# Braeburn.

# **User Manual**

PREMIER SERIES

# **Programmable Thermostats**

This manual covers the following thermostat models:

**4030** Up to 2 Heat / 1 Cool Heat Pump 1 Heat / 1 Cool Conventional

4235 Up to 3 Heat / 2 Cool Heat Pump Up to 2 Heat / 2 Cool Conventional with Humidity Control

Read all instructions before proceeding.

**Store this manual for future reference** 

# **Contents**

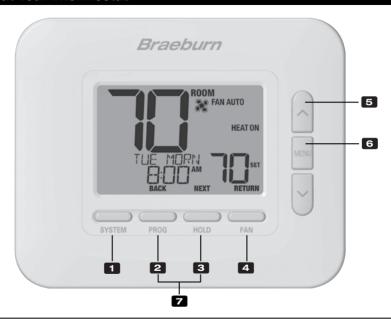
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Congratulations! You are in control of one of the easiest-to-use thermostats on the market today. This thermostat has been designed to provide you with years of reliable performance and comfort control.

# **Features**

- · Stylish new design with large display and bright blue backlight
- SpeedSet® programming gives you the option of programming all 7 days at once
- Convenient HOLD feature lets you override the program schedule
- · Extra large display characters make viewing settings even easier
- User selectable service monitors remind you of required system maintenance
- Multi-level keypad lockout prevents unauthorized use
- Precise temperature accuracy keeps you in control of your comfort
- · Convenient programmable and circulating fan modes
- Optional indoor or outdoor remote sensing
- Optimal humidity control (model 4235 only)
- Expanded commercial features (commercial configuration only)

# **1** About Your Thermostat



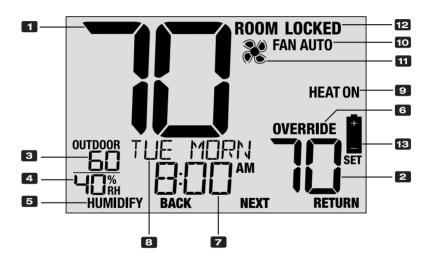
# **Thermostat**

| 1 | SYSTEM ButtonSelects the system you want to control |  |  |  |  |  |
|---|---|--|--|--|--|--|
| 2 |   | .Enters programming mode or hold for 3 seconds to enter SpeedSet® modeSecondary function of the <b>PROG</b> button - Moves to previous setting |  |  |  |  |
| 3 |   | .Enters / Exits <b>HOLD</b> mode (program bypass mode) .Secondary function of the <b>HOLD</b> button - Moves to next setting                   |  |  |  |  |
| 4 |   | .Selects the system fan mode<br>.Secondary function of the <b>FAN</b> button - Exits program or settings modes                                 |  |  |  |  |
| = | -   | lncreases or decreases settings (time, temperature, etc.)Used to access user settings mode   |  |  |  |  |
| = |   | Access user Lock / Unlock screen by holding <b>PROG</b> and <b>HOLD</b> together for 5 seconds   |  |  |  |  |
|   | Battery Compartment                                 | . Located on the back side of thermostat (if installed)  |  |  |  |  |

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<sup>\*</sup> BACK, NEXT and RETURN are secondary functions of the PROG, HOLD and FAN buttons. When in programming or configuration modes, BACK, NEXT and RETURN appear in the display screen indicating that the PROG, HOLD and FAN buttons now function as BACK, NEXT and RETURN.

# About Your Thermostat



# **Thermostat Display**

| 1  | Room Temperature                    | Displays the current room temperature  |
|----|-------------------------------------|--|
| 2  | Set Temperature                     | Displays the current setpoint temperature  |
| 3  | Outdoor Temperature                 | .lf a Braeburn® outdoor sensor is connected, the outdoor temperature will be displayed |
| 4  | Room Humidity (4235 only)           | .Displays the current room Relative Humidity level                                     |
| 5  | Humidity Call Indicator (4235 only) | Indicates when there is a call for Humidification or Dehumidification (in enabled)     |
| 6  | Override Indicator                  | Indicates that the current program schedule has been temporarily overridden            |
| 7  | Time of Day                         | .Displays the current time of day  |
| 8  | Message Center                      | .Displays various thermostat status and maintenance information                        |
| 9  | System Mode                         | Displays the system mode and current system status                                     |
| 10 | Fan Mode Indicator                  | .Indicates the current system fan mode   |
| 11 | Fan Status Indicator                | .Indicates that the system fan is running  |
| 12 | Lock Mode Indicator                 | .Indicates if the thermostat is locked   |
| 13 | Low Battery Indicator               | .Indicates when the batteries need to be replaced                                      |

# 2 User Settings

User Settings allow you set the current time of day as well as customize various thermostat features.

