Step-by-Step Guide: Installing a Programmable Thermostat

Average Cost: $30 to $250*
Incentive: $30 (with a Questar home energy audit)
Time to install: 30 minutes or less
Materials Needed: A programmable thermostat (with screws and plastic anchors), screwdriver, hammer, drill, 2 pencils, a level, batteries, and a large zip lock bag

Programmable thermostats range in price from under $30 to $250. The most basic will allow you to automatically control the temperature of your home to match your schedule, the most expensive types synch up via your smart phone to automatically determine your schedule, and heat and cool your home accordingly. Incentives are available for those who have a Questar home energy audit before installation.

Watch a 4 minute installation video at: http://www.youtube.com/watch?v=owV0t_8zNpk

Instructions:

1. Check to see if your current thermostat is a manual or a programmable thermostat.
   If it is a manual thermostat, go to step #2. If you already have a programmable thermostat, congratulations, go to step #8.
2. Decide which type of thermostat to install in your home.
   a. Determine what type of heating and air conditioning your home uses. If your home uses central heat and/or air conditioning, a typical programmable thermostat will work for you. In some situations, you may need a more specific thermostat. For heat pumps and systems with multiple zones on a single furnace or air handler, consult with a HVAC contractor familiar with your system. Standard programmable thermostats may not work with these applications. If you have multi-stage heating and or cooling systems, multi-stage thermostats are typically required.
   b. Choose a programmable thermostat that fits your family’s schedule. There are three types of programmable thermostats:
      i. 7-day models give you the most flexibility, letting you set different programs for each day of the week.
      ii. 5+2-day models use the same schedule every weekday, and another for weekends.
      iii. 5-1-1 models are best if you tend to keep one schedule Monday through Friday, another schedule on Saturdays, and yet another on Sundays.
3. Determine how much you want to spend. The most popular models run around $60.
4. Gather needed materials you already have on hand, for example a drill, pencils etc.
5. Purchase the programmable thermostat. You can purchase a programmable thermostat at any home improvement store. Don’t forget to take the materials list and pick up any tools that you do not already have on hand.
7. IMPORTANT: Thoroughly read and install your programmable thermostat according to the manufacturer’s instructions.** What follows is list of general installation activities to give you an idea of the process for installing a programmable thermostat:
   a. Cut power to your heating and air conditioning systems at the circuit breaker box.
   b. Remove the cover panel of your existing thermostat to expose the mounting hardware.
   c. Remove the existing thermostat from the wall to access the wires.
d. Before disconnecting the wires, identify and label each wire with the terminal identification. There is no standard color code for these wires so labeling is essential. This can be done by wrapping a small piece of tape around the wire labeled with the wire’s corresponding terminal identification letter.

e. Once labeled, disconnect the wires with a screw driver. Tip: wrap the wires around a pencil once you detach them from the thermostat so that they don’t fall into the wall.

f. Separate the new programmable thermostat’s cover from the base. Note: In some models you may need to set a configuration switch at this time. It is essential to read the manufacture’s installation instructions to insure that you install the thermostat correctly.

g. Place the new programmable thermostat’s base to the wall, feeding the wires through the openings. With a pencil mark, where you need to drill holes. Remove the base, drill the holes and gently hammer the plastic anchors into the holes. Replace the thermostat base, once again feeding the wires through the opening. Attach the base to wall with screws.

h. Match the wires from the old thermostat with the terminal identification on the new thermostat. Then connect the labeled wiring to the corresponding terminals on the new thermostat. It is normal to have extra wires, simply disregard these.

i. Install batteries into the thermostat’s cover and then press the reset button.

j. Add the unit’s cover.

k. Turn your power back on at circuit breaker box. Note: Most electronic modern thermostats include time delays of up to 5 minutes. If power is shut off or disconnected, or the thermostat cycles off, it may take up to 5 minutes before the thermostat starts a new cycle.

8. **Program your new thermostat.** A programmable thermostat must be programmed in order to cut your energy waste and save you money! Follow the programming instructions included with your thermostat. Make sure to save these instructions, as you will reprogram your thermostat when the seasons change (about twice a year).

9. **Apply for the Questar $30 incentive.** If you complete a Questar Thermwise Home Energy Plan (http://www.thermwise.com/home/AfterHomeEnergyPlan.php) prior to installation, you can qualify for a rebate for your new programmable thermostat.

10. **Dispose of your old thermostat properly!** Many old thermostats contain large amounts of mercury, a neurotoxin, and should be taken to:

Salt Lake Valley Solid Waste Facility  
6030 West California Avenue (1400 S)  
Phone: (801) 541-4078.  
Office hours: Monday - Saturday 8:00 a.m. – 4:00 p.m.

Congratulations, your home is more energy efficient and comfortable! To learn more about ways to cut energy waste visit http://utahcleanenergy.org/how-to/energy-efficiency

*Cost will vary considerably depending upon the thermostat type purchased, and whether you install it yourself or have a contractor make the installation.

** If you do not feel comfortable undertaking this project, remember you can always hire a contractor to complete the project for you. Check out a list of ThermWise (Questar Gas) Authorized Contractors:  
http://www.thermwise.com/webapp/AuthorizedContractors/AuthorizedContractorList.php