Aprilaire®

Electronic Thermostats

MODEL 8344 HEAT/COOL NON-PROGRAMMABLE
MODEL 8346 HEAT PUMP NON-PROGRAMMABLE
MODEL 8348 HEAT/COOL MULTI-STAGE NON-PROGRAMMABLE
MODEL 8363 HEAT/COOL 5/2 DAY PROGRAMMABLE
MODEL 8365 HEAT PUMP 5/2 DAY PROGRAMMABLE
MODEL 8366 HEAT/COOL MULTI-STAGE 5/2 DAY PROGRAMMABLE

energy

Operating Instructions

READ AND SAVE THESE INSTRUCTIONS

TABLE OF CONTENTS

PRODUCT FEATURES

- Large, easy to read, backlit display.
- Simple programming with 4 events for weekdays and selectable 2 or 4 events on the weekend.
- Pre-programmed with ENERGYSTAR, recommended settings.
- Set point and room temperature are displayed simultaneously.
- Freeze protection.
- Low battery indicator.
- High temperature protection (Models 8344, 8348, 8363 and 8366).
- Temporary and permanent (vacation) hold.
- Change Water Panel indicator.
- Change air filter indicator.
- Fahrenheit/Celsius selectable.
- Adjustable differential.
- Adjustable offset.

ENERGYSTAR® PROGRAM INFORMATION (Programmable Models Only)

About half of all energy used by households goes to heating and cooling the home. If you've selected a programmable Aprilaire® Electronic Thermostat, you have made a significant step toward conserving energy usage and costs, while improving your indoor comfort.
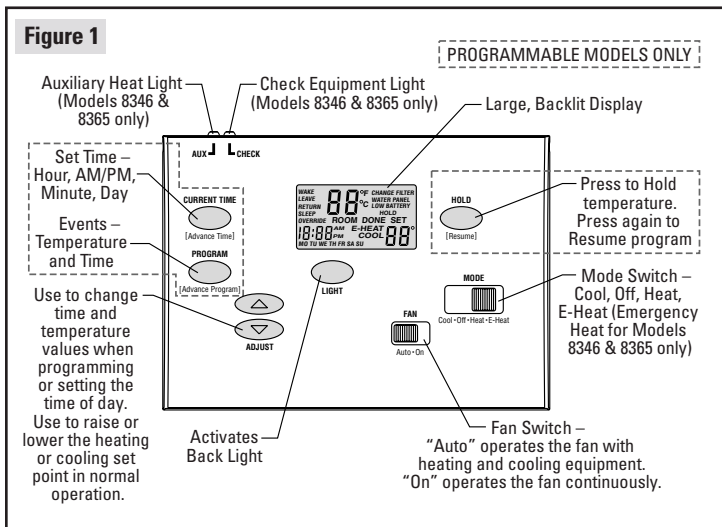
In fact, the Aprilaire Electronic Thermostat Models 8363, 8365 & 8366 have earned the "ENERGYSTAR®" designation of the U. S. Environmental Protection Agency (EPA). This means that your Aprilaire Thermostat is a highly efficient, cutting edge product that is good for the environment. It saves energy and costs less to operate than similar products that do not qualify for the ENERGYSTAR label.

ENERGYSTAR products help you differentiate between standard efficiency and high efficiency products. By using ENERGYSTAR products, you are helping to prevent air pollution while saving money on your utility bills.

According to the EPA, taking advantage of the times that a home is unoccupied or the occupants are asleep, an ENERGYSTAR thermostat can reduce heating and cooling bills by as much as 30%. The Aprilaire Thermostat has programmable capabilities that allow you full flexibility to set your heating and cooling systems to meet your comfort and energy needs. As an ENERGYSTAR partner, Aprilaire has determined that this product meets the ENERGYSTAR guidelines for energy efficiency.

GETTING FAMILIAR WITH YOUR APRILAIRE THERMOSTAT

See **Figure 1** for a description of the thermostat and controls.