To access the User Settings, press and release the **MENU** button to display the first User Setting.

Press the  $\Lambda$  or V buttons to change the value for the displayed User Setting. After your desired setting is displayed, press **NEXT** (HOLD) to advance to the next User Setting. You may also press **BACK** (PROG) to move backwards through the User Settings.

When your changes are complete, press **RETURN** (FAN) to exit.



MENU

# **Table of User Settings**

NOTE: Some user settings may not be available, depending on how the thermostat was configured during installation.

|                     | No. | User Setting  | Displayed        | Default<br>Setting | Available<br>Settings | Description of Available Settings        |  |
|---------------------|-----|---|------------------|--------------------|-----------------------|--|--|
|                     | 1   | Reset SERVICE   | RESET            | NO                 | NO                    | Select to keep message displayed         |  |
|                     |     | FILTER Message  | FILTER           |                    | YES                   | Select to remove message and reset timer |  |
| Reminders           |     | [Only appears if the service filter time interval has expired] If a service filter time interval was selected in setting 11, the thermostat will display a SERVICE FILTER message once that time interval is reached. Select NO to keep the message displayed or select YES to clear the message and reset the timer.                   |                  |                    |                       |  |  |
| Ren                 | 2   | Reset SERVICE<br>UV BULB Message  | RESET<br>UV BULB | NO                 | NO                    | Select to keep message displayed         |  |
| Se                  |     |   |                  |                    | YES                   | Select to remove message and reset timer |  |
| Conditional Service |     | [Only appears if the service UV bulb time interval has expired] If a service UV bulb time interval was selected in setting 12, the thermostat will display a SERVICE UV BULB message once that time interval is reached. Select NO to keep the message displayed or select YES to clear the message and reset the timer.                |                  |                    |                       |  |  |
| ditic               | 3   | Reset SERVICE HUM   | RESET            | NO                 | NO                    | Select to keep message displayed         |  |
| Š                   |     | PAD Message   | HUN PRD          |                    | YES                   | Select to remove message and reset timer |  |
| 3                   |     | [Only appears if the humidifier pad service time interval has expired] If a service humidifier pad time interval was selected in setting 13, the thermostat will display a SERVICE HUM PAD message once that time interval is reached.  Select NO to keep the message displayed or select YES to clear the message and reset the timer. |                  |                    |                       |  |  |

|             | No. | User Setting   | Displayed        | Default<br>Setting | Available<br>Settings | Description of<br>Available Settings            |  |  |
|-------------|-----|--|------------------|--------------------|-----------------------|---|--|--|
|             | 4   | Current Time of Day<br>(Hour)  | SET TIME         | 12:00              | 1-12                  | Select the current hour of day                  |  |  |
| Day         |     | Set the current hour of the d  | ay. If thermosta | t was configi      | ured for a 24-ho      | our clock, the settings 0-24 will be available. |  |  |
| and         | 5   | Current Time of Day<br>(Minute)  | SET TIME         | 12:00              | 00-60                 | Select the current minute of the hour           |  |  |
| Time        |     | Set the current minute of the  | hour.            |                    |                       |   |  |  |
|             | 6   | Current Day of Week  | SET DRY          | MON                | MON-SUN               | Select the current day of the week              |  |  |
|             |     | Set the current day of the we  |                  |                    |                       |   |  |  |
| Only)       | 7   | <b>Humidification Setpoint</b>   | HUMID SET        | 10 RH%             | 10% - 50%             | Select the humidification setpoint              |  |  |
| (4235       |     | [Only available if humidification was enabled] Select a humidification setpoint. When the relative humidity (RH9 below this setpoint, the thermostat will activate your humidification equipment. During a call for humidification, the thermostat will display HUMIDIFY in the lower left corner of the display.  |                  |                    |                       |   |  |  |
| Setpoint    | 8   | Dehumidification<br>Setpoint   | DEHUNID<br>SET   | 80 RH%             | 80%-40%               | Select the dehumidification setpoint            |  |  |
| Humidity Se |     | [Only available if dehumidification was enabled] Select a dehumidification setpoint. When the relative humidity (RH rises above this setpoint, the thermostat will activate your dehumidification equipment. During a call for dehumidification the thermostat will display DEHUMIDIFY in the lower left corner of the display. Your thermostat can also be configured to use the air conditioning system to reduce humidity during the cooling season by running an additional 1-3 degrees belo your cooling setpoint temperature if needed to reduce humidity. |                  |                    |                       |   |  |  |

