

Aprilaire®

Model 8810 Thermostat with Wi-Fi and Event-Based™ Air Cleaning



Owner's Manual

Includes
Operating Instructions and
Warranty Information

READ AND SAVE THESE INSTRUCTIONS

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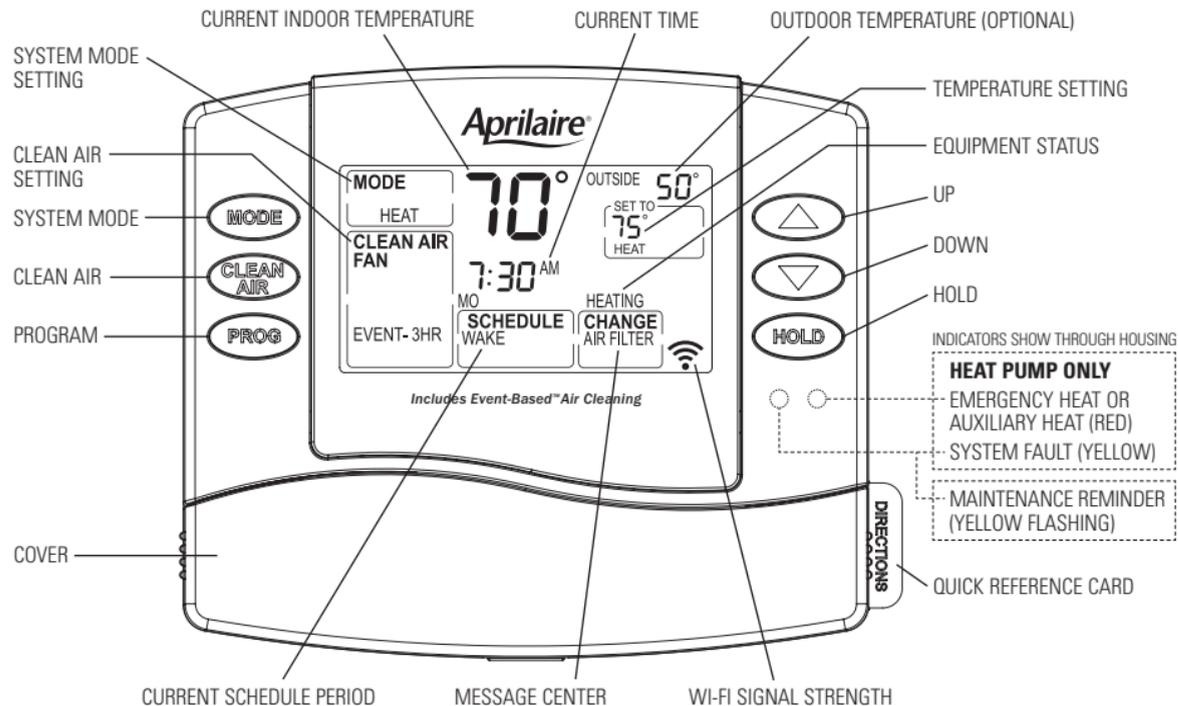
ABOUT YOUR NEW THERMOSTAT

THERMOSTAT FEATURES

- Remote access and control over Wi-Fi.
- Event-Based™ Air Cleaning.
- Large, clear, backlit display is easy to read – even in the dark.
- Displays room temperature, temperature setting, and optional outdoor temperature.
- Built in compressor protection.
- Air filter and humidifier service indicators.
- Auto backlight (activated with first button press).
- 7 day programmability.
- Easy to use temperature control can override program schedule at any time.
- Progressive recovery.

ABOUT YOUR NEW THERMOSTAT

CONTROLS & DISPLAY OVERVIEW



WI-FI SETUP

To connect the 8810 thermostat to a Wi-Fi network follow the steps below.

Note: You will need a computer or mobile device with Wi-Fi and a web browser.

STEP 1

Verify the thermostat is in Wi-Fi Connection Mode.

The thermostat by default will be in Wi-Fi Connection Mode. To confirm that the thermostat is in Wi-Fi Connection Mode, verify that the radio bars on the thermostat are strobing as shown below.



Note: If the thermostat is not in Wi-Fi Connection Mode, refer to Clearing Router Settings on page 15.

STEP 2

Connect to the thermostat using a computer or mobile device.

On your computer or mobile device, scan for available networks. The thermostat should appear as APRILAIRE8810 followed by a unique identifier, corresponding to the last 6 digits of the MAC address. Connect to the thermostat you want to configure.

