Congratulations! You made a smart choice when you purchased your new Honeywell Communicating Chronotherm III Thermostat. It’s the smart thermostat that:

- **Keeps you comfortable** by automatically calculating exactly when the furnace or air conditioning should go on to have the house at the desired comfort temperature by the time you wake up.
- **Saves the maximum amount of energy and money** by remembering to automatically set back the heat or air conditioning when you leave home.
- **Provides the ultimate in comfort and convenience** by coming to you already programmed. But it’s your choice—use the preprogrammed schedule or set your own.
- **Can be connected to a Honeywell’s TotalHome system** for external access and control. TotalHome system devices communicate using HBus, a Honeywell communications protocol.
**Features**

- Monitor thermostat operation; read current time and room temperature at a glance.
- Set the cooling temperatures. See page 7.
- Set the system and fan switches. See page 12.
- Set the current time and day. See page 1.
- Program up to four different time periods in each schedule.
- Choose manual or programmed thermostat operation.
- Choose system and fan operation with the thermostat switches (on subbase).
- Program up to four different time periods in each schedule.
- Bypass the stored program for a single period.
- Choose manual or programmed thermostat operation.

**Simple Four-Step Programming**

Of course, you can use the schedule preprogrammed into your new thermostat. See Glossary, page 40-42). But it’s an easy matter to program the thermostat to fit your lifestyle.

1. Set the current time and day. See page 1.
2. Set the program schedule and heating temperatures. See page 2.
3. Set the cooling temperatures. See page 7.
4. Set the system and fan switches. See page 12.

AUX. HT. and EM. HT. on T8631R. See Glossary, page 40.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming Your Thermostat</td>
<td>1-13</td>
</tr>
<tr>
<td>Setting the current day and time</td>
<td>1</td>
</tr>
<tr>
<td>Setting the program schedule and heating temperatures</td>
<td>2</td>
</tr>
<tr>
<td>Setting the cooling temperatures</td>
<td>7</td>
</tr>
<tr>
<td>Setting the system and fan switches on the subbase</td>
<td>12</td>
</tr>
<tr>
<td>Operating Your Thermostat</td>
<td>14-20</td>
</tr>
<tr>
<td>Temporarily changing the program</td>
<td>14</td>
</tr>
<tr>
<td>Permanently changing the program</td>
<td>15</td>
</tr>
<tr>
<td>Operating the thermostat manually</td>
<td>16</td>
</tr>
<tr>
<td>Canceling program settings</td>
<td>17</td>
</tr>
<tr>
<td>Checking the program times and temperatures</td>
<td>18</td>
</tr>
<tr>
<td>Checking the current temperature setting</td>
<td>19</td>
</tr>
<tr>
<td>External access and control of thermostat</td>
<td>20</td>
</tr>
<tr>
<td>Maintaining Your Thermostat</td>
<td>21-24</td>
</tr>
<tr>
<td>Removing the thermostat</td>
<td>21</td>
</tr>
<tr>
<td>Replacing the thermostat</td>
<td>22</td>
</tr>
<tr>
<td>Replacing the batteries</td>
<td>23</td>
</tr>
<tr>
<td>Power outages</td>
<td>24</td>
</tr>
<tr>
<td>Adaptive Intelligent Recovery™</td>
<td>25-28</td>
</tr>
<tr>
<td>Selecting Recovery Setting</td>
<td>29-30</td>
</tr>
<tr>
<td>Heat Pumps with Supplemental Heat</td>
<td>31-32</td>
</tr>
<tr>
<td>Answering Common Questions About the Chronotherm III Thermostat</td>
<td>33-36</td>
</tr>
<tr>
<td>Saving Energy Across the U.S.</td>
<td>37-39</td>
</tr>
<tr>
<td>Glossary</td>
<td>40-42</td>
</tr>
<tr>
<td>Your Personal Program</td>
<td>43-44</td>
</tr>
<tr>
<td>Troubleshooting Guide</td>
<td>45-46</td>
</tr>
<tr>
<td>Quick Reference to the Keys</td>
<td>47-48</td>
</tr>
<tr>
<td>Index</td>
<td>49-50</td>
</tr>
<tr>
<td>Warranty</td>
<td>51</td>
</tr>
</tbody>
</table>
STEP 1
SETTING THE CURRENT 
DAY AND TIME

You can program this thermostat only on the wall with 24 Vac applied to R and C terminals.

Always press the keys with your fingertip or similar blunt tool. Sharp instruments like a pen or pencil point can damage the keyboard.

NOTE: Check the glossary, page 40, for definitions of unfamiliar words.

Press and release. The display shows 1:00 PM Mon.

Press and hold until the current day appears in the display.

Press and hold until the current time appears in the display. Be sure AM or PM appears as desired.

You have programmed the current day and time. Go on to Step 2.

STEP 2
SETTING THE PROGRAM 
SCHEDULE AND HEATING 
TEMPERATURES

Before You Begin...
The schedule form on page 43 provides an opportunity to plan your schedule.

Now...
Start by programming the WAKE time and temperature for weekdays.

The thermostat requires a program for WAKE. You can program LEAVE, RETURN and SLEEP or not, as you please.

Press and release. Note that the display shows WAKE, the preprogrammed time and temperature.

If the display reads COOL, press and release to switch to HEAT.

If display reads SAT or SUN, press and hold until MON TUE WED THU FRI appears.