Figure 1

PROGRAMMABLE MODELS ONLY

Auxiliary Heat Light (Models 8346 & 8365 only)

Check Equipment Light (Models 8346 & 8365 only)

Large, Backlit Display

Set Time – Hour, AM/PM, Minute, Day

Events – Temperature and Time

Use to change time and temperature values when programming or setting the time of day. Use to raise or lower the heating or cooling set point in normal operation.

Activates Back Light

Press to Hold temperature. Press again to Resume program

Mode Switch – Cool, Off, Heat, E-Heat (Emergency Heat for Models 8346 & 8365 only)

Fan Switch – "Auto" operates the fan with heating and cooling equipment. "On" operates the fan continuously.

See **Figure 2** for the display.

Figure 2

PROGRAMMABLE MODELS ONLY

Current Room Temperature

Fahrenheit or Celsius

Program Done

Change Filter Indicator

Change Water Panel Indicator

Change Battery Indicator

Hold Temperature

Event

Temporary Override

Current Time

Day of Week

Cool, Heat, E-Heat (Emergency Heat Models 8346 & 8365 only)

Current Temperature Setting
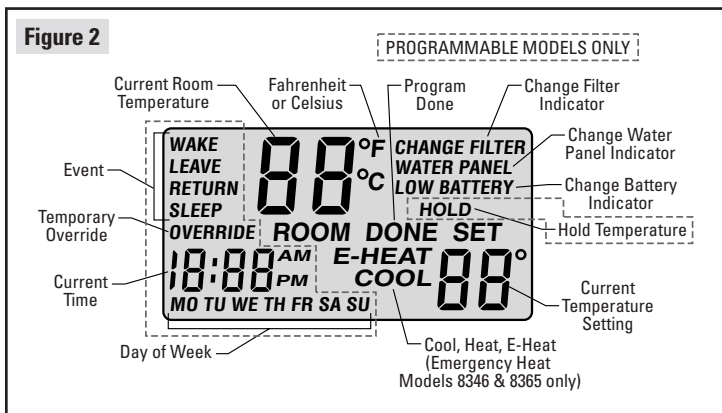
OPERATING MODES

Your thermostat has three operating modes, **COOL, OFF** and **HEAT.** Heat pump Models 8346 & 8365 have an additional **EMERGENCY HEAT** mode (**E-HEAT** on display).

COOL

In the **COOL** mode, the thermostat will control the cooling system and maintain your cooling set point.

NOTE: There is a 4-minute delay after a cooling call is completed. This is to protect the equipment's compressor from short cycling.

OFF

In the **OFF** mode, the thermostat will not operate the heating or cooling equipment. The **FAN** switch can be placed in the **ON** position to operate the fan continuously.

CAUTION: Do not set to **OFF** mode during periods when freezing temperatures may occur.

HEAT

In **HEAT** mode, the thermostat will control the heating system.

NOTE: There is a 4-minute delay after a heating call is completed on heat pump models 8346 & 8365. This is to protect the equipment's compressor from short cycling.

E-HEAT (MODELS 8346 & 8365 ONLY)

In **E-HEAT** mode, the thermostat will activate the emergency heat with any heat call. (Note-the AUX light in the upper left hand corner of the thermostat will illuminate any time there is a call for Emergency Heat or Auxiliary Heat.)

TEMPORARILY RAISE AND LOWER TEMPERATURE – MODELS 8344, 8346 & 8348

1. Press ▲▼ to ADJUST the temperature.

TEMPORARILY RAISE AND LOWER TEMPERATURE – MODELS 8363, 8365 & 8366

1. Press ▲▼ to ADJUST the temperature. The "OVERRIDE" icon will appear. The new temperature setting will hold until the next programmed event.

2. Press **HOLD** twice to resume program.

FAN OPERATION

The thermostat has two settings for fan operation, **AUTO** and **ON.**

AUTO

In the **AUTO** setting, the fan operates only when the heating or cooling equipment is on.

ON

In the **ON** setting, the fan will operate continuously.