|  | No. | User Setting   | Displayed     | Default<br>Setting | Available<br>Settings | Description of Available Settings         |  |
|--|-----|--|---------------|--------------------|-----------------------|---|--|
|  | 9   | Constant Backlight   | BACKLITE AUTO | BUTO               | AUTO                  | Backlight only turns on with button press |  |
|  |     | Conotain Buokingin   | onenene       |                    | ON                    | Backlight is always on                    |  |
| Backlight  |     | [Only available if thermostat is hardwired with a 24 VAC common (C) wire] Select AUTO (default) for backlight to turn on only with the press of a button. Backlight will turn off automatically after approximately 10 seconds. Select ON for backlight to remain on at all times. |               |                    |                       |   |  |
| B  | 10  | Backlight Brightness   | BACKLITE      | 3                  | 1, 2, 3, 4, 5         | Select the level of backlight brightness  |  |
| Select the level of backlight brightness with 5 being the brightest. |     |  |               |                    |                       |   |  |

|           | No. | User Setting  | Displayed | Default<br>Setting | Available<br>Settings        | Description of<br>Available Settings                   |  |  |
|-----------|-----|---|-----------|--------------------|------------------------------|--|--|--|
|           | 11  | Service Filter Timer  | FILTER    | OFF                | OFF                          | Service filter timer is disabled                       |  |  |
|           | ''  | Service Filter Timer  | TILILK    | 011                | 30, 60, 90,<br>120, 180, 365 | Select number of days for service filter timer         |  |  |
|           |     | [Not available on heat-only hydronic systems] Select the number of days before receiving a reminder to change your system filter (if equipped). When the timer interval has expired, the thermostat will display the message SERVICE FILTER. To reset this reminder, see setting 1. To disable, select OFF.   |           |                    |                              |  |  |  |
| ers       |     | Service UV Bulb Timer   |           | OFF                | OFF                          | Service UV bulb timer is disabled                      |  |  |
| Reminders | 12  |   | UV BULB   |                    | 180, 365                     | Select number of days for service<br>UV bulb timer     |  |  |
| Service R |     | [Not available on heat-only hydronic systems] Select the number of days before receiving a reminder to change your system UV bulb (if equipped). When the timer interval has expired, the thermostat will display the message SERVICE UV BULB. To reset this reminder, see setting 2. To disable, select OFF. |           |                    |                              |  |  |  |
| 0,        | 13  | Service Humidifier  | HUM PRD   | OFF                | OFF                          | Service humidifier pad timer is disabled               |  |  |
|           | "   | Pad Timer   |           | 3                  | 180, 365                     | Select number of days for service humidifier pad timer |  |  |
|           |     | [Not available on heat-only hydronic systems] Select the number of days before receiving a reminder to change your humidifier pad (if equipped). When the timer interval has expired, the thermostat will display the message SERVICE HUM PAD. To reset this reminder, see setting 3. To disable, select OFF. |           |                    |                              |  |  |  |

