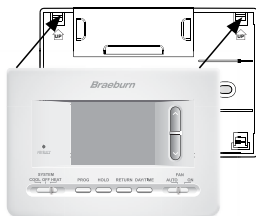*NOTE: Installer switches are located on the back of the thermostat. The reset button must be pressed after making any changes to these switches.*

5   Attach Thermostat to Sub-Base

1. Line up the thermostat body with the sub-base.
2. Carefully push the thermostat body against the sub-base until it snaps into place.
3. Insert quick reference card into slot on top of thermostat.

4   System Testing

⚠ Warning   *Read Before Testing*

• Do not short (or jumper) across terminals on the gas valve or at the heating or cooling system control board to test the thermostat installation. This could damage the thermostat and void the warranty.

• Do not select the COOL mode of operation if the outside temperature is below 50º F (10º C). This could possibly damage the controlled cooling system and may cause personal injury.

• This thermostat includes an automatic compressor protection feature to avoid potential damage to the compressor from short cycling. When testing the system, make sure to take this delay into account.

NOTE: The compressor delay can be bypassed by pressing the reset button on the front of the thermostat. All user settings will be returned to factory default.

1 Move the **SYSTEM** switch to HEAT mode.
2 Press ∧ to raise the set temperature a minimum of 3 degrees above the current room temperature. The system should start within a few seconds. With a gas heating system, the fan may not start right away.
3 Move the **SYSTEM** switch to the OFF mode. Allow the heating system to fully shut down.
4 Move the **SYSTEM** switch to the COOL mode.
5 Press ∨ to lower the set temperature a minimum of 3 degrees below the current room temperature. The system should start within a few seconds (unless compressor short cycle protection is active – See note above).
6 Move the **SYSTEM** switch to the OFF mode. Allow the cooling system to fully shut down.
7 Move the **FAN** switch to the ON mode. The system fan should start within a few seconds.
8 Move the **FAN** switch to the AUTO mode. Allow the system fan to turn off.

5 Setting User Options

Advanced User Options

User options allow you to customize some of your thermostat's features. Most users will not need to make any changes to the settings in this section.

To enter the User Options menu, hold down the RETURN button for approximately 3 seconds until the screen changes and displays the first User Option.

Press the ∧ or ∨ button to change the setting for the displayed User Option. After you have made your desired setting, press **RETURN** to advance to the next User Option.

The thermostat will return to normal mode after your last user option is made or after no keys have been pressed for 15 seconds.

Table of User Options

No.	User Options	Factory Default	Setting Options	Comments
1	Programming Mode	PRO 7	PRO 7 PRO 52 PRO NO	Select for 7 Day Programming Mode Select for 5-2 Day Programming Mode Select for Non-Programmable Mode
2	1st stage differential	0.5	0.5, 1.0, 2.0	Select a 1st stage temperature differential of .5˚, 1˚ or 2˚F (0.2˚, 0.5˚ or 1˚C)
3	2nd stage differential (2220 Only)	2.0	1.0, 2.0, 3.0, 4.0, 5.0, 6.0	Select a 2nd temperature differential of 1˚, 2˚, 3˚, 4˚, 5˚ or 6˚F (.5˚, 1˚, 1.5˚, 2˚, 2.5˚ or 3˚C)
4	Extended Hold Period*	LNG	LNG	Selects long (permanent) hold mode
			24HRS	Selects 24 hr. (temporary) hold mode
5	Filter Service Monitor	OFF	OFF	Disables filter service monitor feature
			30, 60, 90, 120, 180, 365	Selects a number of days before the thermostat will flash a Service Filter reminder in the display.
6	Adaptive Recovery Mode (ARM™)*	OF REC	OF REC	Disables adaptive (early) recovery mode
			ON REC	Enables adaptive (early) recovery mode

Detailed Explanation of User Options:
Programming Mode
(User Option 1)

Selects the programming mode (choose from 7 day, 5-2 Day (weekday/weekend) programming or non-programmable.

Temperature Differential
(User Option 2 and 3)

The differential setting is the temperature control range that your thermostat will provide. The smaller the setting, the tighter your range of temperature control and comfort will be. The 2nd stage differential is only for systems with a second stage of heating (auxiliary heat).
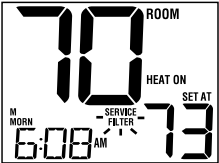
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Extended Hold Period*

(User Option 4)

The Extended Hold Period lets you select the period your thermostat will hold the temperature when the HOLD mode is activated (See "Temperature Adjustment"). When LNG 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 at that time.

Service Filter Monitor

(User Option 5)

The Service Filter Monitor is a user selectable service monitor that will display a reminder for a required air filter replacement by flashing the SERVICE FILTER segment in the display. When the selected interval has been reached, and required cleaning or replacement has been performed, touch the **RETURN** button to reset the timer and reset the service monitor. Select OFF or a set number of days before the reminder will appear.

