TC–PHP, TC–PAC Comfort™ Series Programmable Thermostat

turn to the experts

Owner's Manual Touch · /{·Go™



# YOU WILL LOVE THIS THERMOSTAT.

You have the Comfort  $^{TM}$  Programmable thermostat. This unique device's state-of-the-art technology makes it easier than ever for you to keep your home comfortable.

Designed to be as smart – and smart-looking – as any of the other electronics in your home, your new thermostat offers programming options to fit your lifestyle – not anybody else's. Let this manual show you how easy it is to enjoy the newest experience in home comfort.



Designed and Assembled in the U.S.A.



# TABLE OF CONTENTS

DUTTON IDENTIFICATION 4
ON SCREEN INDICATORS
ON-SCREEN INDICATORS
QUICK SIAKI
Setting the time and day
Setting the temperatures for heating and cooling
Changing the temperature
Understanding Touch 'N' Go™ feature
PROGRAMMING THE THERMOSTAT
Programming the Touch 'N' Go feature
Setting the home temperature
Setting the away temperature
Setting the sleep temperature
Changing the temperature time periods
Assigning time periods to temperatures
OPERATING THE THERMOSTAT
Using Touch 'N' Go buttons
To make a temporary change
To hold it at home, away or sleep
Using the thermostat to turn the heating and cooling system off
Using the fan
Using emergency heat (heat pump systems only)
Changing the batteries
ADVANCED PROGRAMMING OPTIONS
Advanced programming display codes chart
Changing from Fahrenheit to Celsius



# TABLE OF CONTENTS

Turning off the continuous backlighting       39         Keypad lockout       41         Unlocking the keypad       42         Changing from programmable to nonprogrammable       43         Changing the number of programming periods       45         SPECIAL FEATURES       45
Auto changeover A6
Smart Pacovery 46
WHAT IF
The hattery icon is displayed 47
"Aux heat on" is displayed (heat nump systems only) 47
"Em heat" is displayed (heat pump systems only)
There is a power outage
You get a system error message
COMMON TERMS AND WHERE TO FIND THEM
Auto changeover
Auxiliary heat (heat pump systems only)
Backlighting
Emergency heat (heat pump systems only)
Hold
Mode 50
Override 50
Smart Recovery 50
Tennes web-14 51
Temporary note
Time period
Touch 'N' Go
NYA DD A NYENZ

# **BUTTON IDENTIFICATION**



#### **BUTTON IDENTIFICATION**

DU					
a.	FAN	Selects whether the fan operates continuously (on) or only when needed for heating or cooling (auto)			
b.	RUN/HOLD	Holds the currently selected temperature or runs the scheduled program			
c.	MODE	Selects whether thermostat is set for heating, cooling, emergency heat (heat pump system only), auto (heat and cool as needed), or off			
d.	UP	Increases the temperature or adjusts the screen selection up when setting advanced programming features			
e.	DOWN	Decreases the temperature or adjusts the screen selection down when setting advanced programming features			
f.	DONE	Saves settings when completing a set-up or programming step			
g.	SLEEP	Activates heating and cooling settings for the sleep program period			
h.	AWAY	Activates heating and cooling settings for the away program period			
I.	HOME	Activates heating and cooling settings for the home program period			
j.	D/H/M SET CLOCK	Activates clock set mode			
k.	START TIME	Activates the programming menu, displaying the four period start times			
Ι.	PERIOD	Activates the programming menu, displaying the four programming time periods			
m.	DAYS	Activates the programming menu, displaying three options – all days, weekdays and weekends			





### **ON-SCREEN INDICATORS**

- 1. Clock
- 2. Fan mode on or auto
- 3. Selected heating set point; "on" indicates system is in heating mode
- 4. System is in auxiliary (supplemental) mode
- 5. Current temperature
- 6. Thermostat mode is either off or using emergency heat
- 7. Fahrenheit
- 8. Keypad is locked (no padlock means unlocked)
- 9. Celsius
- 10. Battery strength indicator
- 11. Selected cooling set point; "on" indicates system is in cooling mode
- 12. Second stage of cooling is active for 2 speed thermostat models
- 13. Day of the week for programming mode
- 14. System is using sleep settings
- 15. AM or PM indicator for current time
- 16. System is using away settings
- 17. System is in hold
- 18. System is in temporary hold
- 19. System is using home settings

#### Setting the time and day

You must set the time and day before you can use any of the thermostat's programming features.

- 1. Open the door.
- Press the d/h/m button. It's on the lower right, under the display screen. The day of the week will flash on the display.
- Press the up or down button, located to the right of the display, to change the day. Stop on the correct day.
- 4. Press the  ${\rm d}/{\rm h}/{\rm m}$  button again and the hour will flash on the display.
- 5. Press the **up** or **down** button to change the hour. Stop on the correct number.
- 6. Press the d/h/m button again and minutes will flash on the display.
- 7. Press the **up** or **down** button to change the minutes. Stop on the correct minute.
- 8. Press the **done** button or close the door.



