

*American Standard*

# ASYSTAT500C Deluxe Programmable Heat Pump Thermostat



OWNER'S GUIDE

Pub. No. 12-5029-01



69-1617

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# CUSTOMIZING YOUR THERMOSTAT

## Program Options Set Up by Your American Standard Dealer

Your American Standard dealer has programmed your thermostat using the options checked below. For example, your thermostat displays temperatures in degrees Fahrenheit if the checkbox next to *Fahrenheit (°F)* is checked. Contact your American Standard dealer to reprogram any of the options listed.

NOTE: If no options are checked, those listed in the first column are the factory settings on your thermostat.

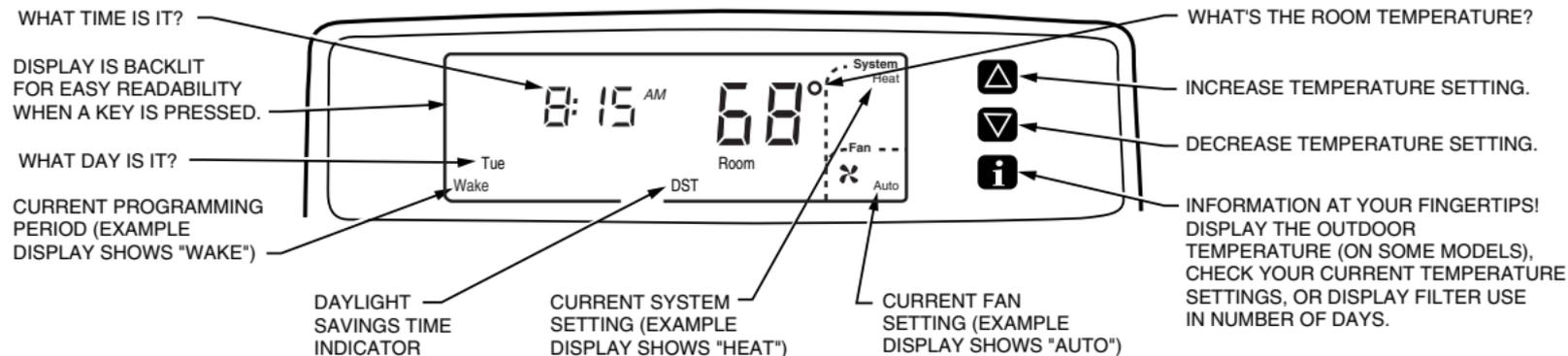
Refer to the Definitions section for a description and comparison of Adaptive Intelligent Recovery™ Control (a Honeywell trademark) to Conventional recovery.

<b>Comfort-R™ Control</b>	<input type="checkbox"/> Off	<input type="checkbox"/> On	
<b>Adaptive Intelligent Recovery™ Control</b>	<input type="checkbox"/> On	<input type="checkbox"/> Off (Conventional recovery)	
<b>Cooling Droop</b>	<input type="checkbox"/> On	<input type="checkbox"/> Off	
<b>Temperature Display</b>	<input type="checkbox"/> Fahrenheit (°F)	<input type="checkbox"/> Centigrade (°C)	
<b>Clock Format</b>	<input type="checkbox"/> 12-Hour Clock Format	<input type="checkbox"/> 24-Hour Clock Format	
<b>System Setting (Heating and Cooling Setting)</b>	<input type="checkbox"/> Auto/Manual (System automatically selects Heat or Cool; You can select Em. Heat, Heat, Cool or Off.)	<input type="checkbox"/> Manual Only (You select Em. Heat, Heat, Cool or Off.)	<input type="checkbox"/> Auto only (System automatically selects Heating or Cooling.)
<b>Outdoor Temperature Display</b>	<input type="checkbox"/> No outdoor temperature is displayed	<input type="checkbox"/> Outdoor temperature is displayed (requires an outdoor sensor).	
<b>Programming</b>	<input type="checkbox"/> 7-Day Programming	<input type="checkbox"/> 24-Hour Programming	<input type="checkbox"/> Constant Temperature Setpoint Programming

NOTE: The ASYSTAT500C thermostat is manufactured for the American Standard Company by Honeywell Inc. Specific features are unique to American Standard and are only available on American Standard models.

# GETTING AROUND THE KEYBOARD

The keyboard is located behind the thermostat cover. Three frequently used keys are located next to the display (Increase temperature setting, Decrease temperature setting, and Information key). The thermostat displays important information such as day, time, schedule period, temperature, filter indicator, system and fan operation.



M14560

**NO NEED TO WORRY ABOUT PRESSING THE WRONG KEY! RUN PROGRAM, RETURN TO NORMAL OPERATIONS, OR UNDO LAST ACTION.**

**HOLD MODE: OVERRIDE NORMAL PROGRAMMING OPERATION, OR GO INTO VACATION MODE!**

**SET CURRENT OR PROGRAM DAY**

**EASILY CHANGE BETWEEN STANDARD AND DAYLIGHT SAVINGS TIME**

**EASY PROGRAMMING! COPY ONE PROGRAMMED DAY TO ANOTHER DAY**

**SET CURRENT DAY AND TIME (INITIALLY AND AFTER EXTENDED POWER OUTAGES).**

**PROGRAM SCHEDULING KEYS**  
PROGRAM UP TO FOUR TIME PERIODS AND TEMPERATURES FOR EACH DAY OF THE WEEK.

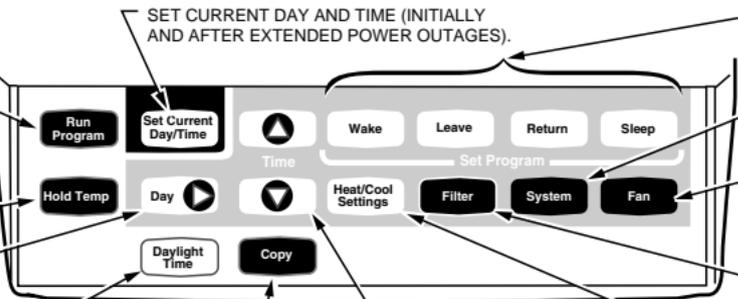
**SELECT SYSTEM OPERATION**  
(EM. HEAT, HEAT, COOL, OFF, AUTO).