Press and hold until the display shows the desired starting time. If using T8631A in Conventional Recovery (visible in display). See Glossary section. With Conventional Recovery the time should be set 30 or more minutes ahead of desired comfort time to get the house comfortable.
### PROGRAMMING YOUR THERMOSTAT

<table>
<thead>
<tr>
<th>LEAVE</th>
<th>Press and hold until the display shows the desired temperature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARMER</td>
<td>If the display starts to blink while you are holding down TEMPERA-TURE WARMER or COOLER, you have reached the setting limit.</td>
</tr>
<tr>
<td>COOLER</td>
<td>Press and release. The display shows LEAVE, but no time or temperature.</td>
</tr>
</tbody>
</table>

Program the LEAVE time and temperature, if desired. 

**NOTE:** You can cancel the LEAVE, RETURN or SLEEP program by holding down the key until the time and temperature disappear from the display.

<table>
<thead>
<tr>
<th>AHEAD</th>
<th>Press and hold until the display shows the desired starting time.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACK</td>
<td>Press and hold until the display shows the desired temperature.</td>
</tr>
</tbody>
</table>

Program the RETURN time and temperature, if desired.

<table>
<thead>
<tr>
<th>RETURN</th>
<th>Press and release. The display shows RETURN, but no time or temperature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHEAD</td>
<td>Press and hold until the display shows the desired starting time.</td>
</tr>
<tr>
<td>BACK</td>
<td>Press and hold until the display shows the desired temperature.</td>
</tr>
</tbody>
</table>

Program the SLEEP time and temperature, if desired.

<table>
<thead>
<tr>
<th>SLEEP</th>
<th>Press and release. The display shows SLEEP, the preprogrammed time and temperature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHEAD</td>
<td>Press and hold until the display shows the desired starting time.</td>
</tr>
<tr>
<td>BACK</td>
<td>Press and hold until the display shows the desired temperature.</td>
</tr>
</tbody>
</table>
PROGRAMMING YOUR THERMOSTAT

Press and hold until the display shows the desired temperature.

Press and release until SAT appears on the display.

Press WAKE, LEAVE, RETURN or SLEEP to select the time period.

Press the AHEAD/BACK keys to set the time and the WARMER/COOLER keys to set the temperature.

You have completed setting the program schedule and heating temperatures. To set air conditioning, go to Step 3.

If you do not want to program cool temperature, skip Step 3 and press RUN PROGRAM key.

Set the SATURDAY schedule. Use the same procedure as for weekdays.

Set the SUNDAY schedule. Use the same procedure as for weekdays.

Press and hold until SUN appears on the display.

Press WAKE, LEAVE, RETURN or SLEEP to select the time period.

Press the AHEAD/BACK keys to set the time and the WARMER/COOLER keys to set the temperature.
**PROGRAMMING YOUR THERMOSTAT**

**STEP 3**
**SETTING THE COOLING TEMPERATURES**

The program times are the same for both heating and cooling. Only the cooling temperatures need to be programmed if you have already programmed for heating. If you change program times for cooling, you are also changing them for heating! To set times as you program the cooling temperatures, use the TIME AHEAD and BACK keys as described in Step 2.

First program the WAKE temperature for weekdays.

Press and release. The display shows WAKE, the time and temperature you programmed for heating.

Press and release so COOL shows on the display, along with the programmed cooling temperature.

If display reads SAT or SUN, press and hold until MON TUE WED THU FRI appears.

Program the WAKE temperature, if desired.

Press and hold until the display shows the desired temperature.

If the display blinks while you hold down TEMPERATURE WARMER or COOLER, you have reached the setting limit.

Program the LEAVE temperature, if desired.

Press and release. The display shows LEAVE, the time programmed for heating and 78°F.

Press and hold until the display shows the desired temperature.

Program the RETURN temperature, if desired.

Press and release. The display shows RETURN, the time programmed for heating and 78°F.
PROGRAMMING YOUR THERMOSTAT

Press and hold until the display shows the desired temperature.

Program the SLEEP temperature if desired.

Press and release. The display shows SLEEP, the time programmed for heating and 78°F.

Press and hold until the display shows the desired temperature.

Set the cooling temperatures for the SATURDAY schedule. Use the same procedure as for weekdays.

Press and hold until SAT appears on the display.

Press WAKE, LEAVE, RETURN or SLEEP to select the time period.

Press the WARMER/COOLER keys to set the temperature.

Set the cooling temperatures for the SUNDAY schedule. Use the same procedure as for weekdays.

Press and hold until SUN appears on the display.

Press WAKE, LEAVE, RETURN or SLEEP to select the time period.
PROGRAMMING YOUR THERMOSTAT

Press the WARMER/COOLER keys to set the temperature.

You have completed programming the cooling temperatures.

Press and release to start the program.

Go to Step 4.

STEP 4
SETTING THE SYSTEM AND FAN SWITCHES ON THE SUBBASE

The T8631A does not have the EM. HT. switch position. Note the positions provided on your subbase, then set the switch(s) as desired.

First set the fan switch.

Then set the system switch.

FAN ON: Use for improved air circulation during special occasions or for more efficient electronic air cleaning. The fan runs continuously.

FAN AUTO: Normal setting for most homes and businesses. T8631A: the fan starts and stops with the air conditioner and with the heating equipment when the fan switch (4A) is set for electric heat. When 4A is set for conventional heat, the fan is controlled by the heating equipment. T8631R: the fan starts and stops with the compressor in heat pump systems when the system switch is set to HEAT or COOL. When system switch is set to EM. HT., the fan operates with the auxiliary heat (on some models).

EM. HT. (T8631R only): The thermostat controls only the backup heat. The heat pump is off.
PROGRAMMING YOUR THERMOSTAT

HEAT: The thermostat controls your heating system.

OFF: Both your heating and cooling systems are off.

COOL: The thermostat controls your cooling system.

You have finished programming your thermostat.

Now, while you enjoy precision temperature control, read on to learn about the operating flexibility that makes this thermostat THE SMART CHOICE.