Adaptive Recovery Mode (early recovery)*

(User Option 6)

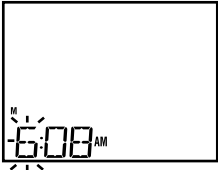Adaptive Recovery Mode is a user setting that controls when the thermostat will start to recover from setback.

ARM™ Setting	Result
OFF	Start change at programmed time
ON	Finish change at programmed time

*Not available if User Option 1 is set to non-programmable

6 Setting Your Program Schedule

Setting the Time and Day

1. In normal operating mode, press the **DAY/TIME** button. The display will switch to the day/time setting mode and the hour will be flashing.
2. Press ∧ or ∨ to adjust the hour. Press **DAY/TIME**.
3. Press ∧ or ∨ to adjust the minute. Press **DAY/TIME**.
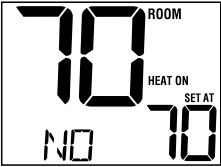4. Press ∧ or ∨ to adjust the day of the week. Press **RETURN** to exit.

Tips Before Setting Your Program Schedule

- Make sure your current time and day of the week are set correctly.
- When programming, make sure the AM and PM indicators are correct.
- Your NIGHT event cannot exceed 11:50 p.m.

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

- 7 day programming mode with 4 events per day (default)
- 5-2 (weekday/weekend) programming mode with 4 events per day.
- Non-Programmable mode

NOTE: *If this thermostat was set in the Installer Settings to be non-programmable, then you cannot set a user program. If you press the* **PROG** *or* **HOLD** *buttons, the word "NO" will appear in the display, indicating there is no program present. See section 5, "Setting User Options" to change this setting.*

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. If you wish to use these settings then no further programming is necessary:

7 Day Programming *Factory Settings*	
4 Event	**All Days**
MORN	Time: 6:00 am Heat: 70˚ F (21˚ C) Cool: 78˚ F (26˚ C)
DAY	Time: 8:00 am Heat: 62˚ F (17˚ C) Cool: 85˚ F (29˚ C)
EVE	Time: 6:00 pm Heat: 70˚ F (21˚ C) Cool: 78˚ F (26˚ C)
NIGHT	Time: 10:00 pm Heat: 62˚ F (17˚ C) Cool: 82˚ F (28˚ C)

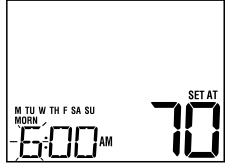| 5-2 Day Programming– Weekday/Weekend *Factory Settings*		
4 Event	**Weekday**	**Weekend**
MORN	Time: 6:00 am Heat: 70˚ F (21˚ C) Cool: 78˚ F (26˚ C)	Time: 6:00 am Heat: 70˚ F (21˚ C) Cool: 78˚ F (26˚ C)
DAY	Time: 8:00 am Heat: 62˚ F (17˚ C) Cool: 85˚ F (29˚ C)	Time: 8:00 am Heat: 62˚ F (17˚ C) Cool: 85˚ F (29˚ C)
EVE	Time: 6:00 pm Heat: 70˚ F (21˚ C) Cool: 78˚ F (26˚ C)	Time: 6:00 pm Heat: 70˚ F (21˚ C) Cool: 78˚ F (26˚ C)
NIGHT	Time: 10:00 pm Heat: 62˚ F (17˚ C) Cool: 82˚ F (28˚ C)	Time: 10:00 pm Heat: 62˚ F (17˚ C) Cool: 82˚ F (28˚ C)

Programming a 7 Day Schedule

The 7 day programming mode gives you the option to program individual days (1 day at a time) or to use SpeedSet and program the entire week (all 7 days) with a 4 event program schedule.

Setting All 7 Days at Once (SpeedSet®)

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

1. Hold the **PROG** button for 3 seconds. The display will switch to SpeedSet programming mode. All 7 days of the week will appear and the hour will be flashing.
2. Select HEAT or COOL with SYSTEM switch.
3. Press the ∧ or ∨ button to adjust the hour for the MORN (morning) event. Press **PROG.**
4. Press the ∧ or ∨ button to adjust the minute for the MORN event. Press **PROG**.
5. Press the ∧ or ∨ button to adjust the temperature for the MORN event. Press **PROG**.
6. Repeat steps 3-5 for the DAY, EVE and NIGHT events.
7. If needed, repeat steps 2-6 to program the opposite mode (HEAT or COOL).
8. Press **RETURN** to exit.
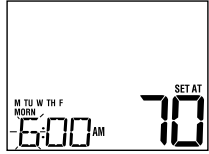
Setting Individual Days (7 Day Mode)

1. Press the **PROG** button. The display will switch to programming mode. M (Monday) will be displayed and the hour will be flashing.
2. Select HEAT or COOL with SYSTEM switch.
3. Press **DAY/TIME** to select the day you would like to program.
4. Press the ∧ or ∨ button to adjust the hour for the MORN (morning) event. Press **PROG**.
5. Press the ∧ or ∨ button to adjust the minute for the MORN event. Press **PROG.**
6. Press the ∧ or ∨ button to adjust the temperature for the MORN event. Press **PROG**.
7. Repeat steps 4-6 for your DAY, EVE and NIGHT events.
8. If needed, repeat steps 3-6 to select a different day to program.
9. If needed, repeat steps 2-8 to program the opposite mode (HEAT or COOL).
10. Press **RETURN** to exit.