**CHOOSE FAN OPERATION** (ON OR AUTO), OR CHOOSE FAN OPERATION FOR EACH PROGRAM PERIOD OF THE DAY ON SELECT MODELS.

**NO MORE GUESSING! SELECT FILTER EXPIRATION** TO REMIND YOU TO CHANGE THE FILTER.

**SWITCH BETWEEN HEATING AND COOLING TEMPERATURE SETTINGS**

**TIME KEYS**  
INCREASE OR DECREASE TIME SETTING FOR CURRENT OR PROGRAMMED TIMES.



**SET WAKE TIMES AND TEMPERATURES**

**SET SLEEP TIMES AND TEMPERATURES**

**SET LEAVE TIMES AND TEMPERATURES**

**SET RETURN TIMES AND TEMPERATURES**



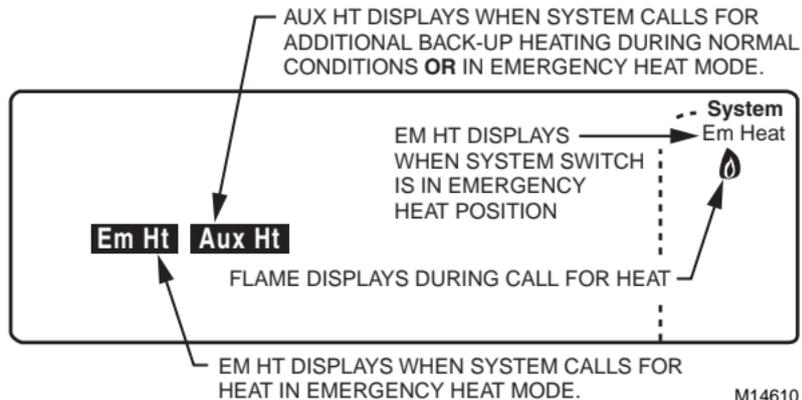
M13301

M17032

## Emergency Heat

The Emergency Heat feature allows you to “turn on” the electric heat section of the system by moving the system switch to the Em. Ht. position. The LED lights and the thermostat displays “Em. Ht.” when the system calls for emergency heating. The thermostat may also display “Aux. Ht.” if the system calls for additional back-up heating (see figure to right).

When the heat pump requires servicing, the LED lights and the system automatically activates emergency heat. After contacting your service technician, clear the LED signal by moving the system switch to Em. Ht. then back to Heat or Auto.



## Auxiliary Heat

The auxiliary heaters assist the heat pump under normal conditions when low outdoor temperature occurs. The auxiliary heaters may also operate while in the recovery mode to maintain comfort level. The thermostat displays “Aux. Ht. ” (see figure above) when the auxiliary heating equipment operates.

# FEATURES

- **Worry-free programming.**
  - **Comfort-R Comfort Enhancement Process—a unique American Standard feature.**
  - **Adaptive Intelligent Recovery Control for comfort and energy savings.**
  - **Wake, Leave, Return and Sleep at the comfort level you select.**
  - **Customize the program schedule—program your own schedule to fit your needs.**
  - **Continuous comfort and energy savings—adjust the schedule as often as you like.**
  - **Temporary schedule override—set the thermostat higher or lower for the current program schedule.**
  - **Vacation mode (1 to 255 days) for added comfort and energy savings. Set the temperature higher or lower for energy savings**
- while on vacation. At the same time, set the comfort level you want when you return.
- **Permanent schedule override—set the thermostat higher or lower indefinitely.**
  - **Set the filter indicator (0, 7, 14, 21, 30, 45, 60, 90, 120, 180, 270, or 360 days) to remind you to change the filter.**
  - **Information at the press of a button—use the Information Key to find out the outdoor temperature (optional accessory), the current setpoints, or the filter status.**
  - **No batteries needed—your thermostat retains the schedule for the life of the product. You never have to reprogram the schedule even after a power outage. (The day and time may need to be reset after an extended power outage.)**
  - **Set or reset the day and time as needed—you can even set Daylight Savings Time.**

# FEATURES YOU'LL WANT TO KNOW MORE ABOUT

## Comfort-R Comfort Enhancement System

Comfort can best be described as the proper balance of temperature and relative humidity, also known as “your comfort index.” The greatest level of comfort is achieved when the temperature and relative humidity are in balance with your body. When the relative humidity is low, you feel comfortable at a higher temperature. Likewise, when the relative humidity is high, you feel comfortable only at a lower temperature. However, if the relative humidity becomes too high, then true comfort cannot be achieved at any temperature.

The Comfort-R™ system is specifically designed to enhance the moisture removal process of your air conditioning system and to make the air drier. This system is so unique, it received a patent from the U.S. Patent Office. During times of high relative humidity, as well as during mild weather, the Comfort-R system increases the moisture removal ability of your air-conditioning system. This results in a lower relative humidity inside your home, which in turn, allows you to feel more comfortable. The resulting lower relative humidity also allows you to maintain the temperature setting on your thermostat at a higher temperature.

## Adaptive Intelligent Recovery Control

### Your Thermostat Senses Temperature More Like You Do

Your new thermostat is so smart, it's almost human. You perceive temperature from a variety of sources, not only from the air in the room, but also from your surrounding walls, windows and furnishings. Humans feel differences in temperature as slight as two degrees Fahrenheit. Common household thermometers and standard thermostats sense only air temperature, which may not reflect how hot or cold the room actually feels to you. Your new thermostat reads both the temperature of the wall and the air, and responds to temperature changes as little as one degree Fahrenheit, so room temperature is more likely to feel right to you and your family.

The Deluxe Programmable Heat Pump Thermostat acts like a computer. When calculating the time to turn on your heating or cooling system, it considers (1) air temperature, (2) wall temperature, and (3) the time you want to reach the comfort temperature. After considering

these three things, Adaptive Intelligent Recovery™ control gradually changes the temperature from the energy savings setting to the comfort setting (for example, from a heating temperature of 62° at night to 70° in the morning).

The system runs continuously until the comfort temperature you choose is reached without overshooting the setting. This saves energy. How do you know when the system is in recovery? The thermostat displays *Recovery* whenever the thermostat activates Adaptive Intelligent Recovery Control. So, *Recovery* displays during the recovery time from Sleep to Wake and from Leave to Return.



M14561

**Recovery indication shown in example above.**

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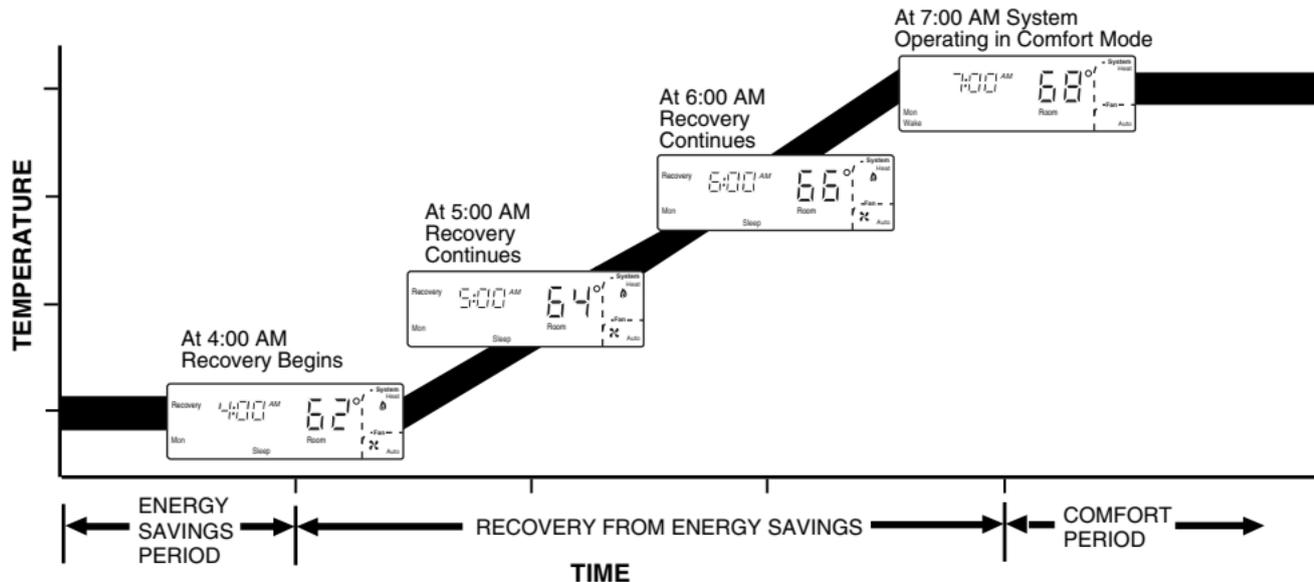
After installation or new schedule programming, your thermostat learns from experience. How? Each day it checks how closely it hit the recovery target (for example, 70° at 6:00 AM) and adjusts the next day's recovery start time accordingly. After four to eight days, the thermostat has adjusted to local weather, your lifestyle, the construction of your home, and your heating and cooling system.