0

0

#### Setting the temperatures for heating and cooling

Your thermostat is installed with pre-set heating and cooling temperature settings. You can use these or change them so your home is as warm or as cool as you'd like it to be. These steps will hold the temperature where you set it. For the temperature to change automatically according to your lifestyle needs - whether you're home, away or asleep - you'll need to follow the Touch 'N' Go instructions on pages 13 -19.

- 1. Open the door.
- 0 2. Press the up or down button located on the right side of  ${}_{\rm O}$ the display. You will see the preset temperature settings 0000
- for heating and cooling. The word *heat* will flash. 3. Press the **up** or **down** button to change the *heat* setting. Stop on the correct setting.
- 4. Press the hold/run button.



.

0

0

- 5. Press the **mode** button located on the left side of the display once. You will see the preset temperature setting for cooling appear on the right side of the display.
- 6. Press the **up** or **down** button. The word *cool* will flash.
- Continue pressing the up or down button to change the cool setting. Stop at the desired cooling setting.
- 8. Press the **hold/run** button located on the left side of the display. This holds the thermostat at that setting.
- 9. Press the **done** button.
- 10. Close the door.











#### Changing the temperature

There are times when you want to change the temperature.

Here's how.

- 1. Open the door.
- 2. Press the **up** or **down** buttons on the right side until you reach the desired temperature setting. This creates a "temporary hold" until the next pre-set time period. You will see *temporary hold* on the display. (To switch from the cooling temperature to the heating temperature or vice versa press the **mode** button on the left until the word heat or *cool* is flashing.)
- cooling temperature to the heating temperature or vice versa press the mode button on the left until the word heat or cool is flashing.)
  3. To maintain that temperature setting so it doesn't change during the next pre-set time period, press the hold/run button on the left side. The display will show hold. The

000

a

6

0

during the next pre-set time period, press the hold/run <sup>O</sup> button on the left side. The display will show hold. The temperature will stay at the setting you selected until you release the hold.
4. To return the temperature to the pre-set level for that time <sup>O</sup> period, press hold/run. This releases the hold and the tem-

perature will return to its programmed level.



5. Close the door.



#### Understanding Touch 'N' Go feature

The unique Touch 'N' Go feature on your thermostat is a revolutionary tool that lets you use a simpler programming option – literally, touch and go – to help you get the maximum comfort control from the entire comfort system.

With the touch of one **Touch 'N' Go** button – **home, away** or **sleep** – you can tell your thermostat where you'll be. To keep the home at that comfort level indefinitely, you add one more button – **hold/run** – and you're set. It's the ideal choice for somebody whose schedule varies from day to day or doesn't fit into the two or four predictable time periods allowed by the thermostat.

At the same time, these three comfort options – home, away and sleep – are connected to the thermostat's full-level programming power so that you get the home comfort you desire exactly when you want it.

The three **Touch 'N' Go** buttons are preset at the factory for typical heating and cooling temperature settings and assigned to specific time periods. You can change these temperature settings and the hours you want to use them easily. Learn how to do that and discover how useful this device is as you read through this manual.

#### Programming the Touch 'N' Go feature

The Touch 'N' Go feature on your thermostat involves the **home**, **away** and **sleep** buttons immediately under the display. They are used for two programming options. One is more sophisticated than the other.

The simpler programming option requires you to either accept the preset temperature settings for when you are home, away or asleep, or to set your own Touch 'N' Go heating and cooling temperature settings. Either way, your home, away and sleep settings are automatically linked to one of four time periods that are also preset (and changeable) on the thermostat.

You can override those preset time periods and their relationship to your **home**, **away** and **sleep** buttons by pressing one of those three buttons at any time. This will let you create a "temporary hold" at that comfort level until the next programming period.

You can also hold the thermostat at your home, away or sleep temperatures by pressing one of those three buttons and then pressing the hold button.

This approach is popular with people who don't follow the same routine every day. And while you need to remember to push one of those three buttons when you leave, come home, or go to bed, doing that is easier for some than manually re-setting the temperature several times a day.



The more sophisticated programming option works well with people who tend to follow a more predictable routine and who also want to get the most from this thermostat's potential. For both programming options, you must set-up your Touch 'N' Go heating and cooling temperatures in order to use the thermostat's expanded programming options.

Here are the temperature settings that are pre-programmed for your home, away and sleep periods.

Touch 'N' Go Option	Heat	Cool
Home	68	74
Away	60	85
Sleep	66	78

Use this blank grid to determine how warm or cool you want your home to be when you're home, away or asleep. You'll assign time periods to those temperatures later.