Programming a 5-2 Day Schedule

The 5-2 day programming mode allows you to program Monday - Friday with one 4 event schedule and then allows you to change Saturday and Sunday with a different 4 event schedule.

1. Press the **PROG** button. The display will switch to programming mode. The days M, TU, W, TH, and F will be displayed and the hour will be flashing.

2. Select HEAT or COOL with SYSTEM switch.

3. Press the ∧ or ∨ button to adjust the hour for the MORN (morning) event. Press **PROG**.

4. Press the ∧ or ∨ button to adjust the minute for the MORN event. Press **PROG**.

5. Press the ∧ or ∨ button to adjust the temperature for the MORN event. Press **PROG**.

6. Repeat steps 3-5 for your DAY, EVE and NIGHT events.

7. Repeat steps 3-6 for your Saturday and Sunday (S, SU) program.

8. If needed, repeat steps 2-7to program the opposite mode (HEAT or COOL).

9. Press **RETURN** to exit.

7 Operating Your Thermostat

Setting the System Control Mode

The System Control has several modes of operation that can be selected by moving the SYSTEM switch to the appropriate position.

COOL Only your cooling system will operate

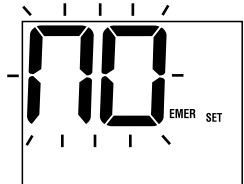**OFF** Heating and cooling systems are off

HEAT Only your heating system will operate

Additional Switch Position (Model 2220 Only):

EMER Operates a backup heat source (Emergency Heat) for heat pump systems only

NOTE: *If your model 2220 was set for a conventional system (CONV) then you will not have the EMER (emergency heat) option and "NO EMER SET" will flash in the display if EMER is selected with the system switch.*

Setting the Fan Control Mode

The Fan Control has 2 modes of operation – AUTO and ON. The mode can be selected by moving the FAN switch to the appropriate position.

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

ON The system fan stays on

Temperature Adjustment

Temporary Adjustment – Press the ∧ or ∨ button to adjust the current set point temperature.

Extended Adjustment – Press the **HOLD** button so that HOLD appears in the display screen. Press ∧ or ∨ to adjust the current set temperature (See "Extended Hold Period", page 8).
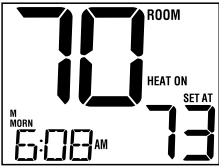
Status Indicators

Status indicators appear in the display to let you know if your system is heating, cooling or off.

HEAT ON Indicates that your heating system is running.

COOL ON Indicates that your cooling system is running.

SERVICE Indicates that a user service reminder was selected (see "Service Filter Monitor, page 8).

Additional status indicators (Model 2220 Only):

AUX Indicates that the auxiliary stage of heating is running (multi-stage systems only).

EMER Indicates that the emergency heating system is running (heat pump systems only).

Program Event Indicators

Program Event Indicators appear in the display to let you know what part of your current program is active. The 4 different program event indicators are MORN, DAY, EVE and NIGHT.

When the program event indicator is flashing, your program has been temporarily bypassed and will resume at the next scheduled event.

Note: You will not see a program event indicator while in HOLD Mode.

Resetting the Thermostat

This thermostat provides you with a reset button that will erase all of your user settings and programming.

To reset the thermostat, use a small object such as a tooth pick or paper-clip and gently press the button located inside the small hole on the front of the thermostat housing labeled "reset".

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8 Additional Operation Features
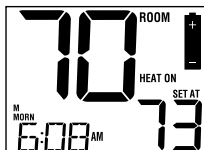
Compressor Protection

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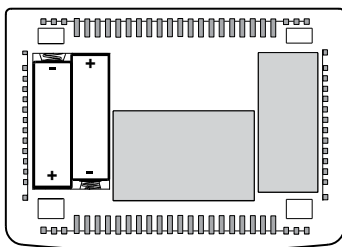
9 Thermostat Maintenance

Changing the Batteries

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

If batteries are installed and they become low, a low battery indicator will appear in the display. You should change your batteries immediately when you see the low battery signal by following these instructions.

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. Using a soft damp cloth wipe the outer body of the thermostat. Never use any abrasive cleansers to clean your thermostat.