PROGRAMMING YOUR THERMOSTAT – MODELS 8363, 8365 & 8366

SET CURRENT TIME AND DAY

1. Press **CURRENT TIME** and use the ▲▼ to ADJUST the current hour. **IMPORTANT: ADJUST HOUR TO APPROPRIATE AM/PM SETTING.**

NOTE: The flashing information is being adjusted.

2. Press **CURRENT TIME** again to advance to and ADJUST the current minutes.

3. Press **CURRENT TIME** again to advance to and ADJUST the current day.

4. Press **CURRENT TIME** again to finish. **"DONE" will appear on the display when you have completed setting the time and day.**

PROGRAM FOR HEATING AND COOLING

As part of the ENERGYSTAR program, your thermostat has been pre-programmed with the following times and temperatures, which can be modified as desired (see page 7).

ENERGYSTAR SETTINGS			
Event	**Temperature Setting**	**Time Schedule**	
		Weekday	**Weekend**
Wake	Heat = 70°F Cool = 78°F	6:00 AM	6:00 AM
Leave	Heat = 62°F Cool = 85°F	8:00 AM	8:00 AM
Return	Heat = 70°F Cool = 78°F	5:00 PM	5:00 PM
Sleep	Heat = 62°F Cool = 82°F	10:00 PM	10:00 PM

PROGRAM EVENTS

Your thermostat has 5/2 (5 weekdays and 2 weekend days) programming functionality, which allows the user to set four events for the weekdays (Monday through Friday) and two or four events for the weekend (Saturday and Sunday). The events are **WAKE, LEAVE, RETURN** and **SLEEP.** If you are normally home on the weekend, you can set up your thermostat to use only 2 events (**WAKE** and **SLEEP**) on Saturday and Sunday.

WAKE is the time and temperature setting you desire when you wake in the morning. The event should include extra time for the heating and cooling equipment to heat or cool the house to a comfort level prior to getting out of bed.

NOTE: It will take some time for your heating or cooling system to reach the desired temperature when returning from setback. Therefore, it is suggested you set your program time before the actual time you want your home to reach the desired temperature. For example, if you get up at 7:00 AM and have a 6 degree setback, set your **WAKE** event to 6:00 AM to be sure the desired temperature is reached by 7:00 AM.

LEAVE is the time and temperature setting for the daytime hours you are away from the house and wish to reduce the heating or increase the cooling temperature for energy savings.

RETURN is the time and temperature setting for the evening hours.

SLEEP is the time and temperature setting for your sleep hours.

TO CHANGE THE HEATING PROGRAM

WAKE – WEEKDAY

1. Move the **MODE** switch to the **HEAT** position.
2. Press the **PROGRAM** button and then ▲▼ to ADJUST the weekday **WAKE** time.
3. Press the **PROGRAM** button again to advance to and adjust the **WAKE** temperature.

LEAVE – WEEKDAY

4. Press the **PROGRAM** button and then ▲▼ to ADJUST the weekday **LEAVE** time.
5. Press the **PROGRAM** button again to advance to and adjust the **LEAVE** temperature.

RETURN – WEEKDAY

6. Press the **PROGRAM** button and then ▲▼ to ADJUST the weekday **RETURN** time.
7. Press the **PROGRAM** button again to advance to and adjust the **RETURN** temperature.

SLEEP – WEEKDAY

8. Press the **PROGRAM** button and then ▲▼ to ADJUST the weekday **SLEEP** time.
9. Press the **PROGRAM** button again to advance to and adjust the **SLEEP** temperature.

WEEKEND – 2 or 4 Events (See page 14)

10. Repeat the weekday steps for the weekend events.
11. Press **PROGRAM** again to exit programming. **DONE will appear on the display.**

TO CHANGE THE COOLING PROGRAM

1. Move the **MODE** switch to the **COOL** position.
2. Repeat the steps above to Program for cooling.

HOLD TEMPERATURE / VACATION – MODELS 8363, 8365 & 8366

When the thermostat is in **HOLD** the set point will be maintained until the **HOLD/Resume** button is pressed.

1. Press the **HOLD** button. The "HOLD" icon will appear on the display and the time and day will disappear.
2. Press the ▲▼ to ADJUST the temperature.
3. Pressing **HOLD** again will resume program.