Touch 'N' Go Option	Heat	Cool
Home		
Away		
Sleep		

#### Setting the home temperature

- 1. Open the door.
- Press the home button located under the display on the original left. You will see a triangle icon (▼) above the home button. This icon will always tell you whether you're in the home, away or sleep setting.



0

- 3. You will see the heating and cooling temperatures that were set at the factory. To use these, just close the door.
- 4. To change the factory settings press the **home** button. You o will see the word heat flashing on the screen.
- 5. Press the **up** or **down** button until you reach the desired temperature setting.



- 6. Press and hold the **home** button for about three seconds. The set temperature will flash, indicating that it saved your settings.
- 7. To change the cooling temperature setting, press the **mode** button repeatedly until you see the word cool flashing on the screen.



- 8. Press the **up** or **down** button on the right side of the display until you reach the desired temperature setting.
- 9. Press and hold the **home** button for about three seconds. The set temperature will flash, indicating that it saved your settings.



#### Setting the away temperature

- Press the **away** button located under the display in the cen-o ter. You will see a triangle icon (♥) above the **away** but-o ton.
- 2. You will see the heating and cooling temperatures that were set at the factory. To use these, just close the door.
- 3. To change the factory settings, press the **away** button. You o will see the word heat flashing on the screen.
- 4. Press the **up** or **down** button on the right side of the display until you reach the correct temperature setting.
- 5. Press and hold the **away** button for about three seconds. The set temperature will flash, indicating that it saved your settings.
- 6. To change the cooling temperature setting, press the **mode** of button until you will see the word cool flashing on the screen.
- 7. Press the **up** or **down** button until you reach the desired temperature setting.
- 8. Press and hold the **away** button for about three seconds. The set temperature will flash, indicating that it saved your settings.



|

0

0

#### Setting the sleep temperature

- 1. Press the **sleep** button located under the display in the center. You will see a triangle icon ( $\mathbf{\nabla}$ ) above the **sleep** button.
- 2. You will see the heating and cooling temperatures that were set at the factory. To use these, just close the door.
- 3. To change the factory settings, press the **sleep** button. You will see the word heat flashing on the screen.
- Press the up or down button on the right side of the display until you reach the desired temperature setting.
- 5. Press and hold the **sleep** button for about three seconds. The set temperature will flash, indicating that it saved your settings.
- To change the cooling temperature setting, press the mode button until you see the word cool flashing on the screen.

our	۲	
	0	
de	0	600
n.		000 0

0

0

c

la

00000

.

0 000

0

0

0

0000

0000

- 7. Press the **up** or **down** button until you reach the desired of temperature setting.
- 8. Press and hold the **sleep** button for about three seconds. The set temperature will flash, indicating that it saved your settings.

	0	000	50
ıds.		000	0
our	0 0 0	000	

#### Changing the temperature time periods

After you have set your three **Touch 'N' Go** buttons with temperature settings for when you're away, home and asleep, you can program the time of day you want to use for those temperature settings.

The thermostat has four time ranges called periods. They are identified on the display as P1, P2, P3 and P4.

With four time period options, you have a great deal of schedule and temperature flexibility. For example, in a household where nobody is home during the day, the users might use P1 for the morning before they leave for work, P2 for the hours they are at work, P3 for the period when they are home in the evening, and P4 when they are sleeping.

In situations where somebody is home most of the day, P1, P2 and P3 can all be assigned the same "home" temperatures, while P4 is reserved for the sleeping hours. (To learn how to reduce the number of time periods from four to two, see page 22.)



The thermostat has preset periods (see below), but you can change these to fit your lifestyle.

Period	Preset Hours
P1	6:00 AM to 8:00 AM
P2	8:00 AM to 5:00 PM
Р3	5:00 PM to 10:00 PM
Р4	10:00 PM to 6:00 AM

What time blocks work for you? Write them in here and refer to this as you make the changes on the thermostat.

Period	Your Hours
P1	
P2	
P3	
Р4	

Here's how to change the factory-set time periods.

- 1. Open the door.
- 2. Press the **days** button at the bottom of the thermostat. You <sup>O</sup> will see *all days*, *weekdays* and *weekends* flashing on the display. You will be changing the time periods according to the days of the week. *All days* is used when the household's weekday and weekend schedules are the same.



0



- 3. You must select one of these three time-frame options all days, weekdays or weekends by pressing the up or down button located to the right of the display. You may also make your selection by pressing the days button again. (Select all days if your weekday and weekend schedules are the same.)
- 4. When you have selected one of the three options (all days, weekdays, weekends), press the period button at the bottom of the thermostat. You will see P and a flashing 1 on the screen. This is period 1 (P1), which begins at 6:00 AM.