OPERATING YOUR THERMOSTAT

TEMPORARILY CHANGING THE PROGRAM

These features let you tailor the program for those times when someone comes home early, or you’re staying up late, or you plan to be out for the evening.

Press and release. The name of the period to be skipped will flash in the display until the next regularly scheduled period starts.

Press and release. The display will show the name of the previous period and flash TEMPORARY until the next regularly scheduled periods starts.
**OPERATING YOUR THERMOSTAT**

To temporarily raise or lower the temperature for the current period only.

Press and hold until the desired temperature is reached. The display will flash TEMPORARY until the next programmed time period starts.

If you change your mind.

Press and release to cancel any of the temporary settings.

**PERMANENTLY CHANGING THE PROGRAM**

If your schedule changes or you want a different temperature, you can update any setting without affecting the rest of the program.

Press and release the desired period key.

Press and hold until the desired day schedule shows on the display.

Press and hold the Time or Temperature keys until the display shows the desired new program.

Press and release to return to normal operation.

**OPERATING THE THERMOSTAT MANUALLY**

This feature lets you set one temperature that the thermostat will hold continuously. Your preset schedule will resume when you push the RUN PROGRAM key.

Press and release.

Press and hold to change the temperature setting. After a few seconds, the display will show the current temperature.

Press and release to check the temperature setting.

Press and release to cancel hold.

**OPERATING YOUR THERMOSTAT**

To temporarily raise or lower the temperature for the current period only.

Press and hold until the desired temperature is reached. The display will flash TEMPORARY until the next programmed time period starts.

If you change your mind.

Press and release to cancel any of the temporary settings.

**PERMANENTLY CHANGING THE PROGRAM**

If your schedule changes or you want a different temperature, you can update any setting without affecting the rest of the program.

Press and release the desired period key.

Press and hold until the desired day schedule shows on the display.

Press and hold the Time or Temperature keys until the display shows the desired new program.

Press and release to return to normal operation.

**OPERATING THE THERMOSTAT MANUALLY**

This feature lets you set one temperature that the thermostat will hold continuously. Your preset schedule will resume when you push the RUN PROGRAM key.

Press and release.

Press and hold to change the temperature setting. After a few seconds, the display will show the current temperature.

Press and release to check the temperature setting.

Press and release to cancel hold.
OPERATING YOUR THERMOSTAT

CANCELING PROGRAM SETTINGS

The thermostat requires time and temperature settings in the WAKE period, but any of the other periods can be canceled. Weekday, Saturday and Sunday settings are canceled separately.

Press and hold the desired period key until the time and temperature clear from the display (about 3 seconds).

Press and release to return to normal operation.

CHECKING THE PROGRAM TIMES AND TEMPERATURES

You can check all the stored settings without affecting the permanent program.

Press and release the desired period key. The start time and temperature setting will appear on the display.

Press and release to display the next daily time and temperature for that period.

Press and release to return to normal operation.
CHECKING THE CURRENT TEMPERATURE SETTING

Press a single key to compare current room temperature to the setting at any time.

Press and release. The display will show the current temperature setting for several seconds, then revert to the room temperature.

PRESENT SETTING

68°F

ON HEAT

ACCSING EXTERNAL SYSTEM

OPERATING YOUR THERMOSTAT

EXTERNAL ACCESS AND CONTROL OF THERMOSTAT

The T8631 Communicating Chronotherm III Thermostat can be connected to a Honeywell TotalHome system for external access and control.

A TotalHome system allows you to change thermostat settings from the system’s user interface panels. Depending on the system chosen, you can also use a touchtone phone to adjust your setting. Whenever the thermostat is controlling to TotalHome system setting, a △ appears under the room temperature display.

You can easily make temporary temperature setting changes by pushing the WARMER or COOLER key on the T8631. The temporary override setting lasts until the next period starts. To permanently change the temperature set point, push the desired period key, then the WARMER or COOLER key. Use the RUN PROGRAM key to change from external system control to thermostat control of program times and temperatures until a new command is received from the TotalHome system.

The T8631 Thermostat can communicate on an HBus network over four-wire conductor cables. This cable connects to the H1, H2, H3 and H4 terminals on the thermostat.

HBus is a Honeywell proprietary communications protocol.

For assistance, call Consumer Services, 1-800-468-1502, Monday-Friday, 7:30 a.m. to 5:00 p.m., Central time.
MAINTAINING YOUR THERMOSTAT

REMOVING THE THERMOSTAT

1. Loosen the two captive screws at the bottom corners of the case.
2. Pull out the thermostat from the bottom.
3. Lift the thermostat up and off the base.

REPLACING THE THERMOSTAT

1. Hang the thermostat on the tabs at the top of the subbase.
2. Swing down and press bottom edge until thermostat snaps in place.
3. Tighten the captive screws.
MAINTAINING YOUR THERMOSTAT

REPLACING THE BATTERIES

Your thermostat uses three AAA alkaline batteries. The display will flash REPL BAT when the batteries get low. You won’t have to reprogram the thermostat if you insert the new batteries within 20-30 seconds of taking out the old ones.

To replace:
- Set the system switch to OFF.
- Remove the thermostat from the wall. See page 21.
- Lift the batteries out of the holder.
- Insert the new batteries, making sure the positive (+) terminals all face toward the right.
- Replace the thermostat on the wall. See page 22.
- Reprogram, if necessary.

POWER OUTAGES

Backup batteries will hold the programming and keep on the display during most power outages. Once the power is restored, the system will resume normal operation.

