

Proper Use Guidelines

Programmable thermostats have to be set and used properly to deliver energy savings. **You must select the ENERGY STAR default settings that are shipped with your programmable thermostat to realize the energy and cost savings mentioned above.** Generally, they're easy to program, but energy savings are lost when temperature settings are left in over-ride or hold modes.

ENERGY STAR default settings are designed to keep you comfortable when you're at home. If you find these settings aren't warm or cool enough, it could be because of inadequate sealing or insulation, or inefficient airflow through your duct system - - conditions which a certified HVAC contractor can diagnose and fix.

Rules of Thumb for Proper Use:

1. Keep the temperature set at its energy savings set-points for long periods of time (at least eight hours), for example, during the day, when no one is at home, and through the night, after bedtime.
2. All thermostats let you temporarily make an area warmer or cooler, without erasing the pre-set programming. This override is cancelled automatically at the next program period. You use more energy (and end up paying more on energy bills) if you consistently "hold" or over-ride the pre-programmed settings.
3. Units typically have 2 types of hold features: (a) hold/permanent/vacation; (b) temporary. Avoid using the hold/permanent/vacation feature to manage day to day temperature settings.

"Hold" or "vacation" features are best when you're planning be away for an extended period. Set this feature at a constant, efficient temperature (i.e. several degrees warmer temperature in summer, several degrees cooler during winter), when going away for the weekend or on vacation. You'll waste energy and money if you leave the "hold" feature at the comfort setting while you're away.

4. Cranking your unit up to 90 degrees or down to 40 degrees, for example, will not heat or cool your house any faster. Most thermostats, including ENERGY STAR qualified units, begin to heat or cool at a programmed time, to reach set-point temperatures sometime thereafter.

Units with adaptive, "smart," or "intelligent" recovery features are an exception to this rule – they reach desired temperatures by the set time, since they use formulas that are based on your historical use.

5. Install your unit on an interior wall, away from heating or cooling vents and other sources of heat or drafts (doorways, windows, skylights, direct sunlight or bright lamps).
6. Many homes use just one thermostat to control the whole house. If your home has multiple heating or cooling zones, you'll need a programmed setback thermostat for each zone to maximize comfort, convenience and energy savings throughout the house.
7. Don't forget to change the batteries each year. Some units indicate when batteries must be changed.

Source: ENERGY STAR®

Features

ENERGY STAR qualifies these types of units:

7-day models are best if your daily schedule tends to change, say, if children are at home earlier on some days. They give you the most flexibility, and let you set different programs for different days – usually with four possible temperature periods per day.

5+2-day models use the same schedule every weekday, and another for weekends.

5-1-1 models are best if you tend to keep one schedule Monday through Friday, and another schedule on Saturdays and Sundays.

All ENERGY STAR qualified programmable thermostats include:

Four default program periods per day, allowing you to save money while you're away or sleeping
+/- 2 degree accuracy to keep the temperature at an even level, keeping you comfortable

ENERGY STAR qualified programmable thermostats typically come with:

- Digital, backlit displays
- Touch pad screen programming
- Voice and/or phone programming
- Hold/Vacation features
- Indicators which tell you when its time to change air filters
- Indicators that signal malfunctioning of heating/cooling systems
- Adaptive Recovery/ Smart Recovery features - control features that senses the amount of time it will take to reach the next set-point temperature, and reach desired temperatures by the set time

Source: ENERGY STAR®

Installation

Programmable thermostats are a low voltage wiring installation (however, you should shut down your electricity during the replacement), and involve anywhere from 2 - 10 wires, depending on your type of heating and cooling system. The previous attachment points will reconnect your new unit. Read all instructions and proceed carefully.

If the job requires more than just a replacement, call your certified HVAC professional to ensure proper installation, as well as operation of your heating and cooling system. It's a good idea to upgrade an old manual thermostat to a programmable unit, if you're replacing a CAC or heating system given that programmable units are far more accurate and will maximize the efficiency of your new system. For heat pumps, you may need a special unit to maximize energy savings year-round. Talk to your retailer or HVAC contractor before selecting the unit.

If you are thinking about hiring a contractor to perform maintenance or make improvements to your home, be sure to check out these [tips for hiring a contractor](#).

Also, if you're replacing a conventional thermostat that has a mercury switch, be careful not to break the tube that holds this toxic substance. As a Springfield/Greene County resident, you may use the services of the City of Springfield's Household Chemical Collection Center free of charge. Please call 864-2000 to schedule an appointment. This is for residential customers only -- no businesses, please.

For more information on recycling:

- City of Springfield Recycling Hotline: 864-1904
- <http://www.ci.springfield.mo.us/community/recycling/>

Source: ENERGY STAR®