0000

b

5. To change the hours in **P1**, press the **start time** button at  $\circ$  the bottom of the screen.



- You will see the hours in 6:00 AM flashing on the screen. Press the up or down button and stop on the desired time.
- 7. To change the minutes, press the start time button on the bottom of the screen again. You will see the minutes in 6:00 AM flashing on the screen. Press the up or down button and stop on the desired time.

The "stop time" for period 1 (P1) is also the "start time" for period 2 (P2). To change the stop time for P1 – which means you are also changing the start time for P2 – use the instructions in the next step to change the start time for period 2.

0

0

000

0000

8.	To change the start time for period 2 (P2), press the period	_	
	button at the bottom of the screen twice. This displays the	0	Γ
	information for period 2, with <b>P2</b> flashing on the display.	0	

9. You will see the hours in **8:00** AM flashing on the screen. Press the **up** or **down** button and stop on the desired time.

- 10. To change the minutes, press the start time button on the bottom of the screen again. You will see the minutes in 8:00 AM flashing on the screen. Press the up or down button and stop on the desired time.
- 11. To change the start time for period 3 (P3), press the **period** button at the bottom of the screen three times. This displays the information for period 3, with **P3** flashing on the display.
- You will see the hours in 5:00 PM flashing on the screen. Press the up or down button and stop on the desired time.
- 13. To change the minutes, press the **start time** button on the bottom of the screen again. You will see the minutes in **5:00 PM** flashing on the screen. Press the **up** or **down** button and stop on the desired time.
- 14. To change the start time for period 4 (P4), press the **period** button at the bottom of the screen repeatedly. This displays the information for period 4, with **P4** flashing on the display.
- 15. You will see the hours in **10:00 PM** flashing on the screen. Press the **up** or **down** button and stop on the desired time.
- 16. To change the minutes, press the **start time** button on the bottom of the screen again. You will see the minutes in **10:00 PM** flashing on the screen. Press the **up** or **down** button and stop on the desired time.

- 17. If you did not select *all days* when you started this process, repeat all the steps for your remaining time-frame choice *weekdays* or *weekends*.
- 18. To confirm that the thermostat has accepted your changes, cycle through the four time periods by pressing days, selecting your time frame all days, weekdays, or weekends and then pressing the period button to see the hours assigned for each start time. Each time you press period, you will advance to the next start time.
- 19. Close the door.

#### Assigning time periods to temperatures

To get the most from your thermostat's programming features, you will want to take the remaining steps that will link your four schedule time periods (P1, P2, P3 and P4) to the heating and cooling temperatures you set with the Touch 'N' Go buttons – home, away and sleep.

Taking these final steps will be easier if you complete the grid below before programming the thermostat. It will help you decide how you want to assign the comfort temperatures you've selected for home, away and sleep to the time periods you've established. The completed grid will help you keep track of your information as you work with the thermostat.

Here's an example of how this would look using the factory-set periods and Touch 'N' Go options.

Pre-set Period Start Time	Period Number	Pre-set Touch 'N' Go Option for Each Period
6:00 AM	1	Home
8:00 AM	2	Away
5:00 PM	3	Home
10:00 PM	4	Sleep

Complete this schedule according to daily routine and use it as you follow the instructions below.

Your Period Start Time	Period Number	Your Touch 'N' Go Option for Each Period
	1	
	2	
	3	
	4	

Here's how to connect your four time periods with the three comfort ranges - home, away and sleep.

- 1. Open the door.
- Press the **days** button at the bottom of the thermostat. You will see *all days, weekdays* and *weekends* flashing on the display.





3. Select one of these three options by pressing the up or down button located to the right of the display. You may also make your selection by pressing the days button again. Select *all days* if your weekday schedule is the same as your weekend schedule.

1		\$
0		•
0		6
0	<u> </u>	0
	0000	

000

0000

0

lo

- When you have selected one of the three options (all days, oweekdays, weekends), press the period button at the obottom of the thermostat. P1 will flash on the display.
- 5. Press the Touch 'N' Go button home, away or sleep you want to use during period 1 (P1) from the row of buttons just below the display. You will see the triangle icon (▼) above the button selected. This tells the thermostat whether you are home, away, or asleep during P1. The thermostat will use the heating and cooling temperature of settings you've selected for that Touch 'N' Go button. For or example, if your heating temperature setting for home is 72 degrees, the thermostat will keep the heat at 72 during P1.



6. Press the **period** button twice. **P2** will flash on the display.



- 7. Press home, away or sleep.
- 8. Press the **period** button twice. **P3** will flash on the display.
- 9. Press home, away or sleep.
- 10. Press the **period** button twice. **P4** will flash on the display.
- 11. Press home, away or sleep.
- 12. If you did not select all days when you started this process, then repeat all the steps for your remaining time-frame choice – weekdays or weekends.
- 13. To confirm that the thermostat has accepted your changes, cycle through the four time periods by pressing **days**, selecting your time frame *all days*, *weekdays*, or *weekends* and then pressing the **period** button to see the Touch 'N' Go option assigned for each start time. Each time you press **period**, you will advance to the next start time.
- 14. Press **done** or close the door.