If the display goes off when power is lost, either the backup batteries need to be replaced or were not installed. When power is restored, the display will flash 1:00 PM to remind you to reprogram. If the colon is not flashing, there is no AC power or the thermostat is not properly connected to the subbase.
Your new thermostat is so smart, it’s almost human.

- Your body perceives temperature from a variety of sources, not only from the air in the room, but also from your surroundings—walls, windows and furnishings.

- Human beings feel differences in temperature as slight as two degrees Fahrenheit.

- Common household thermometers and standard thermostats sense only air temperature, which may or may not reflect how hot or cold the room actually feels to a human being.

- 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.
This thermostat is actually a small but powerful computer. When calculating the exact time to turn on your furnace or air conditioner, it considers (1) air temperature, (2) temperature of the wall and (3) when you want the comfort temperature established.

During the Adaptive Intelligent Recovery setting, the thermostat increases the control temperature gradually and turns the equipment on and off several times to save energy by avoiding overshooting the comfort temperature. You can see the current control temperature anytime during recovery by pressing the PRESENT SETTING key.

This smart control learns from experience. Each day it checks how closely it hit the target and adjusts the recovery start time accordingly.

It typically takes four to eight days after installation for this thermostat to adjust to the weather, your life style, home construction and heating/cooling system. The thermostat calculates the LEAVE/RETURN recovery separately from the SLEEP/WAKE recovery.

With the T8631A, you can choose whether you want to use Adaptive Intelligent Recovery™ or conventional recovery. Use the Adaptive Intelligent Recovery setting if you want to choose the exact time that the room reaches your comfort temperature. Use conventional recovery if you prefer to choose the exact time your furnace or air conditioner comes on to start recovery.
SELECTING RECOVERY SETTING

Your T8631A Thermostat includes a screw on the back marked 2A, allowing for the Adaptive Intelligent Recovery™/Conventional Recovery choice.

Your thermostat was shipped from the factory with the screw positioned for Adaptive Intelligent Recovery setting. Your installer may have left the screw in this position, or may have changed it to Conventional Recovery. Before programming, you must know which recovery method your thermostat has been set for.

• With the Adaptive Intelligent Recovery setting, the dwelling will reach the comfort temperature at the exact time you have programmed into the thermostat.

• With Conventional Recovery, the programmed time will be the time your furnace comes on to start recovery; therefore, you should program the start time to be earlier than the desired comfort time. It may require some trial and error for you to arrive at the best starting time, and the best starting time will vary as the seasons change.

To determine which type of recovery is set into your T8631A Thermostat, make sure your thermostat is mounted and powered on the wall.

Press key. Check thermostat display.

• If the \( \text{nn} \) shows in the lower right-hand corner (see illustration), the thermostat is set for Conventional Recovery. If you would rather have the Adaptive Intelligent Recovery setting, remove thermostat from wall, turn screw 2A (on back of thermostat) clockwise \( \leftarrow \) until it bottoms. DO NOT OVERTIGHTEN.

• If the \( \Box \) does not show, the thermostat is set for Adaptive Intelligent Recovery™. If you would rather have Conventional Recovery, remove thermostat from wall, turn screw 2A (on back of thermostat) out \( \leftarrow \) 1/2 to 1 turn.
HEAT PUMP WITH SUPPLEMENTAL HEAT

HEAT PUMPS ARE DIFFERENT (T8631R)
- Heat pump systems usually have a supplemental, second stage heating system that operates only when necessary. The Honeywell Chronotherm III Thermostat for heat pumps is designed to minimize the more expensive second-stage operation, indicated by the green AUX light on the switching subbase.

- With your Chronotherm III Thermostat, you will notice that your compressor operates continuously during the recovery period. This may appear to waste energy, but it is actually more efficient. Multiple ON-OFF cycles are neither necessary to achieve comfort, nor as efficient for heat pump systems. By reducing the number of cycles, you reduce the strain on your system and extend equipment life.

HEAT PUMPS ARE TWO SYSTEMS IN ONE

- In mild weather, almost all of the demand for heat in buildings can be met by the heat pump compressor. This first stage process of moving heat indoors is very economical. As the air becomes colder outside, the first stage may be unable to deliver enough heat to maintain the desired comfort level in the building.

- During high heat demand, the thermostat will call for additional second stage power from the auxiliary heat system. This auxiliary heat is commonly electric resistance heat and is two to three times more expensive to operate than the compressor.
ANSWERING COMMON QUESTIONS ABOUT THE CHRONOTHERM III THERMOSTAT

1. The temperature displayed on the Chronotherm III Thermostat doesn’t always match the room temperature on another thermometer located right next to it. Why?
The Chronotherm III Thermostat is a very accurate instrument designed to sense both air temperature and wall temperature, like your body does. It gives an average reading over a period of time. Because it adjusts itself, it will take a few days after installation to adjust to your home.

2. A △ triangle symbol is on the display sometimes. What does it mean?
The T8631 Communicating Chronotherm III Thermostat can be connected to a Honeywell TotalHome system for external access and control. Whenever the thermostat is controlling to TotalHome system settings, a △ appears under the room temperature display.

5. What does the HOLD key do?
It bypasses all program settings and holds the temperature at the present setting. To increase or decrease the temperature while on HOLD, use the WARMER-COOLER keys. Pressing the thermostat’s RUN PROGRAM key or entering a change at the external system will return the device to programmed operations.

6. How long does the HOLD key hold?
Forever! The HOLD key will hold the temperature indefinitely. The only way to release it is to press the RUN PROGRAM key or enter a change at the TotalHome system.

7. How can the T8631A Thermostat save energy when it comes on and off so many times early in the morning hours?
Two ways. First, it saves energy (and money) by setting back the temperature for blocks of time during the day or night. Second, it conserves energy by recovering gradually to the desired temperature.