## **The Optimum Comfort and Energy Savings Solution**

In this example, Adaptive Intelligent Recovery Control starts to recover at 4:00 AM and reaches the comfort temperature of 68° at 7:00 AM. Recovery time varies with the starting temperature and the comfort temperature you choose.

Your new thermostat saves energy and keeps you comfortable at the same time. By now you may be wondering how to program your thermostat and how to use some more time and energy-saving features.

First, let's look at features you'll be using often, like how to override the current programming mode or hold the thermostat at a specific temperature while you go on vacation. You can even program the thermostat to return to normal scheduled programming on your last day of vacation so you don't have to worry about energy saving while you are gone or not being comfortable when you return.



THE THERMOSTAT USES THE SAME SCHEME TO RETURN GRADUALLY TO LOWER COMFORT TEMPERATURE DURING THE COOLING SEASON.

M14562

# NEAT STUFF YOU'LL BE USING OFTEN

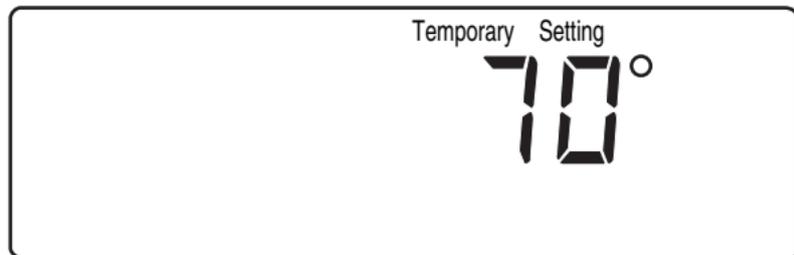
## Setting Temporary Temperatures

If your thermostat is set for 7-Day or 24-Hour Operation, you can override the current schedule period and change the temperature setting until the next schedule period, or change the temperature setting while you are on vacation. You can also change the temperature setting indefinitely.

## Changing Temperature Setting Until the Next Schedule Period

NOTE: This feature does not apply to Constant Temperature Setpoint Programming.

- ▲ Press **Increase ▲** or **Decrease ▼** until the desired temperature setpoint displays.



M14563

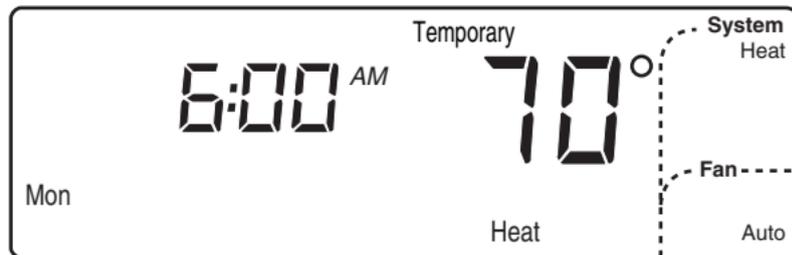
While selecting a temporary setting, only the setpoint displays.

The temporary temperature setting you select displays for approximately 3 seconds. The display reads *Temporary* until the next period begins, or you cancel the Hold.

Run  
Program

### **IMPORTANT**

*To cancel the Hold before the designated time, press **Run Program**.*



M14564

After selecting a temporary setting, display reads *Temporary* until canceled.  
Example displays shows temporary heat setting of 70° at 6:00 AM.

**NOTE:** If “▲” or “▼” appears under the temperature display, it means that both the heating and cooling setpoints are being adjusted. Tapping the key changes both the heat and cool setpoints by one degree. Press after the desired setpoint is reached to verify the setpoints.

**NOTE:** While in temporary operation, the thermostat uses conventional recovery for that period only. The thermostat assumes you desire to maintain the temporary setting until the end of the period.

## Changing Temperature Setting Indefinitely

NOTE: This feature does not apply to Constant Temperature Setpoint Programming.

NOTE: The current time does not display while in this mode.

Hold Temp

1. Press **Hold Temp** once.

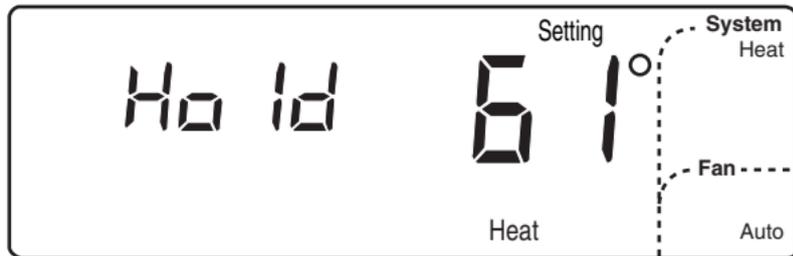


M14565

Pressing Hold Temp once displays the thermostat in Hold mode.  
Example display shows temporary heat setting of 60°.



2. Press **Increase ▲** or **Decrease ▼** to change the temperature setpoint, if desired.



M14566

By pressing the Temperature keys, you can select a temporary temperature. This temperature setting remains until the hold is canceled. Example displays shows heat set to 61°.

Heat/Cool  
Settings

3. Press **Heat/Cool Settings** to change between heat and cool settings.



M14567

Pressing Heat/Cool Settings displays the other temperature setpoint. Example displays shows temporary cooling setting of 78°.

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4. Press **Increase ▲** or **Decrease ▼** to adjust temperature settings.



M14568

Pressing the Temperature keys changes the temporary temperature.  
Example displays shows temporary cooling setting of 80°.

NOTE: The display changes from the setpoint to the room temperature after approximately 3 seconds.

Run  
Program

**IMPORTANT**

*To cancel the Hold, press **Run Program**.*

## Vacation Mode

NOTE: This feature does not apply to Constant Temperature Setpoint Programming.