#### Using Touch 'N' Go buttons

Once you have set the temperatures and time periods that correspond with your three Touch 'N' Go comfort buttons (see **Programming the Touch 'N' Go feature**, page 13, and **Assigning time periods to temperatures**, page 26), you won't need to use your Touch 'N' Go buttons unless you want to make a temporary change. For example, if you go to bed earlier than usual, pressing the **sleep** button will lower the temperature sooner than scheduled. If you go to bed later than usual, pressing the **home** button will keep the home warmer past your usual bedtime but you'll need to press **sleep** before you go to bed.

#### To make a temporary change

- 1. Open the door.
- Press the home. away or sleep button that you want. You will see the words *temporary hold* on the display and the triangle icon (♥) over the button you've selected. The system will change to the temperature setting programmed for that lifestyle period. It will maintain that temperature setting until the start of the next programmed cycle.



- 3. To return to the originally programmed lifestyle period, press the appropriate **home, away** or **sleep** button. The system will return to that time period and the words *temporary hold* will disappear.
- 4. Close the door.

#### To hold it at home, away or sleep

There might be situations when you want to override the programming and hold the home's temperature at one of the three home, away or sleep comfort levels. This is useful when you're going on vacation or traveling, or when you're home unexpectedly. Here's how to prevent the thermostat from changing temperatures when it reaches the next programming time period.

- 1. Open the door.
- 2. Press the desired button under the display **home, away** or **sleep**.
- Press the **hold/run** button on the left side. You will see the word *hold* on the display.



0000

C

6

0

 To return to your original programming schedule, press the hold/run button. The word *hold* will disappear.



5. Close the door.

### Using the thermostat to turn the heating and cooling system off

Here's how to use the thermostat to turn the heating and cooling system off.

- 1. Open the door.
- 2. Press the **mode** button on the top left repeatedly until the display shows *off* in the upper left.
- $3. \ Close \ the \ door.$



#### Using the fan

The fan function helps distribute warmth or cooling throughout your home for a more even temperature in all spaces. The thermostat is automatically set so that the fan runs only during your heating and cooling cycles (auto mode). However, you can adjust the settings so that the fan runs continuously, even between cycles or when the system is turned off.

- 1. Open the door.
- 2. Press the **fan** button on the left side. You will see **fan on** in the lower left corner of the display.
- 3. To return the fan to auto mode, press the **fan** button again. You will see *fan auto* on the display.
- 4. Close the door.



#### Using emergency heat (heat pump systems only)

Emergency heat is useful when the automatic auxiliary heat system can't keep up with demand. (Systems with heat pumps use "auxiliary heat" when it's too cold outside for the heat pump to heat the house without help. The display indicator for this is *aux heat on*.)

If the heat pump compressor that works with auxiliary heat fails, or if the heat pump isn't working at all, you can turn on the emergency heat for that extra help. (You'll know there's a problem if the house can't seem to get warm when it's very cold outside.) You want to avoid using emergency heat, though, because it's the most expensive option. And, of course, if you suspect a problem with your heat pump, call your heating and cooling dealer immediately.

Here's how to set your thermostat to use emergency heat.

- 1. Open the door.
- 2. Press the **mode** button three times. You will see *Em heat* in the upper left of the display.
- 3. Close the door.



#### **Changing the batteries**

Your thermostat is probably powered by the HVAC equipment, but if it isn't, it's battery powered. You can tell if it's battery powered by checking in Advanced Programming Options. (See page 37.) If there's no lighting until you touch a button, it's battery powered. When the thermostat uses electricity, the batteries (if installed) take over if the electricity goes out. This allows you to monitor the indoor temperature when there's no electricity.

When powered by batteries, your thermostat's two AA batteries should last about one year. When your batteries have lost about one-third of their power, a battery icon shows up on the display in the upper right corner. Two-thirds of it will be black. As the batteries get weaker, the icon goes down to one bar and then none. When the battery icon is less than full, you will first see the loss of backlight function. When the batteries are completely dead, you won't be able to use the thermostat.

We recommend that you replace the batteries at the one bar level with two AA alkaline batteries. They're in the back of the thermostat, so you'll have to remove it from the wall. Here's how.

- 1. Locate the **latch** at the top of the thermostat. It's at the center of the top rim.
- 2. Press it down. This will disconnect the thermostat from the top of the wall plate.
- 3. Remove the thermostat from the wall bracket completely by bringing it slightly toward you and lifting it up and off the lip on the lower edge of the wall bracket.
- 4. Set the thermostat face down on a flat surface. You will see the batteries in the lower right corner.
- 5. Remove and discard the old batteries.