BATTERY REPLACEMENT

NOTE: New batteries must be replaced within one minute after removal of old batteries. If more than one minute elapses the programmed settings will be lost and revert to the factory settings. See **Figures 3 and 4** for cover removal and battery orientation.

Replace batteries once per year or when **"LOW BATTERY"** appears on the display. This will keep the thermostat working properly. Replace with two new AA alkaline batteries.

1. Move **FAN** switch to **AUTO** setting.

2. Move **MODE** switch to **OFF** position.

3. Remove housing by gently pulling the housing from the base. See **Figure 3.**

4. Insert new batteries as shown.

5. Replace housing.

6. Return **FAN** and **MODE** switch to desired position.

7. Check to see the correct time and day appear on the display. If more than one minute has elapsed, the thermostat will require re-programming.

Figure 3 – Cover Removal

Pull Here to Open
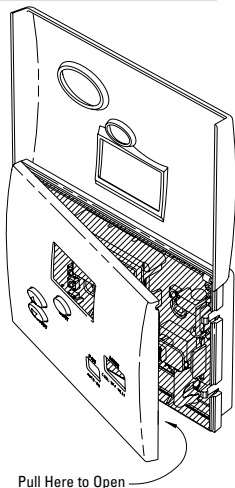
Figure 4 – Battery Orientation

AA Alkaline Battery
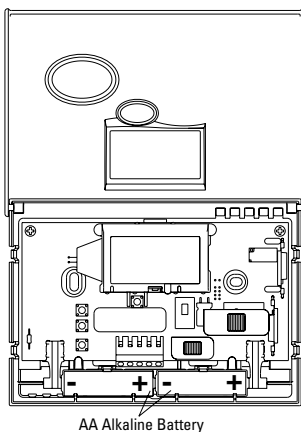
CLEANING THE THERMOSTAT

If the surface of the thermostat becomes dirty it can be cleaned with plain water or a non-abrasive household cleaner including glass cleaner. When using any cleaner, be careful not to get any into the interior of the thermostat. **Do not spray any liquid directly onto the thermostat.** Spray the cleaner on to a soft cloth and wipe the surface of the thermostat.

SET UP INSTRUCTIONS

TO CLEAR THE "CHANGE WATER PANEL" OR "CHANGE FILTER" INDICATOR

Your thermostat is equipped with indicators on the display to notify you when it is necessary to change the systems filter and humidifier Water Panel.

1. Place the MODE switch in the **OFF** mode.
2. Push and hold both of the temperature ADJUST buttons simultaneously (▲ and ▼) until the alert clears from the display.
3. Thermostat will clear the change Water Panel or change air filter indicator.

MODE
▯▯▯▯
ol • Off • Heat

Press and Hold Simultaneously for Three (3) Seconds
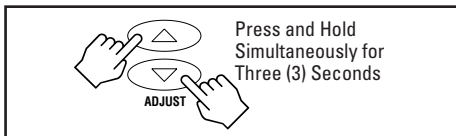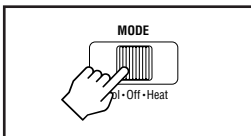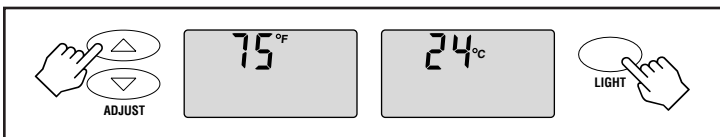
ADJUST

TO CHANGE °F TO °C

The Aprilaire Thermostat is capable of displaying temperatures in Fahrenheit or Celsius.

1. Place the MODE switch in the **OFF** mode.
2. Push and hold both of the temperature ADJUST buttons simultaneously (▲ and ▼) until "ROOM" and "OFF" are no longer displayed.