Hold Temp

1. Press **Hold Temp** twice.



M14569

Pressing Hold Temp twice displays the thermostat in Vacation mode.  
Example displays shows temporary heat setting of 60°.



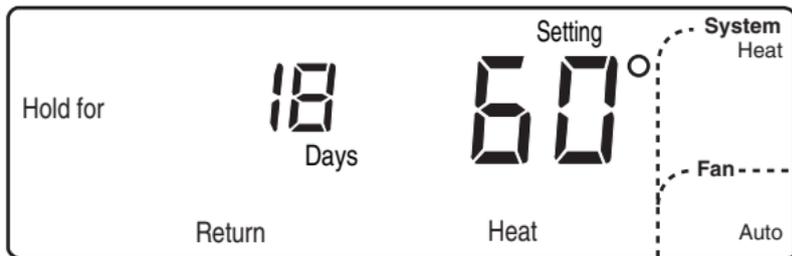
2. Press **Time ▲** or **Time ▼** until the desired number of days displays (1 to 255 days).



M14570

By pressing the Time keys, the number of vacation days is selected.  
Example displays shows 18 vacation days.

3. Press **Wake**, **Leave**, **Return** or **Sleep** to select the period the Hold will stop.



M14571

In this example, the Hold will stop after the 18<sup>th</sup> day at the beginning of the Return period.



4. Press **Increase ▲** or **Decrease ▼** to adjust the temperature setting, if desired.



M14572

By pressing Temperature keys, a new hold temperature is selected.  
Example display shows temporary heat setting of 55°.

NOTE: Only the heating temperature is used when the System is set to Heat. Similarly, only the cooling temperature is used when the System is set to Cool. The thermostat uses both the heating and cooling temperatures when the System is set to Auto.

Heat/Cool  
Settings



5. Press **Heat/Cool** Settings to change between heat and cool settings.
6. Press **Increase ▲** or **Decrease ▼** to adjust the temperature setting, if desired.  
(Example: Cool 84° = cooling equipment operates when the room temperature is above 84°F)

Run  
Program

**IMPORTANT**

To cancel the Hold before the designated time, press **Run Program**.

**Pressed the wrong key?  
Want to start over?**

Don't worry! You can always press

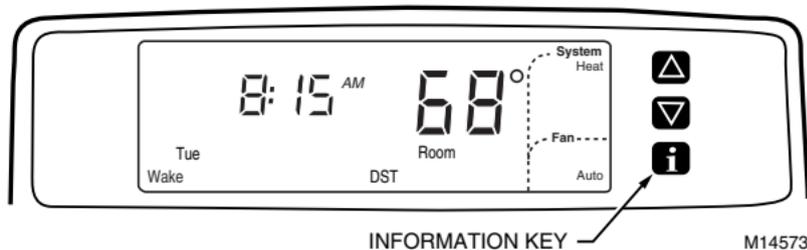
Run  
Program

to return display to normal.

## Information Key

The Information key provides information at your fingertips. The sequence of key presses is as follows:

- Outdoor Temperature (if equipped)
- Current Setpoint of Mode in Use (Heat or Cool)
- Setpoint of Mode Not Currently in Use
- Filter Status



If the filter status is expired (refer to *Filter Indication* section), the sequence of **i** key presses is as follows:

- Filter Status
- Outdoor Temperature (if equipped)
- Current Setpoint of Mode in Use (Heat or Cool)
- Setpoint of Mode Not Currently in Use

## Displaying Outdoor Temperature

**i** Press **i** once to display the outdoor temperature (if equipped).

NOTE: If the filter status is expired, press **i** twice to display outdoor temperature.



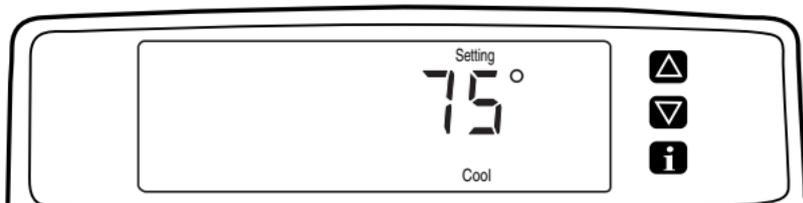
Pressing **i** key once displays the outdoor temperature.  
Example displays shows outdoor temperature at 58°.

## Displaying Current Settings

**i** Press **i** twice to check the current temperature setpoint. Press **i** three times to check the temperature setpoint of the mode not currently in use.

NOTE: Without outdoor temp. sensor, press **i** once to display current setpoint; twice for opposite setpoint.

NOTE: If the filter status is expired, press **i** three times to check current temperature setpoint, if equipped w/outdoor sensor.



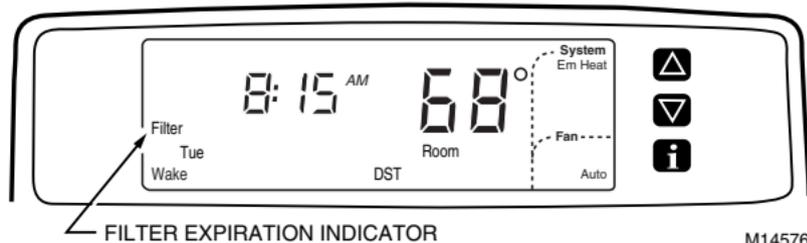
M14575

Pressing **i** key twice displays current setpoint.  
Example displays shows cooling setpoint of 75°.

## Filter Indication

Your thermostat monitors the time the fan is running and lets you know when to replace the filter, based on the number of fan run-time days you select. Upon expiration, the thermostat displays *Filter* and the backlight flashes during the Wake and Return modes.

To temporarily cancel the flashing display, press **i**



M14576

## Setting or Resetting Filter Indication Timer

Your thermostat comes preset to the 30-day setting. To change this setting, or reset after filter expiration, follow these instructions:

Filter

1. Press **Filter** to enter the Filter mode.



M14577

Pressing the Filter key displays filter information. In this example, current fan run time is 5 days and the filter is set to expire in 30 days.

Filter

2. Press and hold **Filter** for at least 3 seconds to reset fan run time to zero.



M14578

Holding down the Filter key resets counter to "0" days.

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3. Press **Time ▲** or **Time ▼** until the desired number of days displays (0, 7, 14, 21, 30, 45, 60, 90, 120, 180, 270, or 360).

Run  
Program

4. Press **Run Program** to return to normal operation.

### **IMPORTANT**

*To track the time the fan is running, you must select a setting other than 0. If the setting is 0 days, the display will always show "0 Days; 0 Setting" when Filter is pressed.*

# PROGRAMMING YOUR THERMOSTAT

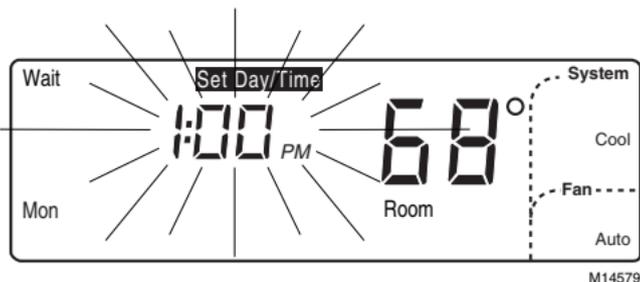
## Clock

### Setting Current Day and Time

#### **IMPORTANT**

*Always press the keys with your fingertip or similar blunt tool. Sharp instruments like pens and pencil points will damage the keyboard.*

On initial power up or after an extended power loss,  
**1:00 PM** flashes on the display until a key is pressed.