- 6. Install new batteries by matching the "plus" and "minus" ends of the batteries with the "plus" and "minus" indicators you'll see outside the two white battery shapes in the space where the batteries sit.
- 7. Snap the batteries into place.
- 8. Put the thermostat back on the wall bracket by lining up the two slots on the bottom edge of the back of the thermostat with the two lips on the wall bracket. You will feel the slots fit over the lips.
- 9. With the bottom of the thermostat attached to the bottom of the wall bracket, bring the thermostat back to the wall. Line up the latch at the top of the thermostat with the corresponding lip on the wall bracket.
- 10. Lightly push the thermostat toward the wall. When the latch and lip are lined up properly, you will hear the thermostat snap into place.

#### Advanced programming display codes chart

You can customize several features of your thermostat. This chart shows which features you can change and the codes associated with them. The codes will be shown on the display when you follow the instructions.

Feature	Configuration Code	Change Indication
Fahrenheit to Celsius	U1	F or C
backlighting	U2*	On or Of
keypad lockout	U3	padlock
programmable or nonprogrammable	U4	P or nP
number of program periods	U5	4 or 2

\* Not available when batteries are installed.

#### Changing from Fahrenheit to Celsius

Your thermostat is preset to display the temperature in degrees Fahrenheit. You can change this to Celsius.

- 1. Open the door.
- Open the door.
   Press and hold the **home** and **sleep** buttons under the display simultaneously for about three seconds.
- 3. Press the **mode** button on the left to change it from F (Fahrenheit) to C (Celsius).
- 4. Press the **done** button on the lower right.
- $5. \ Close \ the \ door.$



0

lo





#### Turning off the continuous backlighting

If your thermostat is not powered by the equipment and is instead battery powered, the display will light up for a few seconds after you press any button. This is backlighting. It will go dark after a few seconds.

If the thermostat is powered by electricity, there is always a low level amount of backlighting until you press any button, which increases the lighting temporarily. Here's how to turn off the constant low level backlight when your thermostat is powered by electricity.

- 1. Open the door.
- Press and hold the **home** and **sleep** buttons under the display simultaneously for about three seconds.
- 3. Press the **up** button at the top right of the display. You will see U2 and On. (If you don't, continue to press the **up** button, cycling through the options until you get to U2 and On.)
- 4. Press the **mode** button on the left to change it to Of.



000 0

C

0





5. Press the **done** button on the right.

6. Close the door.



#### **Keypad** lockout

The keypad lockout feature lets you "lock" the thermostat so nobody can change the temperature - or make any other changes - by pressing buttons. Keypad lockout is not activated when the thermostat is installed. Here's how to activate it.

- 1. Open the door.
- 2. Press and hold the **home** and **sleep** buttons under the display simultaneously for about three seconds.
- 3. Press the **up** button at the top right of the display. You will see U3. (If you don't, continue to press the **mode** button,  $\circ$ cycling through the options until you get to U3.)
- 4. Press the **mode** button on the left. You will see U3 and  $\circ$ On beneath a padlock icon. This indicates that the keypad is now locked.
- 5. Press the **done** button on the right.
- 6. Close the door.



C

0

C

0

0

' |o

.

0

0

0000

000



#### Unlocking the keypad

Here's how to temporarily unlock the keypad.

- 1. Open the door.
- Press and hold the up and down buttons on the right simultaneously for about five seconds.
   The *padlock icon* will disappear. This means the keypad
- 3. The *padlock icon* will disappear. This means the keypad of sunlocked and can be used. The keypad will revert back of the locked state after you've stopped pushing buttons for two minutes.
- 4. Close the door.

#### Changing from programmable to nonprogrammable

It is possible to convert your thermostat's operation from programmable to nonprogrammable. This eliminates its advanced features. When switching to the nonprogrammable format, you lose the programming, hold, days of the week on the display, and Smart Recovery features. Switching to nonprogrammable also means you'll give up some of the thermostat's energy saving features. The time of day will still show on the display and you will be able to increase or decrease the temperature settings manually. Here's how to switch to nonprogrammable.

- 1. Open the door.
- 2. Press and hold the **home** and **sleep** buttons under the display simultaneously for about three seconds.



3. Press the **up** button at the top right of the display. You will see U4 (flashing) and P (for programmable). (If you don't, continue to press the **up** button, cycling through the options until you get to U4 (flashing) and P.)



- 4. Press the **mode** button on the left, P will flash.
- 5. Press the **up** button on the right to change it to nP for nonprogrammable
- 6. Press the **done** button on the right.
- $7. \ Close \ the \ door.$







#### Changing the number of programming periods

Your thermostat is preset with four time periods (P1, P2, P3, P4). You can change this to two. Here's how to change the number of periods in the day.

- 1. Open the door.
- 2. Press and hold the **home** and **sleep** buttons under the display simultaneously for about three seconds.