|             | No. | User Setting   | Displayed   | Default<br>Setting | Available<br>Settings    | Description of Available Settings                 |  |  |  |
|-------------|-----|--|---|--------------------|--------------------------|---|--|--|--|
|             | 14  | Temperature Hold Time  | HOLD  | LONG               | LONG                     | Select for long (permanent) HOLD mode             |  |  |  |
|             |     | (HOLD Button)  |   |                    | 24HR                     | Select for 24 hour (temporary) HOLD mode          |  |  |  |
| e           |     | [Only available if programming is enabled] Temperature Hold Time lets you select the time that your thermostat will hold the temperature when the HOLD button has been pressed. When LONG is selected, the thermostat will hold your temperature indefinitely. When 24HR is selected, the thermostat will hold your temperature for 24 hours and then return to the current program temperature. |   |                    |                          |   |  |  |  |
| ပ္ပ         | 15  | Temperature Override<br>Adjustment Limit   | ADJ LINIT   | OFF                | OFF                      | Disables adjustment limit                         |  |  |  |
| Lock Code   | "   |  |   |                    | 1, 2, 3                  | Select adjustment limit of 1°, 2° or 3°           |  |  |  |
| and         |     | The Temporary Override Adjustment Limit will limit how much the temperature can be adjusted from the current setpoint temperature. This setting will not allow the user to override the temperature past the selected limit amount of 1, 2 or 3 degrees from the current setpoint.   |   |                    |                          |   |  |  |  |
| Temperature | 16  | Program Override<br>Time Limit   | OVERRIDE  | 4 HR               | 4 HR, 3 HR<br>2 HR, 1 HR | Select a program override time limit of 1-4 hours |  |  |  |
| Ten         |     | [Only available if programming is enabled] The Program Override Time Limit allows you to set a maximum time limit (in hours) that the thermostat will return to the program after a temporary temperature override has been made. You may select 1, 2, 3 or 4 hours.   |   |                    |                          |   |  |  |  |
|             | 17  | Thermostat Lock Code   | SET LOCK  | 000                | 0-9                      | Select a 3-digit lock code of 0-9 for each digit  |  |  |  |
|             |     | Setting the 3-digit code does  | The Thermostat Lock Code sets a 3-digit code that you may use at any time to lock or unlock the thermostat keypad.  Setting the 3-digit code does not activate the lock feature. To lock or unlock the thermostat, see Locking/Unlocking Thermostat, section 6. The lock code 000 cannot be used. |                    |                          |   |  |  |  |

|       | No. | User Setting  | Displayed | Default<br>Setting | Available<br>Settings | Description of Available Settings |
|-------|-----|---|-----------|--------------------|-----------------------|-----------------------------------|
| F     | 18  | User Reset  | RESET     | NO .               | NO                    | Reset disabled - no changes made  |
| RESET |     |   |           |                    | YES                   | Reset enabled - resets thermostat |
| 盃     |     | Selecting YES will reset all user settings, program and current time. Thermostat lock code and Installer Settings will not be affected. |           |                    |                       |                                   |

# **3** Setting Your Program Schedule

## **Tips Before Setting Your Program Schedule**

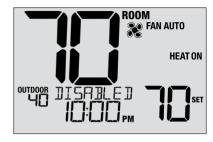
- Make sure your current time and day of the week are set correctly.
- . Make sure the AM and PM indicators are correct.
- Various installer settings such as auto changeover mode and temperature adjustment limits may affect your programming flexibility.
- . Your NITE event cannot exceed 11:50 p.m.
- BACK, NEXT and RETURN are secondary functions of the PROG, HOLD and FAN buttons.

# This thermostat has been configured with one of the following programming options:

- · Residential 7-day programming mode with 4 events per day
- Residential 5-2 (weekday/weekend) programming mode with 4 events per day
- Commercial 7-day programming mode with 2 events per day

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· Non-Programmable mode



**NOTE:** If this thermostat was configured to be non-programmable, then you cannot set a program schedule. If you press the **PROG** or **HOLD** buttons, the word "DISABLED" will appear in the display.

# **Energy Saving Programs**

This thermostat comes pre-programmed with a default energy saving program. The following tables outline the pre-programmed times and temperatures for heating and cooling in each of your 4 daily events (2 events if configured for commercial mode). If you wish to use these settings, then no further programming is necessary:

|         | ay Programming<br>Settings | 5-2 Day Programming<br>Weekday/Weekend Factory Settings |                     |  |
|---------|----------------------------|---|---------------------|--|
| 4 Event | All Days                   | Weekday   | Weekend             |  |
| MORN    | Time: 6:00 am              | Time: 6:00 am   | Time: 6:00 am       |  |
|         | Heat: 70° F (21° C)        | Heat: 70° F (21° C)                                     | Heat: 70° F (21° C) |  |
|         | Cool: 78° F (26° C)        | Cool: 78° F (26° C)                                     | Cool: 78° F (26° C) |  |
| DAY     | Time: 8:00 am              | Time: 8:00 am   | Time: 8:00 am       |  |
|         | Heat: 62° F (17° C)        | Heat: 62° F (17° C)                                     | Heat: 62° F (17° C) |  |
|         | Cool: 85° F (29° C)        | Cool: 85° F (29° C)                                     | Cool: 85° F (29° C) |  |
| EVE     | Time: 6:00 pm              | Time: 6:00 pm   | Time: 6:00 pm       |  |
|         | Heat: 70° F (21° C)        | Heat: 70° F (21° C)                                     | Heat: 70° F (21° C) |  |
|         | Cool: 78° F (26° C)        | Cool: 78° F (26° C)                                     | Cool: 78° F (26° C) |  |
| NITE    | Time: 10:00 pm             | Time: 10:00 pm  | Time: 10:00 pm      |  |
|         | Heat: 62° F (17° C)        | Heat: 62° F (17° C)                                     | Heat: 62° F (17° C) |  |
|         | Cool: 82° F (28° C)        | Cool: 82° F (28° C)                                     | Cool: 82° F (28° C) |  |