**Pressed the wrong key?  
Want to start over?**

Don't worry! You can always press

**Run  
Program**

to return display to normal.



1. Press **Set Current Day/Time**.



M14580

Pressing Set Current Day/Time displays the information shown.



2. Press **Day** until the current day displays.

NOTE: Mon = Monday, Tue = Tuesday,  
Wed = Wednesday,  
Thu = Thursday, Fri = Friday,  
Sat = Saturday, Sun = Sunday.



M14581

By Pressing Day, you can set the current day.  
Example display shows Tuesday.



3. Press **Time ▲** or **Time ▼** until the current time displays.

NOTE: Tapping **Set Current Day/Time** advances the time in one-hour increments.



M14582

By Pressing Time, you can set the current time.  
Example display shows 8:15 AM.



NOTE: If the current time is Daylight Savings Time, press **Daylight Time** until *DST* displays.



M14583

By Pressing Daylight Time, you can set Daylight Savings Time.



4. Press **Run Program** to return to normal operation.

## Setting System and Fan

The system default setting is Heat and the fan default setting is Auto. Use the System and Fan keys to change the settings. The fan settings can be set for each schedule period individually. The system selection is for all the schedule periods.

### Set System

**System**

Press **System** until the desired system displays (Em. Heat, Heat, Off, Cool, or Auto).

Em. Heat: The thermostat controls only the backup heat. The heat pump is off.

Heat: The thermostat controls the heating.

Off: Both the heating and cooling are off.

Cool: The thermostat controls the cooling.

Auto: The thermostat automatically changes between heating and cooling operation, depending on the indoor temperature.



M14611

**Fan**

### Set Fan

Press **Fan** until the desired mode displays (On or Auto).

On: Fan operates continuously.

Auto: Fan operates only when heating or cooling.



M14585

## 7-Day Program and Operation

Your thermostat comes preset for 7-Day Operation unless otherwise noted on page 6. After reviewing the options following this section, you may find that 24-Hour Operation or Constant Temperature Setpoint Programming is better for you and your family. If so, please consult your American Standard dealer or service technician.

During 7-Day Operation, you can set your thermostat for four periods (Wake, Leave, Return and Sleep) and up to eight temperatures (four Heat and four Cool) for each day of the week. Each day can be the same or different.



M14586

During 7-Day Operation, one day of the week displays in program mode (Monday is shown in the example).

## 7-Day Preprogrammed Schedule

If your thermostat is set for 7-Day Operation, follow the steps below. Otherwise, refer to 24-Hour Program and Operation, or Constant Temperature Setpoint Programming.

The preprogrammed schedule is shown in Table 1 (same schedule for all days of the week). You may keep this schedule or organize your own.

**Table 1. 7-Day Preprogrammed Schedule.**

	<b>WAKE</b>		<b>LEAVE</b>		<b>RETURN</b>		<b>SLEEP</b>	
<b>SUNDAY</b>	TIME FAN H 70	6:00 AM AUTO C 78	TIME FAN H 62	8:00 AM AUTO C 85	TIME FAN H 70	5:00 PM AUTO C 78	TIME FAN H 62	10:00 PM AUTO C 82
<b>MONDAY</b>	TIME FAN H 70	6:00 AM AUTO C 78	TIME FAN H 62	8:00 AM AUTO C 85	TIME FAN H 70	5:00 PM AUTO C 78	TIME FAN H 62	10:00 PM AUTO C 82
<b>TUESDAY</b>	TIME FAN H 70	6:00 AM AUTO C 78	TIME FAN H 62	8:00 AM AUTO C 85	TIME FAN H 70	5:00 PM AUTO C 78	TIME FAN H 62	10:00 PM AUTO C 82
<b>WEDNESDAY</b>	TIME FAN H 70	6:00 AM AUTO C 78	TIME FAN H 62	8:00 AM AUTO C 85	TIME FAN H 70	5:00 PM AUTO C 78	TIME FAN H 62	10:00 PM AUTO C 82
<b>THURSDAY</b>	TIME FAN H 70	6:00 AM AUTO C 78	TIME FAN H 62	8:00 AM AUTO C 85	TIME FAN H 70	5:00 PM AUTO C 78	TIME FAN H 62	10:00 PM AUTO C 82
<b>FRIDAY</b>	TIME FAN H 70	6:00 AM AUTO C 78	TIME FAN H 62	8:00 AM AUTO C 85	TIME FAN H 70	5:00 PM AUTO C 78	TIME FAN H 62	10:00 PM AUTO C 82
<b>SATURDAY</b>	TIME FAN H 70	6:00 AM AUTO C 78	TIME FAN H 62	8:00 AM AUTO C 85	TIME FAN H 70	5:00 PM AUTO C 78	TIME FAN H 62	10:00 PM AUTO C 82

## Customizing Your Own 7-Day Schedule

Before starting the programming procedure, use Tables 2 and 3 to organize your schedule. The preprogrammed schedule is shown in Table 1. Four time periods are available for each day of the week – WAKE, LEAVE, RETURN, and SLEEP.

### **A Word About Power Outages**

Don't worry! Your thermostat retains the schedule (preprogrammed or your own) for the life of the product. The clock and day information is retained for a minimum of ten minutes during a power outage. After a longer power outage, the current time and day may need to be set (*1:00 PM* flashes on the display), but the schedule is retained.

## Instructions

1. Write in the time you want each schedule period to begin.
2. Write in the heating temperature (H) and cooling temperature (C) you want for each period.
3. Circle the fan operation you desire for each period.
4. Begin with Programming the First Day!

**Pressed the wrong key?  
Want to start over?**

Don't worry! You can always press

**Run  
Program**

to return display to normal.

**Table 2. Your 7-Day Schedule.**

	WAKE			LEAVE			RETURN			SLEEP		
<b>SUNDAY</b>	TIME FAN H	AUTO C	ON									
<b>MONDAY</b>	TIME FAN H	AUTO C	ON									
<b>TUESDAY</b>	TIME FAN H	AUTO C	ON									
<b>WEDNESDAY</b>	TIME FAN H	AUTO C	ON									
<b>THURSDAY</b>	TIME FAN H	AUTO C	ON									
<b>FRIDAY</b>	TIME FAN H	AUTO C	ON									
<b>SATURDAY</b>	TIME FAN H	AUTO C	ON									

**Table 3. An Extra 7-Day Schedule.**

	WAKE			LEAVE			RETURN			SLEEP		
<b>SUNDAY</b>	TIME FAN H	AUTO C	ON									
<b>MONDAY</b>	TIME FAN H	AUTO C	ON									
<b>TUESDAY</b>	TIME FAN H	AUTO C	ON									
<b>WEDNESDAY</b>	TIME FAN H	AUTO C	ON									
<b>THURSDAY</b>	TIME FAN H	AUTO C	ON									
<b>FRIDAY</b>	TIME FAN H	AUTO C	ON									
<b>SATURDAY</b>	TIME FAN H	AUTO C	ON									

## Programming the First Day

To modify the preprogrammed schedule, start by programming the Wake time and temperature and fan operation for any one day:

NOTE: This schedule follows the current day and time you set in the section *Setting Current Day and Time* and the Heat or Cool setting and Fan setting you selected in the section *Setting System and Fan*.