MODE
▯▯▯▯
ol • Off • Heat

Press and Hold Simultaneously for Three (3) Seconds

ADJUST
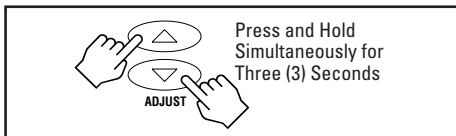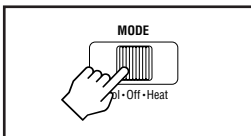
3. Display will show only the room temperature and scale. Use the ▲ or ▼ button to toggle between Fahrenheit (F) or Celsius (C).

4. Press the LIGHT button repeatedly until "DONE" is displayed.

TO CHANGE DIFFERENTIAL SETTING (d1)

The Aprilaire Thermostat is capable of adjusting the differential to change how often the heating and cooling equipment will cycle on and off.

1. Place the MODE switch in the **OFF** mode.

2. Push and hold both of the temperature ADJUST buttons simultaneously (▲ and ▼) until "ROOM" and "OFF" are no longer displayed.

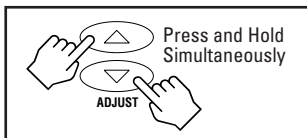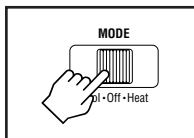3. Press the LIGHT button until "**d1**" is displayed.
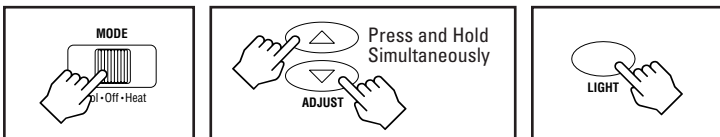
4. Thermostat will display "**d1**" and a number **1, 2 or 3.** The number indicates the degrees from setpoint before a call for heating or cooling is made.

5. Use the ▲ ▼ buttons to select **1, 2 or 3** degrees.

6. Press the LIGHT button repeatedly until "DONE" is displayed.
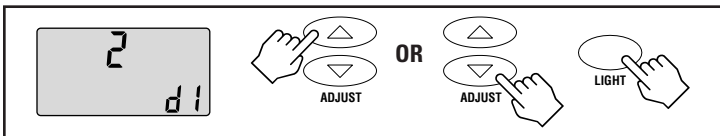
TO CHANGE SECOND STAGE DIFFERENTIAL SETTING (d2) (MODELS 8348 & 8366 ONLY)

This setting controls how far from the first stage differential setting the temperature will be allowed to fall/rise before initiating second stage.

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1. Place the MODE switch in the **OFF** mode.

2. Push and hold both of the temperature ADJUST buttons simultaneously
   (▲ and ▼) until "ROOM" and "OFF" are no longer displayed.

3. Press the LIGHT button until "**d2**" is displayed.

MODE
ol · Off · Heat

Press and Hold
Simultaneously
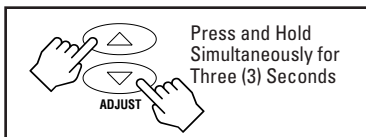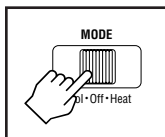
ADJUST
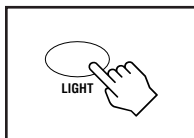
LIGHT

4. Thermostat will display "**d2**" and a number **1, 2 or 3.** The number indicates
   the degrees from the first stage differential setting (d1) before a call for
   heating or cooling is made.

5. Use the ▲ ▼ buttons to select **1, 2 or 3** degrees.

6. Press the LIGHT button repeatedly until "DONE" is displayed.

2
d2

OR

ADJUST   **ADJUST**

LIGHT
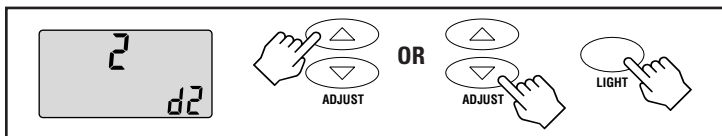
TO CHANGE TEMPERATURE OFFSET

Aprilaire thermostats are factory tested and calibrated within 1° Fahrenheit.
However, it may be desirable to adjust the reading of the thermostat to
coincide with other temperature measuring devices.