| Commercial 2 Event Programming<br>Factory Settings |   |  |  |
|--|---|--|--|
| 2 Event  | All Days  |  |  |
| OCC  | Time: 8:00 am<br>Heat: 70° F (21° C)<br>Cool: 78° F (26° C) |  |  |
| UNOC   | Time: 6:00 pm<br>Heat: 62° F (17° C)<br>Cool: 85° F (29° C) |  |  |

# Setting a 7-Day program – All 7 Days at Once (SpeedSet®)

(7-day residential or commercial programming mode only)

**NOTE:** Setting all 7 days at once will copy over any previously programmed individual days.

# **Available Daily Events**

Residential mode: MORN, DAY, EVE, NITE

Commercial mode: OCC, UNOC

- 1. Hold the PROG button for 3 seconds until ALL DAYS appears.
- 2. Press SYSTEM to select HEAT or COOL. Press NEXT.
- 3. Press ∧ or ∨ to adjust the hour for the first event. Press NEXT.
- 4. Press ∧ or ∨ to adjust the minute for the first event. Press **NEXT**.
- 5. Press A or V to adjust the temp for the first event. Press NEXT.
- 6. Press ∧ or V to adjust the fan\* for the first event. Press NEXT.
- 7. Repeat steps 3-6 for the remaining daily events.
- **8.** If needed, repeat steps 2-7 to program the opposite mode.
- 9. Press RETURN to exit.





<sup>\*</sup> See "Programmable Fan Mode" in section 5.

# Setting a 7-Day program – Individual Days

(7-day residential or commercial programming mode only)

## **Available Daily Events**

Residential mode: MORN, DAY, EVE, NITE

Commercial mode: OCC, UNOC

- 1. Press and release the PROG button.
- 2. Press SYSTEM to select HEAT or COOL.
- 3. Press A or V to select the day you want to program. Press **NEXT.**
- 4. Press ∧ or V to adjust the hour for the first event. Press NEXT.
- 5. Press ∧ or ∨ to adjust the minute for the first event. Press NEXT.
- Press ∧ or ∨ to adjust the temp for the first event. Press NEXT.
- 7. Press  $\wedge$  or  $\vee$  to adjust the <u>fan</u>\* for the first event. Press **NEXT**.
- 8. Repeat steps 4-7 for your remaining daily events.
- 9. If needed, repeat steps 3-8 to program additional days.
- 10. If needed, repeat steps 2-8 to program the opposite mode.
- 11. Press RETURN to exit.







<sup>\*</sup> See "Programmable Fan Mode" in section 5.

# Setting a 5-2 Day Weekday/Weekend Program

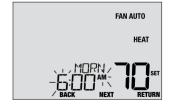
(5-2 day residential programming mode only)

# Available Daily Events: MORN, DAY, EVE, NITE

- 1. Press and release the PROG button.
- 2. Press SYSTEM to select HEAT or COOL.
- Press A or V to select WEEKDAYS or WEEKEND, Press NEXT.
- 4. Press  $\wedge$  or  $\vee$  to adjust the hour for the first event. Press **NEXT**.
- 5. Press  $\wedge$  or  $\vee$  to adjust the minute for the first event. Press **NEXT**.
- 6. Press ∧ or V to adjust the temp for the first event. Press **NEXT**.
- 7. Press A or V to adjust the fan\* for the first event. Press **NEXT**.
- 8. Repeat steps 4-7 for your remaining daily events.
- 9. If needed, repeat steps 3-8 to program additional days.
- **10.** If needed, repeat steps 2-9 to program the opposite mode.
- 11. Press RETURN to exit.







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<sup>\*</sup> See "Programmable Fan Mode" in section 5.

# **4** Operating Your Thermostat

#### **Setting the SYSTEM Control Mode**

The System Control has 5 modes of operation – COOL, OFF, HEAT, AUTO and EMER. The mode can be selected by pressing the **SYSTEM** button to scroll through the different system modes.