3. Why does the T8631 follow a schedule not programmed into the thermostat?
When the △ is displayed, the thermostat is controlling to the setting in your TotalHome system.

4. How many hours in advance of my WAKE time should the furnace come on?
The time will vary, up to 24 minutes per degree Fahrenheit difference between the energy saving and comfort temperatures, depending on outside temperature and performance during the past 24 hours. A microchip computer with Adaptive Intelligent Recovery™ allows the thermostat to think for itself and adjust the furnace or air conditioning recovery time to reach your desired comfort temperature at the programmed time. Whenever the temperature is more than one degree hotter or colder than the comfort temperature at the programmed time, the system turns on earlier the next day. This approach ensures the temperature won’t over- or under-shoot the set point and allows the proper amount of time for recovery.

8. Sometimes my Chronotherm III Thermostat doesn’t allow the house temperature to drop to my SLEEP setting before it starts bringing the furnace on. Why?
Many factors affect your comfort and energy savings. If those factors, such as weather, humidity, etc. were always consistent, an unchanging program would work just fine. But factors change. The whole point of Adaptive Intelligent Recovery™ is to save energy without sacrificing comfort. If necessary, the Adaptive Intelligent Recovery™ will override your temperature settings to assure accurate temperature recovery with optimum comfort and energy savings for the current conditions.
ANSWERING COMMON QUESTIONS ABOUT THE CHRONOTHERM III THERMOSTAT

9. Can I stop the thermostat from bringing the heat on so early in the morning? How?
   T8631A has screws on the back of the thermostat that will allow you to turn off Adaptive Intelligent Recovery™.

   On the T8631R without the screw to override Adaptive Intelligent Recovery™, you will only be able to set one completely automatic energy savings period; the second period must be ended manually. Also, since recovery starts at the time you programmed, the comfort temperature may not be reached by the desired time.

   Do you have a heat pump with auxiliary heat?
   If so, we don’t recommend overriding Adaptive Intelligent Recovery™ because the amount of expensive auxiliary heat needed for recovery can cost more than the energy saved by lowering the temperature.

Here’s how to override Adaptive Intelligent Recovery setting:
   ■ Set the desired WAKE program temperature.
   ■ Set the WAKE program time 30 to 60 minutes before the time you normally get up. (You can adjust this time. If the house reaches the comfort temperature too early, set the time later; if it reaches the comfort temperature too late, set the time earlier, but don’t go beyond 90 minutes.)
   ■ Set the desired SLEEP program time and temperature. The SLEEP temperature must not be more than 10 degrees below the comfort setting.
   ■ Set the RETURN program time to 10 minutes before your programmed WAKE time.
   ■ Set the RETURN program temperature the same as the SLEEP temperature.
   ■ The LEAVE program remains blank unless you want a day energy saving period. See page 3.
   ■ The thermostat will think that it doesn’t need to start recovery until 10 minutes before your WAKE time. It will run the furnace constantly until the comfort temperature is reached.

   The first person home must push the CHANGE TO LAST PERIOD key to start warming the house. The furnace will run constantly until the comfort temperature is reached.

10. I have a high efficiency furnace and my heat is short cycling. What can I do?
   Some high efficiency furnaces need the cycle rate set at the Hot Water setting instead of the factory setting of gas/oil warm air. Turn out the 1A screw with screw 1B left turned in.

Additional Questions? Call Honeywell Consumer Services: 1-800-468-1502 Monday-Friday, 7:30 a.m. to 5:00 p.m., Central time.
SAVING ENERGY ACROSS THE U.S.

- **Save up to 30% in energy costs.** Chronotherm III Thermostats offer you complete comfort and a low-cost easy way to save on your energy bills.

- The energy-saving percentages listed on the maps on pages 38 and 39 are based on setting the thermostat down in winter or up in summer for eight hours.

- If the time period you choose for setback is longer, you may see even greater energy savings. The energy saving period must be at least two hours long to save any energy.

Find the city closest to your home. The energy saving listed will be similar to the saving you can expect.

PERCENTAGE OF HEATING ENERGY YOU CAN SAVE

**ONE 10°F ENERGY SAVINGS PERIOD**
- 70°F TO 60°F; 8 HRS/DAY
  - 9% TO 11%
  - 12% TO 13%
  - 14% TO 15%
  - 16% TO 18%

**TWO 10°F ENERGY SAVINGS PERIODS**
- 70°F TO 60°F; 8 HRS/DAY, 8 HRS/NIGHT
  - 18% TO 24%
  - 23% TO 25%
  - 25% TO 29%
  - UP TO 30%

* Savings for a 5°F heating setback are at least 1/2 of savings for a 10°F setback. Actual savings depend on your home, geographic location, number of energy saving periods and energy savings temperature. If you have a heat pump, your heating savings may be greater than those shown.
SAVING ENERGY ACROSS THE U.S.

PERCENTAGE OF COOLING ENERGY YOU CAN SAVE

ONE 5°F ENERGY SAVINGS PERIOD*
75° TO 80°F; 8 HRS/DAY

- 7% TO 9%
- 10% TO 11%
- 12% TO 14%
- 15% TO 18%

TWO 5°F ENERGY SAVINGS PERIODS*
75° TO 80°F; 9 HRS/DAY, 7 HRS/NIGHT

- 11% TO 15%
- 16% TO 18%
- 19% TO 22%
- 23% TO 33%

* Actual savings depend on your home, geographic location, number of energy saving periods and energy savings temperature.

GLOSSARY

Adaptive Intelligent Recovery
The time when the thermostat operates the heating or cooling equipment to return the house from the energy savings to the comfort temperature. The thermostat starts the recovery period early so the house will be at the comfort setting by the time you’ve chosen.