1. Press **Wake**.



M14586

By pressing Wake, you enter the program mode.  
Example display shows 6:00 AM on Tuesday with Heat set to 70°F.



2. Press **Day** until the desired day displays.



M14588

By pressing Day, you select the day to program.  
Example display shows Monday is selected and ready to program.



3. Press **Time ▲** or **Time ▼** until the desired Wake time displays.

NOTE: The program times are in fifteen-minute intervals.  
(Example: 8:00, 8:15, 8:30).



M14589

By pressing Time, you select the time the Wake period will begin.  
Example display shows the Wake period will begin at 6:30 AM.



4. Press **Increase ▲** or **Decrease ▼** until the desired Wake temperature displays.

NOTE: The setpoint temperature range is 55 to 85°F (13 to 29°C) for heating and 65 to 99°F (18 to 37°C) for cooling.



M14590

By pressing **Increase ▲** or **Decrease ▼**, you select the temperature for the Wake period.  
Example display shows the heating Wake period set for 68°.

Fan

NOTE: Press **Fan** to modify fan operation. **Auto** means the fan runs only when the heating or cooling equipment is operating. **On** means the fan runs continuously for the entire schedule period.

5. Press **Heat/Cool Settings** to make selections for the opposite system setting (either Heat or Cool).

NOTE: If your system is set for Heat, only the heating temperature will be used. Similarly, if your system is set for Cool, only the cooling temperature will be used. If your system is set for Auto, either the heating or cooling temperature may be used depending on the temperature of the room.



6. Press **Increase ▲** or **Decrease ▼** until the desired temperature setpoint displays.



M14591

By pressing Heat/Cool Settings, you select the cooling system (if you already set the heating temperature). The current setting displays. Example display shows the cooling system was previously set for 78°.



M14592

By pressing **Increase ▲** or **Decrease ▼**, you select the cooling Wake temperature. Example display shows the cooling Wake period set for 76°.

7. Press **Leave**, **Return** or **Sleep** and repeat steps 3, 4, 5 and 6 for programming the rest of the day. The day is now programmed (first day of a seven-day schedule).



**IMPORTANT**

*Repeat steps 1 through 7 for each day of the week that has a different schedule from the first day. Or, refer to the section **Copying a Day** to copy any programmed day to another.*

A black rounded rectangular button with the text 'Run Program' in white.

8. Press **Run Program** to return to normal operation.

**Pressed the wrong key?  
Want to start over?**

Don't worry! You can always press

A black rounded rectangular button with the text 'Run Program' in white.

to return display to normal.

## Copying a Day

NOTE: The copy feature applies only to 7-Day Operation. The thermostat must be in the program mode to use the copy feature. Go to step 2 if the thermostat is already in the program mode (Set Program displays in upper left corner).

1. Press **Wake**, **Leave**, **Return** or **Sleep** to enter program mode.



2. Press **Day** to select the day to copy from.

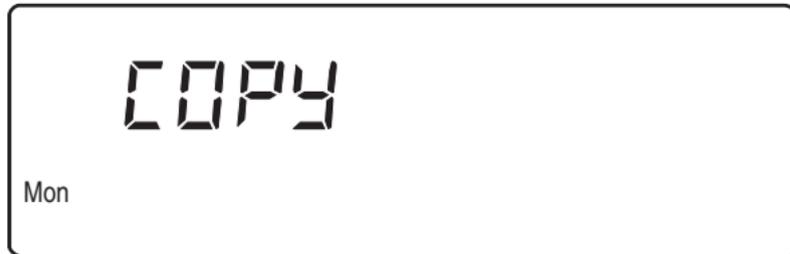


M14590

By pressing Day, you select which day's schedule to copy. Example display shows the thermostat in program mode with Monday ready to be copied.

Copy

3. Press **Copy**.



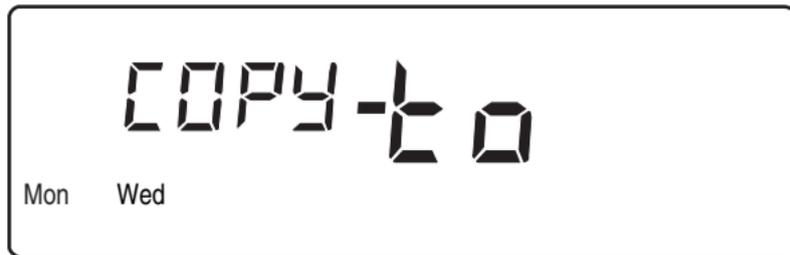
M14594

By pressing Copy, you copy a day's schedule into memory. Example display shows Monday's schedule has been copied into memory.

Day



4. Press **Day** until the day to be copied to is displayed.



M14595

By pressing Day again, you select which day to copy to. Example display shows Monday and Wednesday. Since Monday was already selected, Monday's schedule will be copied to Wednesday.

Copy

5. Press **Copy**.

NOTE: *donE* displays for two seconds before the normal display returns.



done

M14596

By pressing Copy again, you complete the copy command. Example display shows *donE*. Monday's schedule was successfully copied to Wednesday (Monday and Wednesday now have the same schedule).

6. Repeat steps as necessary for all the periods and days desired.

Run  
Program

7. Press **Run Program** to return to normal operation.

## Clearing Schedule Period

Suppose you want to skip a schedule period or periods for a particular day because you don't need them. For example, if Saturday is a day you normally stay at home from school or work, you can clear the Leave and Return periods for this day and keep the Wake and Sleep periods. You can always reprogram the periods later.

**NOTE:** The clear feature applies to 7-Day and 24-Hour Operation. The thermostat must be in the program mode to use the clear feature. Go to step 2 if the thermostat is already in the program mode (Set Program displays in upper left corner).

1. Press **Leave**, **Return** or **Sleep** to enter program mode.



M14597

By pressing Leave, Return, or Sleep, you enter the program mode. Example display shows 8:00 AM on Monday in the Leave period, with Heat set for 62°



2. For 7-Day Operation, press **Day** until the desired day displays. For 24-Hour Operation, skip to step 3.



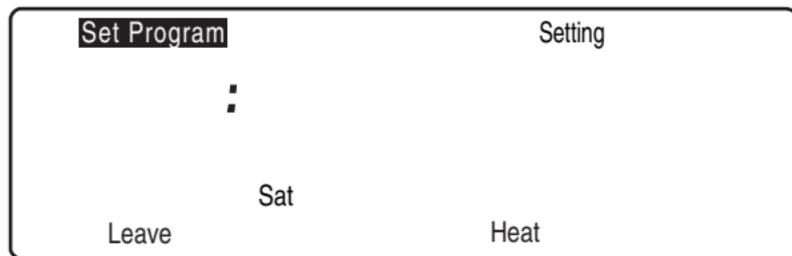
M14598

Press Day to select which day to begin clearing periods.  
Example display shows Saturday is selected.