If you are installing multiple thermostats, you can determine the MAC address of the specific thermostat you are trying to configure by removing the cover on the front of the thermostat to access the MAC address label.

(Continued on the following page.)

WI-FI SETUP

STEP 3

Configure the thermostat to connect to the Wi-Fi network.

Open a web browser on your computer or mobile device. In the browser enter:

<http://192.168.1.99/index.html>

In the web browser interface select the network you want to connect the thermostat to, and enter the network's security credentials.

STEP 4

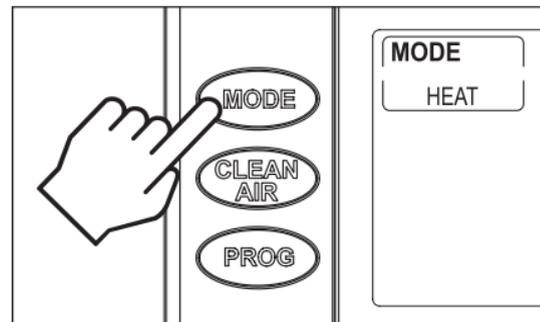
Verify the thermostat is connected to the Wi-Fi network.

Once all the required information is entered in the web browser interface, the thermostat will connect to the Wi-Fi network you selected. After the thermostat is connected to the Wi-Fi network, the thermostat will display the radio bars based on the Wi-Fi signal strength. If the radio bars are not displaying the signal strength, refer to Troubleshooting Wi-Fi Connection on pages 15-16.

Note: If you are not using the thermostat with a home automation system, but are instead using an Aprilaire account to communicate with the thermostat, refer to **Wi-Fi Thermostat App User Guide** and then **Start Up** on my.aprilaire.com for instructions on connecting to Wi-Fi and registering to an Aprilaire account. For additional instructions on using the Aprilaire web and mobile Apps refer to **Wi-Fi Thermostat App User Guide** on my.aprilaire.com.

OPERATION & PROGRAMMING

SELECT SYSTEM MODE (OFF/HEAT/EM-HEAT/COOL/AUTO)



Press **MODE** to select:

AUTO: Thermostat automatically selects heating or cooling depending on the indoor temperature.

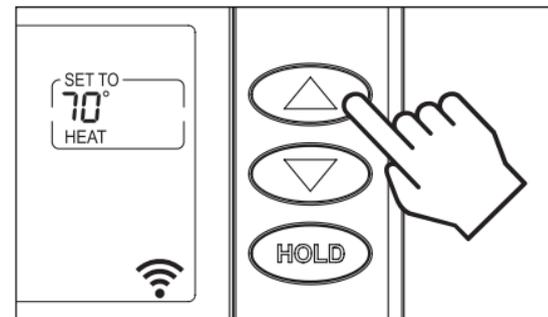
OFF: Heating and cooling systems are off.

HEAT: Thermostat controls only the heating system.

COOL: Thermostat controls only the cooling system.

EM-HEAT: Thermostat controls emergency/auxiliary heat. Heat pump will not operate. (Only for heat pumps with auxiliary heat.)

CHANGE TEMPERATURE SETTING

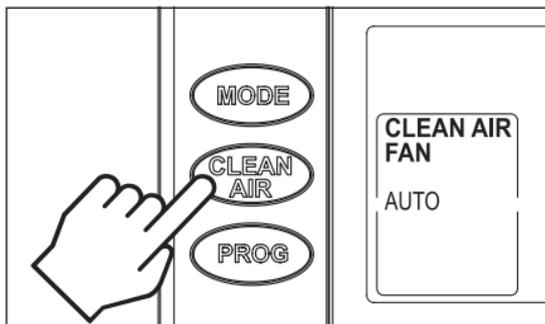


Press  or  to adjust the current setting.

In AUTO use **MODE** to switch between the HEAT and COOL setting.

OPERATION & PROGRAMMING

SELECT EVENT-BASED™ AIR CLEANING SETTING



Press to select:

ON-24/7: This option will provide the maximum amount of air cleaning available. The air cleaner will be active for 24 hours a day seven days a week.

AUTO: Air cleaning will not occur for the sole purpose of air cleaning, but will occur during fan operation for heating and cooling.

CIRC-30/HR: The air cleaner will run a minimum of 30 minutes every hour. The air cleaner will monitor the amount of time your heating and cooling system runs; if 30 minutes is not reached the air cleaner will automatically turn on. This will maximize the amount of air cleaning while minimizing energy consumption.