1. Place the MODE switch in the **OFF** mode.

2. Push and hold both of the temperature ADJUST buttons simultaneously
   (▲ and ▼) until "ROOM" and "OFF" are no longer displayed.

3. Press the LIGHT button until "**OF**" is displayed.

MODE
ol · Off · Heat

Press and Hold
Simultaneously for
Three (3) Seconds
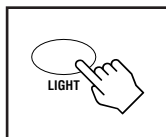
ADJUST

LIGHT

4. Press the ▲ and ▼ buttons to raise or lower the displayed
   temperature. The thermostat will indicate the number of degrees
   above or below actual temperature of adjustment.

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5. Press the LIGHT button repeatedly until "DONE" is displayed.
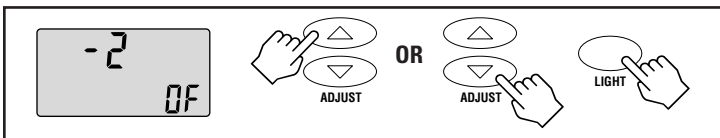
TO CHANGE THE WATER PANEL INDICATOR SETTING

The Aprilaire Thermostat is capable of indicating when the Water Panel of a humidifier should be changed.

1. Place the MODE switch in the **OFF** mode.
2. Push and hold both of the temperature ADJUST buttons simultaneously (▲ and ▼) until "ROOM" and "OFF" are no longer displayed.
3. Press the LIGHT button several times until "CHANGE WATER PANEL" is displayed on the thermostat.

Press and Hold Simultaneously for Three (3) Seconds
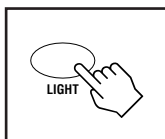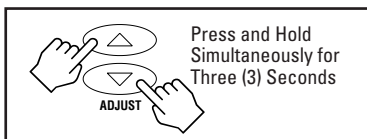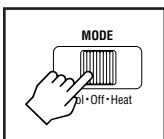
4. Use the ▲ and ▼ buttons to select between **1** to **12** or **OFF**. This is the number of months until the "CHANGE WATER PANEL" reminder will first be displayed. Subsequently, it will be displayed every 52 weeks.
5. Press the LIGHT button repeatedly until "DONE" is displayed.
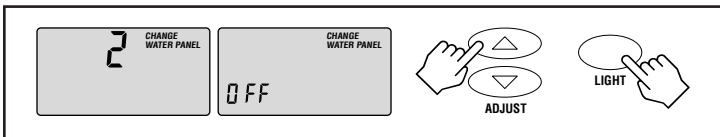

TO SET HUMIDIFIER TYPE

NOTE: This feature will only be displayed if the Water Panel Change value is **not** set to "OFF".

1. Place the MODE switch in the **OFF** mode.
2. Push and hold both of the temperature ADJUST buttons simultaneously (▲ and ▼) until "ROOM" and "OFF" are no longer displayed.

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3. Press the LIGHT button several times until "WATER PANEL" is displayed on the thermostat.

4. Use the ▲ or ▼ button to set this value to "1" if the home has an Aprilaire Model 400 whole house humidifier. The Water Panel in the Model 400 should be changed twice per season and this feature will cause the Water Panel Change Alert to appear on the display 90 days after the first alert. For example, if the Water Panel Change Alert value is set to show the first alert in October, then a second alert will appear in January. An alert will not be displayed again until the next October, and the cycle repeats.

5. Press the LIGHT button repeatedly, after the humidifier type value has been set, until "DONE" is displayed.
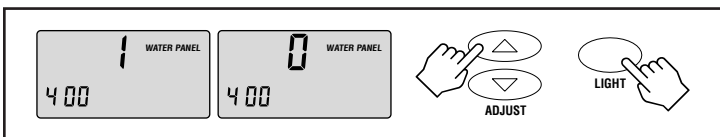

TO CHANGE THE AIR FILTER INDICATOR SETTING

The Aprilaire Thermostat is capable of indicating when the air filter should be changed.

1. Place the MODE switch in the **OFF** mode.

2. Push and hold both of the temperature ADJUST buttons simultaneously (▲ and ▼) until "ROOM" and "OFF" are no longer displayed.

