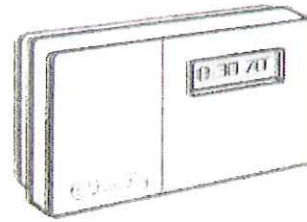


How to Install a Programmable Thermostat



Do It Yourself or Hire a Pro?

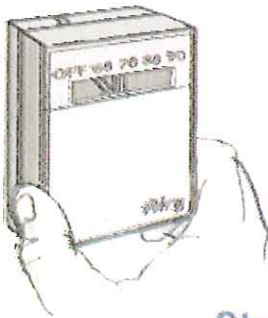
If you hire a professional, they may charge from \$100-\$125 to remove your old thermostat and install a new one. Some professionals may find it too small of a job to install one thermostat, however if you call around you should be able to find someone. You can always stock-pile your small electrical jobs into a larger one for a pro to take care of too. You can cut your costs in half or more with a little electric know-how and a couple of hours.

If You Do It Yourself

Be sure to write down the number and wire type that is attached to your old thermostat. If it is connected to thin wires coming directly out of the wall, then they are low voltage and do not present a shock hazard. If the thermostat is connected to an electrical box, it is likely running off a 120-volt current and you should contact a licensed electrician.

Step by Step

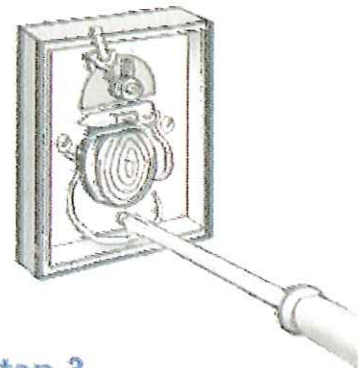
Step 1. Turn the power off. Turn off the power to the furnace and central air conditioner unit by shutting off the circuit breaker or removing the fuse at the service panel.



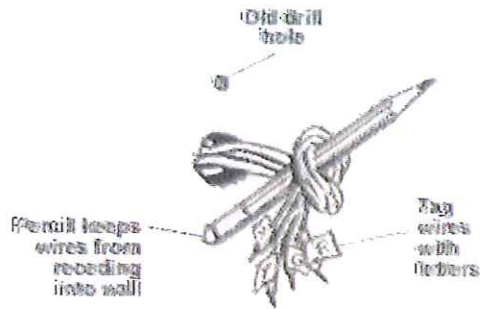
Step 2

Step 2. Remove the old thermostat cover. Without disconnecting any wires, remove the thermostat cover from the mounting plate.

Step 3. Remove the mounting plate. Unscrew and remove the old thermostat's mounting plate from the wall.



Step 3

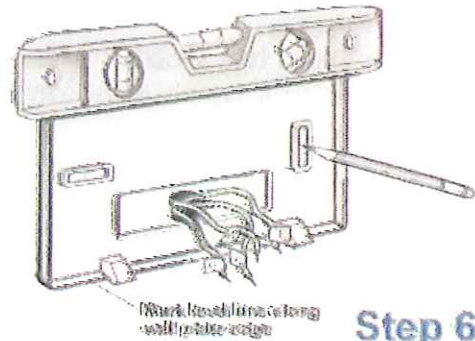


Step 4

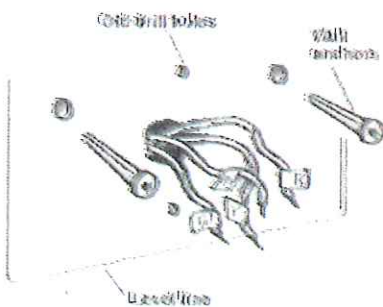
Step 4. Label the existing wires. The old thermostat will have a letter identifying each wire. Attach a label (included with your new thermostat) to each wire that corresponds to the letter on the old thermostat. If no labels are provided, use masking tape (see image, left).

Step 5. Disconnect the wires. Once the wires are marked, disconnect them from the screw terminals. To keep the wires from falling back into the wall, wrap them around a pencil. If you discover an old paint color behind the mounting plate, make sure that the new thermostat will cover up the mismatched paint. If it doesn't, repaint the wall before you install the new thermostat.

Step 6. Prep the thermostat base. Thread the wires through the base of the new thermostat. Be sure that the base sits flush against the wall and none of the wires are trapped behind it. Place a torpedo level on top of the base and adjust the base until it's perfectly level. Use a sharp pencil to mark the center of the mounting plate's screw holes.