**NOTE:** Depending on how your thermostat was configured, some system modes may not be available.

COOL Only your cooling system will operate.

**OFF** Heating and cooling systems are off.

**HEAT** Only your heating system will operate

AUTO The system will cycle between heating and cooling automatically based on your temperature set points. AUTO will be displayed with either HFAT or COOL

**EMERGENCY** Operates a backup heat source (Emergency Heat) for heat pump systems only.



## **Setting the FAN Control Mode**

The Fan Control has 4 modes of operation – AUTO, ON, CIRC and PROG. The mode can be selected by pressing the **FAN** button to scroll through the different fan modes.

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**NOTE:** Depending on how your thermostat was configured, some fan modes may not be available.

AUTO The system fan will run only when your heating or cooling system is running.

**ON** The system fan stays on.

CIRC The system fan will run from time to time to help circulate air and provide more even temperature when the heating or cooling system is not active.

PROG The system fan will function in the AUTO, ON or CIRC modes depending on your program schedule.



## **Temperature Adjustment**

**Temporary Adjustment (OVERRIDE)** − Press ∧ or ∨ to adjust the current set temperature. The set temperature will change back to your programmed temperature a few hours later or at the start of the next scheduled program event. OVERRIDE will appear in the display during the entire override period.

**Extended Adjustment (HOLD)** – Press the **HOLD** button to override all programming. You can continue to use the  $\Lambda$  or V buttons to adjust the current set temperature. Press **HOLD** again to resume the program schedule. You can limit your hold time to 24-hours by adjusting User Setting 14 in section 2.

**NOTE:** If your thermostat was configured to be non-programmable, HOLD and OVERRIDE are not available.

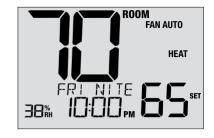




# **Program Event Indicators**

Program event indicators appear in the display to let you know what part of your current program is active.

- Residential Program Mode: MORN, DAY, EVE or NITE
- Commercial Program Mode: OCC (occupied) or UNOC (unoccupied)



When OVERRIDE appears, your program has been temporarily overridden and will resume in 1-4 hours depending on the selection for User Setting 16 in section 2. The program will also resume at the beginning of the next scheduled program event.

**NOTE:** If your thermostat was configured to be non-programmable, or is in HOLD mode, you will not see a Program Event or OVERRIDE indicator.



# **System Status and Maintenance Indicators**

Status indicators are messages or symbols that appear in the display to let you know what function your system is currently performing. They are also used to inform you of various service and maintenance functions.

**HEAT ON** The heating system is running.

**COOL ON** The cooling system is running.

**HEAT ON AUX** The auxiliary stage of heating is running

(multistage systems only).

**EMERGENCY** The emergency heating system is running (heat pump systems only).

Indicates that the system fan is running.

**HUMIDIFY** Thermostat is calling for humidification

(model 4235 only).

**DEHUMIDIFY** Thermostat is calling for dehumidification

(model 4235 only).





# **System Status and Maintenance Indicators** (continued)

LOCKED Thermostat has been fully or partially locked.

See Locking and Unlocking thermostat, section 5.



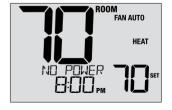
SERVICE

A user selectable service reminder for changing the filter, UV bulb or humidifier pad has been triggered. To set or reset these reminders, see User Options, section 2.



**NO POWER** 

AC power to thermostat has been lost. Only available if thermostat is hardwired and thermostat is configured for power monitoring.



# **System Status and Maintenance Indicators** (continued)

HIGH I IM Setpoint temperature has reached its

upper limit maximum.

LOW LIM Setpoint temperature has reached its

lower limit maximum

HI TEMP Room temperature has risen above the

display range. Cooling will still operate to

help lower temperature.

LO TEMP Room temperature has fallen below the

display range. Heat will still operate to help

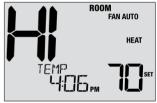
raise temperature.

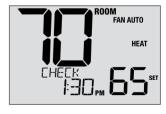
CHECK Indicates that there is a potential problem with SYSTEM

your system. Contact a local service technician.

Display will alternate between CHECK / SYSTEM.