Comfort temperature
The temperature you want in the morning and evening when you’re home.

Conventional Recovery
The time set for a program period when the heating or cooling equipment will first start getting the room to the set temperature.

Energy-saving temperature
The lower (heating) or higher (cooling) temperature that lets you save on heating and cooling costs when you’re asleep or away. Also called the setback (heating) or setup (cooling) temperature.

HBus
A Honeywell proprietary communications protocol.

Period key
One of the four keys—WAKE, LEAVE, RETURN or SLEEP—that you press to check or program the start time and temperature for a time period.

Preprogrammed schedule
The schedule programmed into your thermostat at the factory. It sets a night program that provides energy savings if you don’t set your own program, or if your personal program is lost for any reason. The program, which is the same for all days of the week, is:

<table>
<thead>
<tr>
<th>Period</th>
<th>Time</th>
<th>Heating</th>
<th>Cooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAKE</td>
<td>6:00 AM</td>
<td>70°F</td>
<td>78°F</td>
</tr>
<tr>
<td>LEAVE</td>
<td>6:00 PM</td>
<td>60°F</td>
<td>78°F</td>
</tr>
<tr>
<td>RETURN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLEEP</td>
<td>10:00 PM</td>
<td>60°F</td>
<td>78°F</td>
</tr>
</tbody>
</table>
**GLOSSARY**

**Program**
The times and temperatures you set to define the comfort and energy savings periods for each schedule (weekdays, Saturday, Sunday).

**Saturday program schedule**
The schedule of WAKE, LEAVE, RETURN and SLEEP period start times and temperatures that you program to run on Saturdays.

**Setback**
Reducing the temperature in the house for a set period every day in winter for energy savings. The lower temperature is the energy savings temperature.

**Setup**
Raising the temperature in the house for a set period every day in summer for energy savings. The higher temperature is the energy savings temperature.

**Time period**
One of four program periods: WAKE, LEAVE, RETURN and SLEEP available with the Chronotherm III Thermostat. One period begins when the previous period ends.

- **WAKE**—The time period when you want the house at a comfortable temperature while the family gets up and gets ready to leave for work and school. This is the only period that must contain a time and temperature.

- **LEAVE**—The time period when you can set back (winter) or up (summer) the temperature for energy savings because the family is usually away from home.

- **RETURN**—The time period when you want the house at a comfortable temperature for family activities in the evening before bedtime.

- **SLEEP**—The time period when you can set back (winter) or up (summer) the temperature for energy savings because the family is sleeping. Set it to start at your family’s normal bedtime. Often the SLEEP program is set only for the heating season so family members can sleep cool in summer.

**TotalHome**
A Honeywell system that lets you control your home environment from a user interface panel. Depending on the system chosen, you can also use a touchtone phone to adjust your settings. TotalHome offers convenience and flexible control of your security system and home environment.

**Weekday program schedule**
The schedule of WAKE, LEAVE, RETURN and SLEEP period start times and temperatures that you program to run Monday through Friday.

**EM HT light [T8631R only] (red)**—this light glows whenever the thermostat system switch is in the EM HT position (located on subbase). On some systems it may also indicate the need to switch to EM. HEAT because of a problem with the heat pump.

**Sunday program schedule**
The schedule of WAKE, LEAVE, RETURN and SLEEP period start times and temperatures that you program to run on Sundays.

**Setpoint**
The temperature you set on the thermostat. The thermostat turns the heating or cooling equipment on and off to maintain this temperature at the thermostat location until another temperature setting goes into effect.

**STATUS LIGHTS**—Lights that show system operation settings.

- **SYSTEM light** (yellow)—This light glows whenever the thermostat is calling for heating or cooling (located on thermostat).

- **AUX HT light [T8631R only] (green)**—This light glows whenever the thermostat is calling for operation of the backup heater. Backup (auxiliary) heat is more expensive to operate than the heat pump and typically is used only when the heat pump is unable to handle the load (located on subbase).

**TotalHome**
A Honeywell system that lets you control your home environment from a user interface panel. Depending on the system chosen, you can also use a touchtone phone to adjust your settings. TotalHome offers convenience and flexible control of your security system and home environment.

**Weekday program schedule**
The schedule of WAKE, LEAVE, RETURN and SLEEP period start times and temperatures that you program to run Monday through Friday.

**Setpoint**
The temperature you set on the thermostat. The thermostat turns the heating or cooling equipment on and off to maintain this temperature at the thermostat location until another temperature setting goes into effect.

**STATUS LIGHTS**—Lights that show system operation settings.

- **SYSTEM light** (yellow)—This light glows whenever the thermostat is calling for heating or cooling (located on thermostat).

- **AUX HT light [T8631R only] (green)**—This light glows whenever the thermostat is calling for operation of the backup heater. Backup (auxiliary) heat is more expensive to operate than the heat pump and typically is used only when the heat pump is unable to handle the load (located on subbase).
You can use the tables below to plan your schedule before you begin programming. If you choose not to program a daytime energy savings period, leave the LEAVE and RETURN periods blank.

