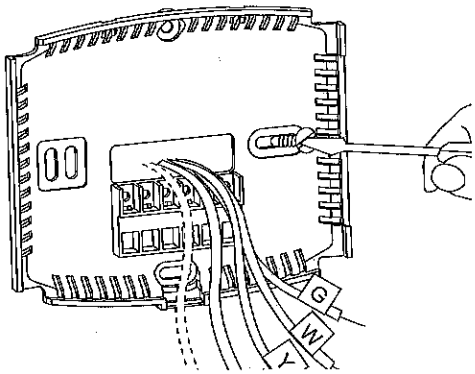


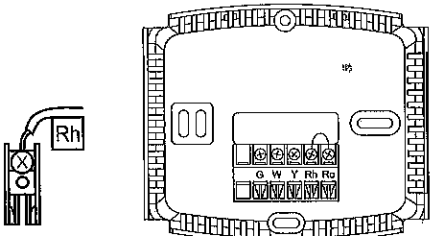
Figure 3

NOTE: 5-wire Systems

If your thermostat has one wire marked R or Rh (2, 3, or 4-wire system), then leave the jumper wire between the Rh and Rc terminals on the wallplate. Otherwise, if you have separate Rh and Rc wires (5-wire system), then remove the jumper wire between the Rh and Rc terminals.

Connect Wires and Mount Thermostat to Wallplate

- Match and connect the labeled wires to the appropriate coded terminal screws on the wallplate. (See Figure 4, 5.) Ignore any wires which may be present, but which were not connected to the old thermostat.



Selector Switches (See Figure 6)

Use the switches on the back of the thermostat and in the remote control to match the thermostat to your system (either gas or electric), choose between temperature readout (either Fahrenheit or Celsius), and set the remote control address.

- **Heating System Selector (HG - HE switch)**
  The factory position for this switch is in the "HG" position. Leave it in this position if you have a gas furnace or an oil burner. If you have an electric furnace, test to see whether the Heat and Fan come on as expected after installation. If the Fan operation is normal, leave it in the "HG" position. If the Fan does not come on within a minute of the thermostat calling for heat, change the switch position to "HE". The system selector has no effect in the cooling mode.
  NOTE: "HG" position is for gas and most other systems. "HE" position is for certain electric systems having a fan relay.
- **F° / C° selector (Fahrenheit / Celsius)**
  Your thermostat is set for F° mode from the factory. In order to change to C° mode, slide the switch to C° and press the reset button on front of the thermostat with a paper clip.
  NOTE: Unless the reset button is pressed, the thermostat will not change temperature mode.
- **Remote Control Address**
  Use a pin to configure the four Remote Control Address switches.
  NOTE: Write down the address to which you configure these switches, as you will have to configure the Remote Control to the same address.

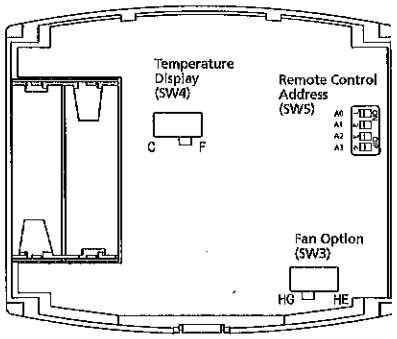


Figure 6

Remove the battery compartment Cover from the back of the remote control. See Figure 7. Use a pin to configure the four remote control Address switches to same address you gave to the thermostat.

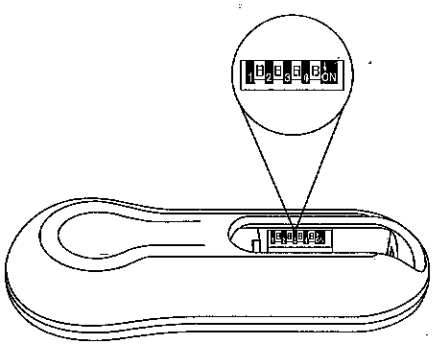


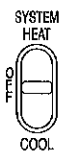
Figure 7

OPERATION

Start-up

The LCD will show the factory default display of 70°F (21°C) when batteries are first installed, or after the Reset button is pressed. The temperature will update after a few seconds.

System Selector Switch



The System Selector switch on the front of the thermostat determines the operating mode of the thermostat. You may select COOL, OFF, HEAT.

NOTE: Anytime you install or remove the thermostat from the wallplate, slide the System Selector to the OFF position to prevent the possibility of a rapid system On-Off.

Fan Switch

The Fan switch should normally be located in the AUTO position. The Fan will be turned on along with normal operation of your system. In a normal gas or oil furnace, the Fan will be turned on by your furnace after its warm-up delay. For electric heat and air conditioning operation, the Fan will turn on with the system.

To run the Fan on continuously, slide the Fan switch to the ON position.

Setting New Temperature

- Press either the up or down key and hold for longer than 1 second.
- The display will flash to show that you are in Set Temperature mode, then you can release the key.