-

0

0000

0

C

- Press the up button at the top right of the display repeatedly. You will see U5 and 4. (If you don't, continue to press the up button, cycling through the options until you get to U5 and 4.)
- 4. Press the **mode** button on the left to change it from **4** to **2**.  $^{\circ}$
- 5. Press the **done** button on the right.
- 6. Close the door.







### SPECIAL FEATURES

#### Auto Changeover

The thermostat displays one of five modes: heat, cool, Em heat (heat pump version only), heat cool, and off. When the mode selection is for both heating and cooling, the thermostat is in auto changeover mode. This allows the system to switch from heating to cooling – or from cooling to heating – to maintain the temperatures you've programmed. It does this automatically.

#### **Smart Recovery**

The Smart Recovery feature transitions your home from one temperature period (P1, P2, P3, P4) to the next so that the your home's temperature matches the temperature setting at the start of each time period. This means, for example, that if your sleep period temperature setting is lower than the period that precedes it, the thermostat will start cooling down the home before the beginning of the scheduled sleep period.

It does this at an energy-efficient rate. This not only helps make your home as comfortable as possible, it also makes your thermostat more cost effective. Call your dealer to adjust Smart Recovery settings.

# WHAT IF ...

#### The battery icon is displayed

The battery icon appears on the display only when the battery starts to lose power. Replace it when one-third of the icon is black.

If you wait until the icon is just a silhouette with no black bars, the thermostat won't have the power to function correctly. Replace the battery to restore thermostat functions.

#### "Aux heat on" is displayed (heat pump systems only)

Aux heat on is auxiliary heat. It applies only to the heat pump version. If it is on, you will see aux heat on. When it is displayed, it means the system has determined that it's too cold outside for your heat pump to heat the house without help, so it's getting help from the electric heaters. This happens automatically.

#### "Em heat" is displayed (heat pump systems only)

Em heat is the display term for emergency heat and applies only to the heat pump version. When emergency heat has been turned on, Em heat is displayed when you press the **mode** button. You have to turn on emergency heat manually – it doesn't happen automatically – so if you see Em heat on the display, it means somebody has turned it on.

# WHAT IF ...

#### There is a power outage

If you lose electricity and have batteries installed, the thermostat will continue to display the status because it has a battery backup power source. This means that even though your heating and cooling system doesn't work, you will still be able to monitor your home's temperature. In addition, you won't have to reprogram the thermostat because your settings are retained even if the battery dies. The display will continue to show the time for 8 hours while there is no electricity.

#### You get a system error message

Here are the possible system error messages and what they mean:

- -- The room air sensor reports that the room air temperature is above  $150^{\circ}$  or below  $50^{\circ}$ .
- E4 This means the memory has failed and the thermostat will return to the factory settings. Call your heating and cooling dealer.

## COMMON TERMS AND WHERE TO FIND THEM

#### Auxiliary heat (heat pump systems only) ...... page 33

Most heat pump systems can't heat a home sufficiently when it gets very cold outside so they use a supplemental heating source called auxiliary heat. The system knows when to use this help and does so automatically. If it's using auxiliary heat, the display will show *aux heat on*. You have no control over the auxiliary heat function.

#### Backlighting ...... page 39

backlighting illuminates your display. When the thermostat is powered by electricity, the backlight is on constantly at a dim level that brightens when you push a button. With battery powered thermostats, the backlight is off until you press a button.

### COMMON TERMS AND WHERE TO FIND THEM

Hold								•••					 	 	 	 	 	pag	ge 3	50
This fu	nction	hold	s the	e cu	rrei	it se	et t	en	ipe	era	tur	e.								

**Override** ...... page 30 This happens when you temporarily disregard the thermostat's programmed temperature settings and schedules by using the temporary hold or hold options.

## COMMON TERMS AND WHERE TO FIND THEM

Time period ...... page 19

The thermostat features four time periods. These blocks of time are linked to temperatures you set according to how warm or cool you want the house during those time periods. The time periods are also linked to your Touch 'N'  $\text{Go}^{\sim}$  settings of home, away and sleep.

Touch 'N' Go ...... page 12

The three Touch 'N' Go buttons – home, away and sleep – let you change programmed time periods with the touch of a button. They are particularly useful for somebody who doesn't want to take advantage of the thermostat's full programming capability or somebody whose schedule varies from day to day.



turn to the experts

### CARRIER CORPORATION

# Limited Warranty for Thermostats

#### FOR WARRANTY SERVICE OR REPAIR:

Contact the installer or a Carrier dealer. You may be able to find the installer's name on the equipment or in your Owner's Packet. You can also find a Carrier dealer online at <u>www.carrier.com</u>

For help, contact: Carrier Corporation, Consumer Relations, P.O. Box 4808, Syracuse, New York 13221, Phone  $1\mathchar`eq 800\mathchar`eq 227\mathchar`eq 800\mathchar`eq 227\mathchar`eq 800\mathchar`eq 800$ 

PRODUCT REGISTRATION: You can register your product online at www.carrier.com.