3. Press the LIGHT button several times until "CHANGE FILTER" is displayed on the thermostat.

Press and Hold Simultaneously for Three (3) Seconds
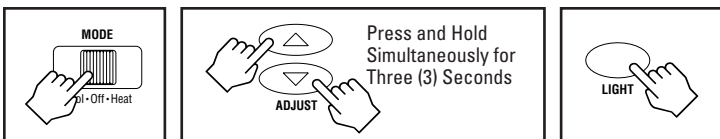
4. Use the ▲ and ▼ buttons to select between **1, 3, 6, 12** or **OFF** (See TABLE 1). This is the number of months until the "CHANGE FILTER" reminder will be displayed.

5. Press the LIGHT button repeatedly until "DONE" is displayed.
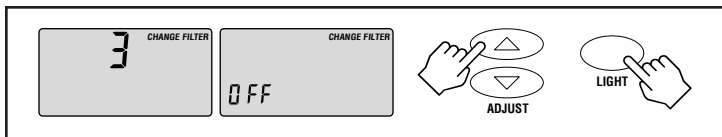
TABLE 1		
FILTER TYPE	**CHANGE FREQUENCY**	**THERMOSTAT SETTING**
Disable the feature		OFF
Disposable Panel	1 month	1
Washable Electrostatic	3 months	3
Extended Media (Aprilaire)	6-12 months	6 or 12

TO SET NUMBER OF WEEKEND EVENTS (MODELS 8363, 8365 AND 8366 ONLY)

Use this feature to set the number of events for the weekend program. The default value is 4 events (The ENERGYSTAR® setting), which will result in the "LEAVE" and "RETURN" events to be used during programmed operation. If your schedule is such that the home or building is generally occupied during the weekends, switch to 2 events on the weekend. This will cause the "LEAVE" and "RETURN" events to be ignored during programmed operation.

1. Place the MODE switch in the **OFF** mode.
2. Push and hold both of the temperature ADJUST buttons simultaneously (▲ and ▼) until "ROOM" and "OFF" are no longer displayed.
3. Press the LIGHT button several times until "WAKE, LEAVE, RETURN, SLEEP" is displayed on the thermostat.
4. Press the ▲ or ▼ buttons to toggle between the two selections.
5. Press the LIGHT button when done. "DONE" will appear on the display and the thermostat will reset.
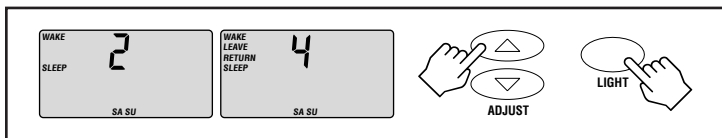
LIMITED WARRANTY

Your Research Products Corporation Aprilaire® Thermostat unit is expressly warranted for two (2) years from date of installation to be free from defects in materials and workmanship.

Research Products Corporation's exclusive obligation under this warranty shall be to supply, without charge, a replacement for any thermostat which is found to be defective within a two (2) year period and which is returned, together with the date of installation, no later than thirty (30) days after said two (2) year period by you to either your original supplier or to Research Products Corporation, Madison, Wisconsin 53701.

THIS WARRANTY SHALL NOT OBLIGATE RESEARCH PRODUCTS CORPORATION FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY YOUR INSTALLER AS CONTRASTED TO DEFECTS IN THE THERMOSTAT ITSELF.

IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID TWO YEAR PERIOD. RESEARCH PRODUCTS CORPORATION'S LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFORESAID IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECT(S) RESULT FROM FAILURE TO HAVE THIS THERMOSTAT INSTALLED BY A QUALIFIED HEATING AND AIR CONDITIONING CONTRACTOR. IF THE LIMITED WARRANTY IS VOID DUE TO FAILURE TO USE A QUALIFIED CONTRACTOR, ALL DISCLAIMERS OF IMPLIED WARRANTIES SHALL BE EFFECTIVE UPON INSTALLATION.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitations may not apply to you.

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

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