- Press either up or down again to change to your desired Set Temperature. Hold the key down for over 2 seconds to fast-advance the Set Temperature.

Filter Monitor

The thermostat counts the number of hours your system's filter has been in use. To maximize your system's performance and energy efficiency, change or clean your filter regularly.

When the total system run time for heat and cool reaches 400 hours, the Filter Change indicator will flash as a reminder to check your system's filter.

After changing or cleaning the system filter, press and hold the Filter key for 3 seconds. The display will blink, and the counter will be reset to zero.

NOTE: Pressing the Filter key at any time for less than 3 seconds will cause the Filter Change indicator to appear on the LCD. This is only to confirm key operation, and the counter is not affected unless the key is held for greater than 3 seconds.

SPAN Setting

Your thermostat is set at the factory to cycle at 1°F (0.5°C) above and below the set temperature. (Span = 2) This setting has been designed to provide a comfortable room temperature under most all conditions. However, if you find your system cycling too fast or too slow, then the Span can be adjusted to modify the cycle time.

- Press and hold BOTH for three seconds. The display will flash, and SPAN will be displayed on the LCD.

- Press to raise the Span to 3. This setting INCREASES the cycle time by allowing your system to run LONGER.

- Press to lower the Span to 1. This setting DECREASES the cycle time by causing your system to run SHORTER.

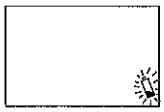
The Span settings remain the same for both HEAT and COOL, and can be changed in any System Switch position.

When batteries are installed in the thermostat, or the Reset key is pressed, the Span is reset back to setting 2.

Low Battery Warning

Your thermostat has a two-stage low battery warning system. When the batteries are first detected to be weak, the first stage low battery warning is indicated by battery symbol flashing on the LCD display. At your earliest convenience, you need to replace the batteries with 2 new AA alkaline batteries.

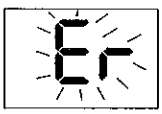
When the batteries become too weak for normal operation, the thermostat enters the second stage low battery warning which shuts down the thermostat. In this condition, "BATT" flashes alone on the display, and the thermostat will turn your system Off. Your system will remain shut-off until the batteries are replaced.



NOTE: The thermostat will still keep the current Set Temperature and Filter run time in memory until new batteries are installed. After confirming that new batteries have been inserted, the thermostat will return to normal operation.

Error Mode

If the thermostat is unable to control your system due to an unexpected battery problem, the thermostat will enter Error Mode. In this condition, the thermostat flashes "Er" on the LCD display, and shuts off your system.



To correct this problem, replace the batteries with 2 new AA alkaline batteries, even if you have recently replaced them. Next, use a paper clip to press the RESET button next to the keypad. You will need to reprogram your thermostat and confirm normal operation.

If Error Mode returns, please call Technical Support at 1-800-676-7861 for further information.

Remote Operation

You can use the remote control (12 volt battery included) that came with your thermostat to adjust the temperature setting. Press the "+" side of the remote button to raise the setting one degree, and press it twice to raise the setting two degrees. The "+" side of the button will glow red each time you press it. Press the "–" side of the remote button to lower the setting one degree, and press it twice to lower the setting two degrees. The "–" side of the button will glow blue each time you press it. See Figure 8.

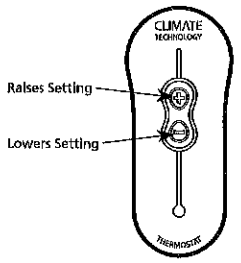


Figure 8

NOTE: You can not change your thermostat's setting by more than two degrees in either direction by using the remote control. If you change the setting by two degrees, you must wait until the room temperature arrives at the new setting before you adjust the setting again with the remote control.

Auto Cut Off

Your thermostat will automatically cutoff in Heat mode if the room temperature rises above 95°F (35°C). It will cutoff in Cool mode if the room temperature drops below 45°F (7°C).

Note that if your system has malfunctioned and no longer responds to thermostat controls, the Auto Cut-Off will have no effect.

TROUBLESHOOTING

Problem	
No Display.	1. Check battery connections and batteries. 2. Press RESET button with a small pin and hold in for two seconds.
Entire Display Dims.	1. Replace Batteries.
Auto Fan Does Not Turn On Properly.	1. Move HG/HE selector to correct position.
Heating or Cooling Does Not Go On or Off.	1. Check that the function switch is in the correct position ("HEAT" or "COOL"). 2. There may be as much as 4-minute delay before the system turns On—wait and check. (Compressor protection delay.) 3. Check your circuit breakers and switches to ensure there is power to the system. 4. Replace batteries. 5. Make sure your furnace blower door is closed properly. 6. If your system only uses 4-wires, be sure the jumper wire is installed between the Rc and Rh terminals.
Thermostat does not respond to Remote Control	1. Replace the batteries in the remote control. 2. Ensure the Remote Control Address switches in the thermostat and the remote control are set to the same adress.