### Weekday Program

<table>
<thead>
<tr>
<th>PERIOD</th>
<th>START TIME</th>
<th>HEATING TEMPERATURE</th>
<th>COOLING TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAKE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEAVE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RETURN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLEEP</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Saturday Program

<table>
<thead>
<tr>
<th>PERIOD</th>
<th>START TIME</th>
<th>HEATING TEMPERATURE</th>
<th>COOLING TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAKE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEAVE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RETURN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLEEP</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sunday Program

<table>
<thead>
<tr>
<th>PERIOD</th>
<th>START TIME</th>
<th>HEATING TEMPERATURE</th>
<th>COOLING TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAKE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEAVE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RETURN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLEEP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IF...</td>
<td>THEN...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Display will not come on.</strong></td>
<td>- Check that heat or cool system power is on. You need 24V from R to C terminals.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Make sure thermostat is correctly mounted on subbase.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Display flashes during programming.</strong></td>
<td>- You have reached the temperature setting limit. The setting range is 45°F to 88°F.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Display flashes during operation.</strong></td>
<td>- Programming has been lost because of a power outage. You must reprogram.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Program is lost due to power outage.</strong></td>
<td>- Check that backup batteries are installed correctly. Replace if necessary. Reprogram the thermostat.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Colon in display does not flash.</strong></td>
<td>- Check for 24V from R to C terminals on the subbase.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Make sure thermostat is mounted correctly on the subbase.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Temperature change occurs at the wrong times.</strong></td>
<td>- Check for ( \Delta ) on display screen. If ( \Delta ) is present, check your external system for the command that is bypassing the thermostat program.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Check the program times for the period in question. Be sure that AM and PM indications are correct. Make sure the current day and time are correct. Reprogram if necessary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Remember that with Adaptive Intelligent Recovery the heating or cooling system comes on before the WAKE and RETURN start times so the house will be at the desired temperature when the period starts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Check if T8631A is set for Conventional Recovery ( ( \square ) visible on display) or Adaptive Intelligent Recovery.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Heating will not come on.**

- Check the fuse or circuit breaker and replace or reset if necessary.
- Check that switch on thermostat is set to HEAT.
- T8631R has a built-in time delay which can add to time delays in the heating equipment. Allow up to 10 minutes after changing the setting before the compressor starts.
- If temperature setting is higher than current temperature, and display says HEAT ON or SYSTEM light is on, contact your heating and air conditioning contractor.

**Cooling will not come on.**

- Check the fuse or circuit breaker and replace or reset if necessary.
- Check that switch on thermostat is set to COOL.
- The thermostat has a built-in time delay, which can add to time delays in the cooling equipment. Allow up to 10 minutes after changing the setting before the compressor starts.
- If temperature setting is lower than current temperature, and display says COOL ON or SYSTEM light is on, contact your heating and air conditioning contractor.

**The building is too warm or too cool.**

- Press PRESENT SETTING to check the current temperature setting.
- If desired, change the time or temperature setting. See page 21.
- Check for \( \Delta \) on display screen. If \( \Delta \) is present, check your external system for the command that is bypassing the thermostat program.
- Allow time for the heating equipment to heat up before checking for heat at the register.

**Display says HEAT ON or system light is on, but no heat is coming from the registers.**

- Install fresh AAA alkaline batteries. See page 23.
QUICK REFERENCE TO THE KEYS

Press these keys to:

- **SET PRESENT DAYTIME**
  - Begin the current day or time programming.

- **DAY**
  - Set the day of the week and select the program day during programming.

- **WAKE**
  - Select the time period to program or review.

- **SLEEP**
  - Switch between heat and cool settings during programming or when reviewing the program.

- **SET HEAT/COOL**
  - Set the time ahead and back. Hold either key down to change the setting faster.

- **AHEAD**
  - Set the temperature while programming and temporarily change the temperature during operation. Hold either key down to change the setting faster.

- **BACK**
  - Hold any temperature you desire for an extended period.

- **WARMER**
  - Change the temperature to the set point of the previous period.

- **COOLER**
  - Maintain the current temperature through the next program period.

- **HOLD TEMP**
  - Start your programmed schedule; cancel temporary program changes.

- **CHANGE TO LAST PERIOD**
  - See the current temperature setting. Setting may not match programmed setting during recovery from energy savings.