3. Press and hold **Leave**, **Return** or **Sleep** until the start time and temperature setting are cleared (approximately 3 seconds).



NOTE: **Wake** cannot be cleared.



M14599

By pressing and holding Leave, Return or Sleep, the period for that day is cleared. Example display shows Saturday's Leave period has been cleared.

You do not have to program a replacement time for the remaining periods, for example Wake and Sleep. If you cleared only the Leave and Return periods for Saturday (or any day), the thermostat remains in the Wake period for all of Saturday until the Sleep period.

4. Repeat steps as necessary for all the periods to be cleared.
5. Press **Run Program** to return to normal operation.

A black rounded rectangular button with the text "Run Program" in white, centered on the button.

## 24-Hour Program and Operation

24-Hour Operation is the same as 7-Day Operation except the same program repeats itself each day. Monday through Sunday follows the same exact schedule (four periods and up to eight temperatures).



M14600

During 24-Hour Operation, all days of the week display in program mode.

## 24-Hour Preprogrammed Schedule

If your thermostat is set for 24-Hour Operation, follow the steps below. Otherwise, refer to 7-Day Program and Operation, or Constant Temperature Setpoint Programming.

The preprogrammed schedule is as follows (same schedule for all days of the week): You may keep this schedule or organize your own.

**Table 4. 24-Hour Preprogrammed Schedule.**

	WAKE		LEAVE		RETURN		SLEEP	
<b>Program Repeats Every 24 Hours</b>	TIME FAN H 70	6:00 AM AUTO C 78	TIME FAN H 62	8:00 AM AUTO C 85	TIME FAN H 70	5:00 PM AUTO C 78	TIME FAN H 62	10:00 PM AUTO C 75

## Customizing Your Own 24-Hour Schedule

Before starting the programming procedure, use Tables 5 and 6 to organize your schedule. The preprogrammed schedule is shown in Table 4. Four time periods are available—WAKE, LEAVE, RETURN, and SLEEP.

**Table 5. Your 24-Hour Schedule.**

	WAKE			LEAVE			RETURN			SLEEP		
<b>Program Repeats Every 24 Hours</b>	TIME FAN H	AUTO C	ON									

## Instructions

1. Write in the time you want each schedule period to begin.
2. Write in the heating temperature (H) and cooling temperature (C) you want for each period.
3. Circle the fan operation you desire for each period.
4. Begin programming.

**Table 6. An Extra 24-Hour Schedule.**

	WAKE			LEAVE			RETURN			SLEEP		
<b>Program Repeats Every 24 Hours</b>	TIME			TIME			TIME			TIME		
	FAN	AUTO	ON	FAN	AUTO	ON	FAN	AUTO	ON	FAN	AUTO	ON
	H	C		H	C		H	C		H	C	

## Programming Your 24-Hour Schedule

To program the Wake time and temperature and fan operation:

**NOTE:** This schedule follows the current day and time you set in the section *Setting Current Day and Time* and the Heat or Cool setting and Fan setting you selected in the section *Setting System and Fan*.



1. Press **Wake**.



M14600

By pressing Wake, you enter the program mode.  
Example display shows 6:00 AM with Heat set to 70°F.



2. Press Time ▲ or Time ▼ until the desired Wake time displays.

NOTE: The program times are in fifteen minute intervals.  
(Example: 8:00, 8:15, 8:30).



M14601

By pressing Time, you select the time the Wake period will begin.  
Example display shows the Wake period will begin at 6:30 AM.



3. Press **Increase ▲** or **Decrease ▼** until the desired Wake temperature displays.

NOTE: The setpoint temperature range is 55 to 85°F (13 to 29°C) for heating and 65 to 99°F (18 to 37°C) for cooling.



M14602

By pressing **Increase ▲** or **Decrease ▼**, you select the temperature for the Wake period. Example display shows the heating Wake period set for 68°.



NOTE: Press **Fan** to modify fan operation. **Auto** means the fan runs only when the heating or cooling equipment is operating. **On** means the fan runs continuously for the entire schedule period.

4. Press **Heat/Cool Settings** to make selections for the opposite system setting (either Heat or Cool).

NOTE: If your system is set for Heat, only the heating temperature will be used. Similarly, if your system is set for Cool, only the cooling temperature will be used. If your system is set for Auto, either the heating or cooling temperature may be used depending on the temperature of the room.



M14603

By pressing Heat/Cool Settings, you select the cooling system (if you already set the heating temperature). The current setting displays. Example display shows the cooling system was previously set for 78°.



5. Press **Increase ▲** or **Decrease ▼** until the desired temperature setpoint displays.



M14604

By pressing **Increase ▲** or **Decrease ▼**, you select the cooling Wake temperature. Example display shows the cooling Wake period set for 76°.

6. Press **Leave**, **Return** or **Sleep** and repeat steps 2, 3, 4, and 5 for programming the rest of the day. The week is now programmed.



**Run  
Program**

7. Press **Run Program** to return to normal operation.

## Constant Temperature Setpoint Programming

Unlike the first two options, Constant Temperature Setpoint Programming does not have the Wake, Leave, Return and Sleep periods. The temperature is set by pressing the ▲ and ▼ keys.



M14588

The four periods (for example, Wake) are absent from the display in this mode.

## Setting Temperature and Fan Operation

If your thermostat is set for Constant Temperature Setpoint Programming, follow the steps below. Otherwise, refer to 7-Day Program and Operation, or 24-Hour Program and Operation.

To set the temperature and fan operation:

NOTE: Refer to the section *Setting Current Day and Time* to set the current day and time, and the section *Setting System and Fan* to set the system and fan.



1. Press **Increase ▲** or **Decrease ▼** until the desired temperature displays.

NOTE: The setpoint temperature range is 55 to 85°F (13 to 29°C) for heating and 65 to 99°F (18 to 37°C) for cooling.



M14605

By pressing **Increase ▲** or **Decrease ▼**, you select the heating temperature. Example display shows Heat is set for 68°.

Fan

NOTE: Press **Fan** to modify fan operation. **Auto** means the fan runs only when the heating or cooling equipment is operating. **On** means the fan runs continuously for the entire schedule period.



2. Press **Information i** key to make selections for the opposite system setting (works like the **Heat/Cool Settings** key).



3. Press **Increase ▲** or **Decrease ▼** until the desired temperature setpoint displays.



M14606

By pressing **Increase ▲** or **Decrease ▼** after pressing , you select the cooling temperature. Example display shows Cool is set for 75°.