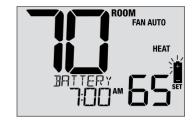




# **System Status and Maintenance Indicators** (continued)

#### CHANGE BATTERY

If batteries are installed and they become low, the battery symbol appears in the display. When the batteries become critically low, the battery symbol will flash, and CHANGE / BATTERY will alternate in the display (see "Changing the Batteries" in section 7).



#### OVERFLOW

If enabled, this indicates that your air conditioning condensate pan has filled with water and should be corrected immediately. The cooling system will be locked out until the problem is corrected.

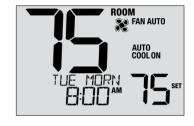
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# **5** Additional Operating Features

### **Auto Changeover Mode**

When Auto Changeover mode is enabled and selected, the system automatically switches between heating and cooling when the room temperature meets the current heating or cooling set points. To operate properly, the thermostat maintains a forced separation between the heating and cooling setpoints to prevent these systems from working against each other. If a setting is made in either heating or cooling which violates the forced separation, the opposite mode will adjust up or down accordingly to maintain the current forced separation.



Select Auto Changeover Mode by pressing the SYSTEM button until AUTO HEAT or AUTO COOL appears in the display. Whichever system was running last will remain in the display until the opposite system runs.

# Adaptive Recovery Mode (ARM™)

If enabled, Adaptive Recovery Mode attempts to achieve your desired heating or cooling temperature at the time you have set in your current program schedule, after a setback period. For example, if you set your heat down to 62° at night and have a set point of 70° scheduled for 7:00 AM, the thermostat may turn on your heating system early in order achieve a temperature of 70° by 7:00 AM.

This feature does not operate when the thermostat is in HOLD mode; if the program is temporarily overridden or if emergency heat is selected on a multistage heat pump system.

# **Circulating Fan Mode**

Circulating Fan Mode is selected by touching the FAN button until CIRC appears in the display. When in CIRC mode the fan operates as required by the heating and cooling system (just like AUTO mode). When heating or cooling is not active, fan will run as needed to ensure a 35% minimum run time.

# **Programmable Fan Mode**

Programmable Fan Mode allows the user to run the system fan in the AUTO, ON or CIRC mode during a selected program event. This selection is made during the programming process (See "Setting Your Program Schedule" in section 3).

Programmable Fan is selected by pressing the FAN button until FAN PROG appears in the display. It is not available if the thermostat was configured to be Non-Programmable, however it will still function if the thermostat is placed into HOLD mode.





### **Compressor Protection**

This thermostat includes an automatic compressor protection delay to avoid potential damage to your system from short cycling. This feature activates a short delay after turning off the system compressor.

Additionally, for multistage heat pump systems, this thermostat provides cold weather compressor protection by locking out the compressor stage(s) of heating for a period of time after a power outage greater than 60 minutes. During this lockout period, the thermostat will operate the auxiliary stage of heating.

### **Locking and Unlocking the Thermostat**

Your 3-digit Lock Code is set in the User Settings portion of this manual (section 2). Once the code is set, the thermostat can be locked or unlocked at any time by entering that code.

To lock or unlock the thermostat, press and hold the **PROG** and **HOLD** buttons together for 5 seconds. While holding these buttons, LOCK will flash in the display (Figure 1).

The screen will change displaying LOCK CODE 000 (Figure 2). Press  $\Lambda$  or V to enter the first digit of your lock code and then press the **NEXT** button to advance to the next digit. Repeat this process to enter the second and third digit of your lock code. After entering the third digit, press **NEXT** to advance to the next User Setting or **RETURN** to exit.

If you entered a valid code, the thermostat will be locked or unlocked (depending on its previous state). When locked, the word LOCKED appears in the display (Figure 3). If an invalid code is entered, WRONG CODE will briefly appear in the display.



Figure 1

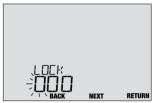


Figure 2



Figure 3

# **Outdoor Remote Sensing**

Outdoor remote sensing is achieved by installing a Braeburn® remote outdoor sensor (model 5490).

When properly connected, the current outdoor temperature can be viewed in the left side of the display. An outdoor sensor can also used in certain Heat Pump applications for heating and cooling balance points.

# **Indoor Remote Sensing**

Indoor remote sensing is achieved by installing a Braeburn remote indoor sensor (model 5390).

If a Braeburn indoor remote sensor was installed and properly configured, the thermostat will sense temperature at a remote location or an average of a remote location and the thermostat location



# **Humidification and Dehumidification** (4235 only)

This thermostat can be used to control the level of humidity when connected to an external humidifier and/or dehumidifier. The cooling system can also be used to help reduce humidity.