Model Number	Serial Number
Date of Installation	Installed by
Name of Owner	Address of Installation

Carrier Corporation (hereinafter "Company") warrants this product against failure due to defect in materials or workmanship under normal use and maintenance as follows. All warranty periods begin on the date of original installation. If a part fails due to defect during the applicable warranty period Company will provide a new or remanufactured part, at Company's option, to replace the failed defective part at no charge for the part. Alternatively, and at its option, the Company will provide a credit in the amount of the then factory selling price for a new equivalent part toward the retail purchase price of a new Company product. Except as otherwise stated herein, those are Company's exclusive obligations under this warranty for a product failure. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below and on the reverse (if any) of this document.



OWNER-OCCUPIED, RESIDENTIAL APPLICATIONS

This warranty is to the original purchasing owner and is transferable only to the extent and as stated in the Warranty Conditions and below. The warranty period in years, depending on the part and the claimant, is as shown in the chart below.

	Limited Warranty (Years)							
Product	Original Owner	Subsequent Owner						
TP, TC, TB Thermostats***	10* (or 5)	5						

- \* If properly registered within 90 days, otherwise 5 years (except in California and Quebec and other jurisdictions that prohibit warranty benefits conditioned on registration, registration is not required to obtain longer warranty periods). See Warranty Conditions below.
- \*\*\* Applies only to Thermostats. Active electronic finished good accessories, such as the optional ExP module, have different warranty terms. See product for details.

OTHER RESIDENTIAL APPLICATIONS (Apartments, Rental Properties, etc.)

The warranty period is five (5) years. The warranty is to the original owner only and is not transferable.

#### OTHER APPLICATIONS

The warranty is one (1) year on all such applications. The warranty is to the original owner only and is not transferable.

**LEGAL REMEDIES:** The owner **must** notify the Company in writing, by certified or registered letter to Carrier Corporation, Warranty Claims, P.O. Box 4808, Syracuse, New York 13221, of any defect or complaint with the product, stating the defect or complaint and a specific request for repair, replacement, or other correction of the product under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.



#### WARRANTY CONDITIONS:

- To obtain the longer warranty periods as shown in the table under original owner, for the original purchaser, the product <u>must</u> be properly registered at <u>www.carrier.com</u> within ninety (90) days of original installation. In jurisdictions where warranty terms conditioned on registration are prohibited by law, registration is not required and the longer warranty period shown will be apply.
- 2. Where a product is installed in a newly constructed home, the date of installation is the date the homeowner purchased the home from the builder.
- 3. If the date of original installation cannot be verified, then the warranty period begins ninety (90) days from the date of product manufacture (as indicated by the model and serial number). Proof of purchase may be required at time of service.
- 4. The remainder of the first five years of warranty is freely transferable without registration.
- 5. Product must be installed properly and by a licensed HVAC technician.
- 6. The warranty applies only to products remaining in their original installation location.
- Installation, use, care, and maintenance must be normal and in accordance with instructions contained in the Installation Instructions, Owner's Manual and Company's service information.
- 8. Defective parts must be returned to the distributor through a registered servicing dealer for credit.

LIMITATIONS OF WARRANTIES: <u>ALL IMPLIED WARRANTIES AND/OR</u> <u>CONDITIONS (INCLUDING IMPLIED WARRANTIES OR CONDITIONS OF</u> <u>MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE) ARE</u> <u>LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. SOME STATES OR</u>



#### PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THE ABOVE MAY NOT APPLY TO YOU, THE EXPRESS WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

### THIS WARRANTY DOES NOT COVER:

- 1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts, or replacement parts, or new units.
- 2. Any product purchased over the Internet.
- Normal maintenance as outlined in the installation and servicing instructions or Owner's Manual, including filter cleaning and/or replacement and lubrication.
- 4. Failure, damage or repairs due to faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
- Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
- 6. Failure or damage due to floods, winds, fires, lightning, accidents, corrosive environments (rust, etc) or other conditions beyond the control of Company.
- 7. Parts not supplied or designated by Company, or damages resulting from their use.
- 8. Products installed outside the U.S.A. or its territories and Canada.
- 9. Electricity or fuel costs, or increases in electricity or fuel costs from any reason whatsoever, including additional or unusual use of supplemental electric heat.
- 10. Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
- 11. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR <u>COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER</u>. Some states or provinces do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

49004DP133

08/2011



Copyright 2012 Carrier Corporation, 7310 W Morris St. Indianapolis, IN 46231
OM-TCPHP-05CA Replaces: OM-TCPHP-04CA

Edition Date: 05/12

Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.