Step 6



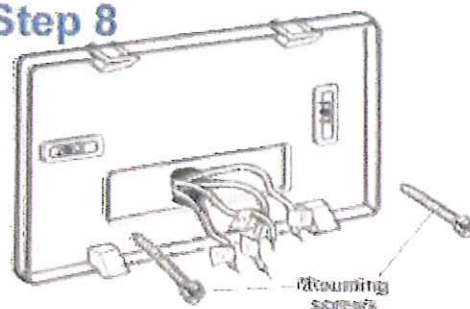
Step 7

7. Drill the mounting holes. Remove the base and drill a 3/16-inch-diameter hole at each screw location.

When you drill holes to mount the new thermostat, hold a vacuum cleaner hose up against the wall to catch the drywall dust.

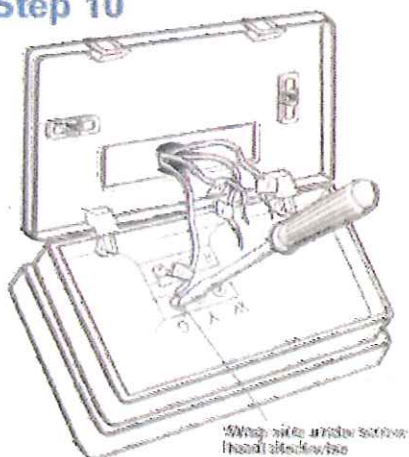
8. Attach the base to the wall. Use a hammer to gently tap plastic anchors into the holes. Reposition the thermostat over the anchors. Thread the wires through the base of the new thermostat and insert the mounting screws (see image, left).

Step 8



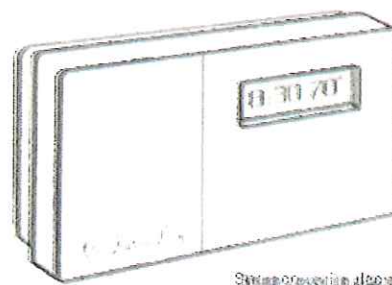
9. Level the base and tighten it to the wall. Use the torpedo level again to ensure that the base is still level. Once level, tighten the mounting screws.

Step 10



10. Connect the wires. If necessary, use a wire stripper to remove about 1/4 inch of plastic insulation from the ends of the wires. Connect the wires to the screw terminals, matching the masking-tape labels to the letters on the terminals. Also, consult the wiring diagram in the installation manual to make sure everything is properly hooked up.

11. Turn on the power. Turn the electricity back on, then follow the thermostat's manual to program the unit. Finally, run a test in both the auto and manual modes to confirm that the furnace and air conditioner go on and off, as directed by the thermostat settings.



Adapted by Lou Mueller, USU Extension, from <http://www.cornerhardware.com/howto/ht018.html>

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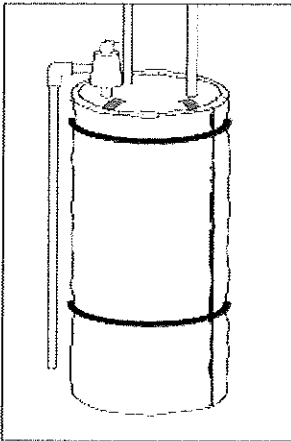
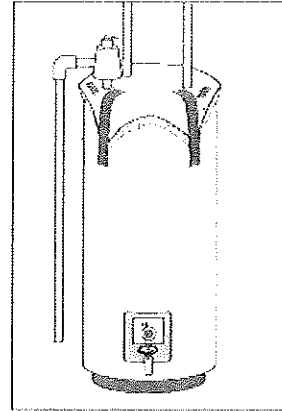
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How to Install a Water Heater Blanket

Step by Step

Step 1. Cut a piece of insulation just larger than the size of the tank top to allow for overlap on the sides. Slit insulation open from the edge to allow for insulation to be fitted around the pipes.

Step 2. Lay the corners of the tank top insulation down and tape securely to the sides of the tank. Then tape the slits closed.



Step 3. Position the insulating blanket around the circumference of the tank. For ease of installation, position the blanket so that the ends do not come together over the access panels and controls in the side of the tank. Some tanks have only one access panel.

Step 4. Secure the blanket in place with the belts provided. Position the belts so they do not go over the access panels. Belts should fit snugly over the blanket but not compress it more than 15%–20% of its thickness.

The installation is easier with two people. If working alone, use tape to hold the blanket to the top until you get the belts into position.

Step 5. If your water heater has the temperature/pressure relief valve and the overflow pipe on the side of the tank instead of on the top, install the blanket so these items are outside of the blanket. Depending on the piping arrangement and location, you may need to compress (or even cut) the blanket.

Step 6. Locate the four corners of the access panel(s). Make an x-shaped cut in the insulating blanket from corner to corner of each access panel.