The current level of relative humidity (%RH) is always displayed on the left side of the display screen, even if humidity control is not enabled (Figure 1). If humidity control is enabled, you can set your humidification and/or dehumidification setpoint in the User Settings mode:

- Press and release the MENU button to enter User Settings.
- Press **NEXT** to advance to User Settings 7 and 8 (Figures 2 and 3).
- Press A or V to adjust the current setpoint.
- Press RETURN to exit the User Settings mode.

**Note:** See section 2 for more information.

If dehumidification overcooling is enabled, the air conditioning system can be used to reduce humidity during the cooling season. If the room humidity level is above the dehumidification set point, the cooling system may run until the room temperature is up to 3 degrees lower than the cooling setpoint, or until the room humidity level reaches the dehumidification set point (whichever comes first).



Figure 1



Figure 2



Figure 3

#### Humidification and Dehumidification (4235 only) cont.

If the Auto Humidity Setpoint Limit was enabled, the humidification set point may be limited based on the current outdoor temperature. This helps prevent over humidification in extremely cold weather.

When there is a call for humidification or dehumidification, the thermostat will indicate HUMIDIFY or DEHUMIDIFY in the lower left side of the display screen (Figure 4).



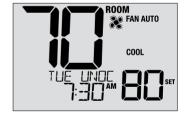
Figure 4

#### **Additional Commercial Features**

These features are only available if configured as a Commercial Thermostat

### **Pre-Occupancy Purge**

If enabled, Pre-Occupancy Purge will turn on the system fan for up to 3 hours before the start of the occupied (OCC) program event. The fan mode will not change, but the fan icon will turn on to indicate the fan is running.



#### **Condensate Overflow**

If a condensate overflow monitor is installed, the thermostat can be configured to immediately disable the cooling compressor(s) when this monitor is triggered. Once triggered, the message OVERFLOW will appear in the display. After the monitor is inactive for 1 minute, the compressor(s) will resume operation and the thermostat display will return to normal.

# **Occupancy Control**

This feature is intended for use with an occupancy sensor or mechanical spring-wound timer switch. When active, the thermostat will be forced into the occupied (OCC) portion of the program schedule and OVERRIDE will appear in the display until the switch becomes inactive.

#### Door Sensor

This feature is intended for a door switch monitor. When enabled, the thermostat will only run the occupied (OCC) portion of the program schedule while the switch is inactive (door closed). When the switch becomes active (door open), the thermostat will turn OFF and display the message DOOROPEN until the switch becomes inactive again. There is a 3-minute delay before the thermostat turns OFF. Temperature override is not permitted while the switch is active (door open).







# **6** Thermostat Maintenance

#### **Changing the Batteries**

Depending on your installation, this thermostat may be equipped with two (2) "AA" type alkaline batteries.

If batteries are installed and they become low, the battery symbol appears in the display. When the batteries become critically low, the battery symbol will flash, and CHANGE / BATTERY will alternate in the display.

#### To change your batteries:

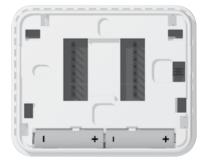
- 1. Remove thermostat body by gently pulling it from base.
- 2. Remove old batteries and replace with new batteries.
- 3. Make sure to correctly position the (+) and (-) symbols.
- 4. Gently push thermostat body back onto base.

**NOTE:** We recommend replacing the thermostat batteries annually or if the thermostat will be unattended for an extended period of time.

# **Thermostat Cleaning**

Never spray any liquid directly on the thermostat. Spray your cleaning liquid on a soft cloth and then proceed to clean the screen with the damp cloth. Only use water or household glass cleaner. Never use any abrasive cleansers to clean your thermostat.





#### For more information, visit www.braeburnonline.com

## **Limited Warranty**

When installed by a professional contractor, this product is backed by a 5 year limited warranty. Limitations apply. For limitations, terms and conditions, you may obtain a full copy of this warranty. Visit us online: www.braeburnonline.com/warranty, phone us: 866.268.5599 or write us: Braeburn Systems LLC. 2215 Cornell Avenue. Montgomery. IL 60538.



Braeburn Systems LLC 2215 Cornell Avenue • Montgomery, IL 60538 Technical Assistance: www.braeburnonline.com Call us toll-free: 866-268-5599 (U.S.) 630-844-1968 (Outside the U.S.)