**NOTICE:** This equipment is a Class B digital apparatus, which complies with Canadian Radio Interference Regulations, CRC c. 1374.



## CAUTION

**Equipment Damage Hazard.**

**Can cause permanent damage to the compressor or other equipment.**

To avoid possible equipment damage, do not operate cooling when outside temperature is below 50°F (10°C). See equipment manufacturer instructions. To avoid possible compressor damage, allow the compressor to remain off for five minutes before restarting.

# TROUBLESHOOTING GUIDE

Symptom	Possible Cause	Action
Display does not come on.	Thermostat is not being powered.	Check if the thermostat is mounted and latched on the wallplate—mount and latch the thermostat on the wallplate. Check if the circuit breaker is tripped—reset the circuit breaker. Check if the fuse is blown—replace the fuse. Check if the system switch at the equipment is in the Off position—set to the On position. Check wiring between thermostat and HVAC equipment—replace any broken wires. If 24 Vac is present, proceed with troubleshooting.
Temperature setting does not change (Example: cannot set the heating higher or the cooling lower).	The upper or lower temperature limits were reached.	Check that the temperature setpoints are: Heating: 55 to 85°F (13 to 29°C) Cooling: 65 to 99°F (18 to 37°C).

*(continued)*

## Troubleshooting Guide (continued).

Symptom	Possible Cause	Action
Heating does not come on.	No power to the thermostat. System selection is not set to Heat. Heating setpoint is below room temperature.	Check that setpoint is above room temperature. Check if the circuit breaker is tripped—reset the circuit breaker. Check if the fuse is blown—replace the fuse. Check if the system switch at the equipment is in the Off position—set to On position. If 24 Vac is present, proceed with troubleshooting. Wait five minutes for the system to respond (thermostat displays <i>Wait</i> ). Set system selection to Heat.
Cooling does not come on.	No power to the thermostat. System selection is not set to Cool. Cooling setpoint is above room temperature.	Check that setpoint is below room temperature. Check if the circuit breaker is tripped—reset the circuit breaker. Check if the fuse is blown—replace the fuse. Check if the system switch at the equipment is in the Off position—set to On position. If 24 Vac is present, proceed with troubleshooting. Wait five minutes for the system to respond (thermostat displays <i>Wait</i> ). Set system selection to Cool.

(continued)

## Troubleshooting Guide (continued).

Symptom	Possible Cause	Action
System on indicator (flame=heat, snowflake=cool) is lit, but no warm or cool air is coming from the registers.	Heating/cooling equipment turns on the fan when the equipment has reached the setpoint.	Wait a minute after seeing the flame or snowflake and then check the registers.
System on indicator reads <i>Filter</i> and backlight is flashing.	Filter expired.	Refer to the <i>Filter Indication</i> section.
Outdoor temperature not displayed or is incorrect.	Filter expired.  Installer did not activate this option. Outdoor sensor is connected incorrectly.	Press  twice for outdoor temperature when filter expiration shows on display. Refer to the <i>Filter Indication</i> section.  Contact installer or service technician.
LED is lit.	System switch is set to Em. Heat.  Compressor failure.	Move switch to Heat or Auto  Contact service technician.

# DEFINITIONS

## **Adaptive Intelligent Recovery™ Control**

Adaptive Intelligent Recovery™ Control is the factory default setting that allows you to choose the exact time the room reaches your comfort temperature, as opposed to conventional recovery.

## **Adaptive Intelligent Recovery™ Modes**

- WAKE** You choose the exact time the room reaches your comfort temperature after the SLEEP period.
- LEAVE** You choose the time you want your heating or cooling system to start an energy-savings mode while you are away (lower temperature during heating season, and higher temperature during cooling season) – follows WAKE period.
- RETURN** You choose the exact time the room reaches your comfort temperature after the energy-savings LEAVE period.
- SLEEP** You choose the time you want your heating or cooling system to start an energy-savings mode while you sleep-follows RETURN period.

## **Conventional Recovery**

Conventional recovery is an optional setting allows you to choose the exact time your heating or cooling system comes on to start recovery, as opposed to Adaptive Intelligent Recovery™ Control.

If your thermostat is set to conventional recovery, a  indication displays continuously, as shown on the example display.



### Conventional Recovery Modes

- WAKE** You choose the time you want your heating or cooling system to start to reach your comfort temperature after the SLEEP period. Adjust this time to earlier when you know it will take longer for the system to reach your comfort temperature. Adjust this time to later when you know the SLEEP temperature is closer to your WAKE temperature.
- LEAVE** You choose the time you want your heating or cooling system to start an energy-saving mode while you are away (lower temperature during heating season, and higher temperature during cooling season) – follows WAKE period.
- RETURN** You choose the time you want your heating or cooling system to start to reach your comfort temperature after the energy-savings LEAVE period.
- SLEEP** You choose the time you want your heating or cooling system to start an energy-savings mode while you sleep-follows RETURN period.

## **Preprogrammed Schedule**

The preprogrammed schedule consists of the four periods (Wake, Leave, Return and Sleep) and accompanying temperatures programmed into your thermostat at the factory. See Tables 1 and 4.

## **Period**

One of the four times of the day (Wake, Leave, Return or Sleep) that you can program a setpoint or setpoints.

## **Setpoint**

Setpoint is the temperature setting you select for a schedule or for a Hold. The setpoint can be either the heating temperature you set or the cooling temperature. Setpoint does not refer to actual room temperature or outdoor temperature.

## **System**

System refers to either the heating and cooling mechanics. For example, when the System is set to Heat, the heating mechanics operate according to the heating setpoint. The thermostat selects the System when set to Auto. Some installations allow you to turn the System off (neither heating nor cooling will operate).

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# LIMITED WARRANTY

## Low Voltage Room Thermostats

This warranty is extended by American Standard Inc., to the original purchaser and to any succeeding owner of the real property to which the **Thermostat** is originally affixed, and applies to products purchased and retained for use within the U.S.A. and Canada.

If any part of your **Thermostat** fails because of a manufacturing defect within five years from the date of the original purchase, Warrantor will furnish without charge a new thermostat. **Any local transportation, related service labor and diagnosis calls are not included.**

This limited warranty applies to product installed on or after 10/1/2001 where product is manufactured after 1/1/2000. This limited warranty is not retroactive to any installations prior to 10/1/2001 or on product produced prior to 2000.

**THE LIMITED WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESS OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR USE, AND IN N EVENT SHALL WARRATOR BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Parts will be provided by our factory organization or an authorized service organization in your area listed in the yellow pages. If you wish further help or information concerning this warranty, contact:

American Standard Inc.  
Troup Highway  
Tyler, TX 75711-9010

# CUSTOMER ASSISTANCE

If, after reading this guide, you have any questions concerning the operation of your thermostat, please call the Thermostat Customer Assistance Helpline at 1-800-500-2041.

For service, contact your local heating and cooling contractor.

*American  
Standard*

American Standard Inc.  
Troup Highway  
Tyler, TX 75711-9010