- **SKIP NEXT PERIOD**
  - **RUN PROGRAM**
  - **PRESENT SETTING**
## INDEX

<table>
<thead>
<tr>
<th>Accessing external system control</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive Intelligent Recovery</td>
<td>25-28, 40</td>
</tr>
<tr>
<td>Auxiliary heat light</td>
<td>41</td>
</tr>
<tr>
<td>Batteries, replacement</td>
<td>23</td>
</tr>
<tr>
<td>Blinking display</td>
<td>3, 10</td>
</tr>
<tr>
<td>Canceling programs</td>
<td>17</td>
</tr>
<tr>
<td>Change temperature</td>
<td>15</td>
</tr>
<tr>
<td>Checking present setting</td>
<td>19</td>
</tr>
<tr>
<td>Checking programs</td>
<td>18</td>
</tr>
<tr>
<td>Clock display</td>
<td>*, 1</td>
</tr>
<tr>
<td>Comfort temperature</td>
<td>40</td>
</tr>
<tr>
<td>Conventional recovery</td>
<td>40</td>
</tr>
<tr>
<td>Cooling temperatures</td>
<td>7-11</td>
</tr>
<tr>
<td>Day</td>
<td>1</td>
</tr>
<tr>
<td>Display</td>
<td>*, 1</td>
</tr>
<tr>
<td>Emergency heat light</td>
<td>42</td>
</tr>
<tr>
<td>Energy-saving temperature</td>
<td>40</td>
</tr>
<tr>
<td>Fan switch</td>
<td>12</td>
</tr>
<tr>
<td>Features</td>
<td>*</td>
</tr>
<tr>
<td>Flashing display</td>
<td>45</td>
</tr>
<tr>
<td>Glossary</td>
<td>40-42</td>
</tr>
<tr>
<td>HBus</td>
<td>40</td>
</tr>
<tr>
<td>Heating temperatures</td>
<td>2-6</td>
</tr>
<tr>
<td>Hold temperature</td>
<td>16, 48</td>
</tr>
<tr>
<td>Keys</td>
<td>47-48</td>
</tr>
<tr>
<td>LEAVE</td>
<td>42-47</td>
</tr>
<tr>
<td>Lights</td>
<td>41-42</td>
</tr>
<tr>
<td>Maintenance</td>
<td>21-24</td>
</tr>
<tr>
<td>Manual operation</td>
<td>16</td>
</tr>
<tr>
<td>Operation</td>
<td>14-20</td>
</tr>
<tr>
<td>Period keys</td>
<td>40, 42</td>
</tr>
<tr>
<td>Personal program</td>
<td>43-44</td>
</tr>
<tr>
<td>Power outage</td>
<td>24</td>
</tr>
<tr>
<td>Preprogrammed schedule</td>
<td>40</td>
</tr>
<tr>
<td>Present setting</td>
<td>19, 48</td>
</tr>
<tr>
<td>Program schedule</td>
<td>2</td>
</tr>
<tr>
<td>Programming overview</td>
<td>*</td>
</tr>
<tr>
<td>Programming steps</td>
<td>1-13</td>
</tr>
<tr>
<td>Quick reference to the keys</td>
<td>47-48</td>
</tr>
<tr>
<td>Recovery Setting</td>
<td>29-30</td>
</tr>
<tr>
<td>Removing thermostat</td>
<td>21</td>
</tr>
<tr>
<td>Replacing batteries</td>
<td>23</td>
</tr>
<tr>
<td>RETURN</td>
<td>42, 47</td>
</tr>
<tr>
<td>SLEEP</td>
<td>42, 47</td>
</tr>
<tr>
<td>Saturday program</td>
<td>5, 9-10, 41</td>
</tr>
<tr>
<td>Set cooling temperatures</td>
<td>7-11</td>
</tr>
<tr>
<td>Set current day</td>
<td>1</td>
</tr>
<tr>
<td>Set current time</td>
<td>1</td>
</tr>
<tr>
<td>Set fan switch</td>
<td>12</td>
</tr>
<tr>
<td>Set heating temperatures</td>
<td>2</td>
</tr>
<tr>
<td>Set program schedule</td>
<td>2</td>
</tr>
<tr>
<td>Set system switch</td>
<td>12</td>
</tr>
<tr>
<td>Setback</td>
<td>41</td>
</tr>
<tr>
<td>Setting limits</td>
<td>3, 8</td>
</tr>
<tr>
<td>Setup</td>
<td>41</td>
</tr>
<tr>
<td>Skip</td>
<td>48</td>
</tr>
<tr>
<td>Sunday program</td>
<td>6, 10, 42</td>
</tr>
<tr>
<td>Switch, fan</td>
<td>12</td>
</tr>
<tr>
<td>Switch, system</td>
<td>12-13</td>
</tr>
<tr>
<td>System light</td>
<td>41</td>
</tr>
<tr>
<td>System switch</td>
<td>12-13</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Temporary program changes</td>
<td>14</td>
</tr>
<tr>
<td>Time</td>
<td>1</td>
</tr>
<tr>
<td>Time period</td>
<td>42</td>
</tr>
<tr>
<td>Troubleshooting</td>
<td>45-46</td>
</tr>
<tr>
<td>WAKE</td>
<td>42, 47</td>
</tr>
<tr>
<td>Warranty</td>
<td>51</td>
</tr>
<tr>
<td>Weekday program</td>
<td>2-5, 7-9, 42</td>
</tr>
</tbody>
</table>

*See the product features inside the front cover.
Honeywell warrants this thermostat, excluding battery, to be free from defects in the workmanship or materials, under normal use and service, for a period of one (1) year from the date of purchase by the consumer. If, at any time during the warranty period, the product is defective or malfunctions, Honeywell shall repair or replace it (at Honeywell’s option) within a reasonable period of time.

If the thermostat is defective,
(i) return it, with a bill of sale or other dated proof of purchase, to the dealer or contractor from which you purchased it, or
(ii) package it carefully, along with proof of purchase (including date of purchase) and a short description of the malfunction, and mail it, postage prepaid, to the following address:
Honeywell Inc.
Return Goods Department
1050 Berkshire Lane
Plymouth, MN 55441-4437

This warranty does not cover removal or reinstallation costs. This warranty shall not apply if it is shown by Honeywell that the defect or malfunction was caused by damage which occurred while the product was in the possession of a consumer.

Honeywell’s sole responsibility shall be to repair or replace the product within the terms stated above. HONEYWELL SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY FROM ANY BREACH OF ANY WARRANTY, EXPRESSED OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.

THIS WARRANTY IS THE ONLY EXPRESS WARRANTY HONEYWELL MAKES ON THIS PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE ONE YEAR DURATION OF THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

If you have any questions concerning this warranty, please write our Consumer Services Department, Honeywell Inc. 1885 Douglas Dr. N., Golden Valley, MN 55422-3992, or call 1-800-468-1502, Monday-Friday, 7:30 a.m. to 5:00 p.m., Central time.
Congratulations! You made a smart choice when you purchased your new Honeywell Communicating Chronotherm III Thermostat. It's the smart thermostat that:

- Keeps you comfortable by automatically calculating exactly when the furnace or air conditioning should go on to have the house at the desired comfort temperature by the time you wake up.
- Saves the maximum amount of energy and money by automatically setting back the heat or air conditioning when you leave home.
- Provides the ultimate in comfort and convenience by coming to you already programmed. But it’s your choice—to use the preprogrammed schedule or set your own.
- Helps you control your world with a Honeywell’s TotalHome system for external access and control. TotalHome system devices communicate using HBus, a Honeywell communications protocol.