EVENT-3HR: When selected, the air cleaner will run continuously and then return to the most recent mode of AUTO, CIRC-30/HR, or ON-24/7. Use this option when the air needs cleaning; an example would be while vacuuming.

ALLERGY-24HR: When seasonal allergies spike and outside air quality is at its worst, choose this option. Your air cleaner will run continuously for 24 hours and then return to the most recent mode of AUTO, CIRC-30/HR, or ON-24/7.

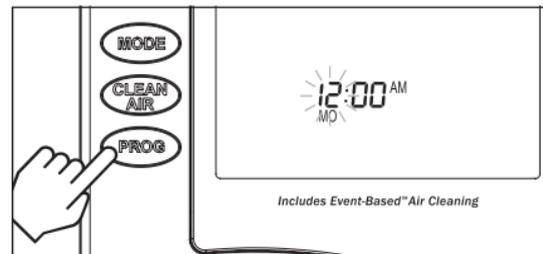
RESET SERVICE REMINDER MESSAGES

Press and hold and together for three seconds to reset a service reminder message.

OPERATION & PROGRAMMING

SET TIME AND DAY

1. Press to enter time setting mode. The hour is flashing.



2. Press or to adjust the hour.
3. Press , the minutes flash. Press or to adjust the minutes.
4. Press , the day flashes. Press or to adjust day.
5. Press to end. "DONE" will display.

The thermostat will return to normal mode if no key is pressed within 3 seconds.

Note: If configured to do so, the home automation system can send periodic time updates to the thermostat. If the thermostat is configured to be used with an Aprilaire account the thermostat's time and date will be updated periodically, and will update automatically for daylight savings.

UNDERSTANDING PROGRAM SCHEDULES

The daily schedule is split into four sections:

WAKE: 6am-8am – Temperature you would prefer to wake up to, until you leave for the day.

LEAVE: 8am-5pm – Temperature when you are away from the house during the day.

RETURN: 5pm-10pm – Temperature you would prefer to return to, until bedtime.

SLEEP: 10pm-6am – Temperature you would prefer during the night.

The times shown are the defaults. The start time and temperature of each section can be changed to fit your schedule (see page 11).

OPERATION & PROGRAMMING

UNDERSTANDING PROGRAM SCHEDULES (CONTINUED)

Event	Event designator	Start time	Setpoint	
			Heat	Cool
1	WAKE	6:00AM	70°F (21°C)	78°F (25.5°C)
2	LEAVE	8:00AM	62°F (16.5°C)	85°F (29.5°C)
3	RETURN	5:00PM	70°F (21°C)	78°F (25.5°C)
4	SLEEP	10:00PM	62°F (16.5°C)	82°F (27.5°C)

PROGRESSIVE RECOVERY

The Progressive Recovery feature allows the thermostat to activate the heating and cooling equipment prior to an event in order to reach the desired temperature at the start of the next scheduled event.

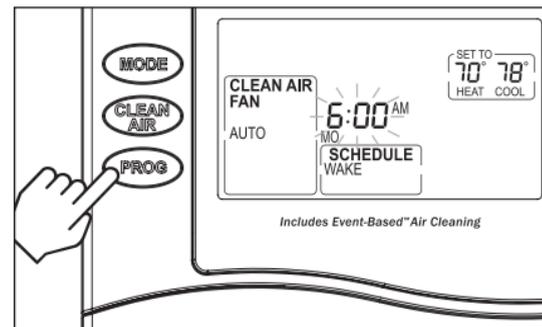
Example:

Set the Wake time to 6 am, and the heat setpoint to 70°F. The heat will come on before 6 am, so the temperature is 70°F by the time you wake at 6 am.

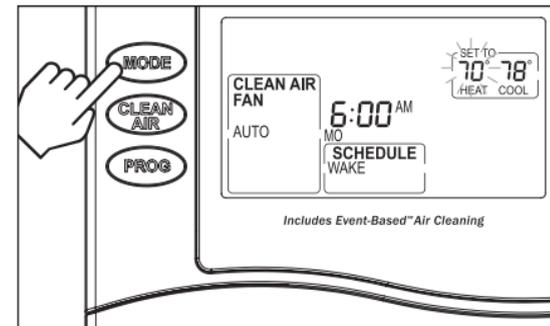
OPERATION & PROGRAMMING

CHANGING PROGRAM SCHEDULES

1. Press **PROG** twice to enter program setting mode. Start time of the WAKE event is flashing.



2. Press **▲** or **▼** to adjust the start time
3. Press **MODE**, HEAT setting flashes. Press **▲** or **▼** to adjust the heat setting.



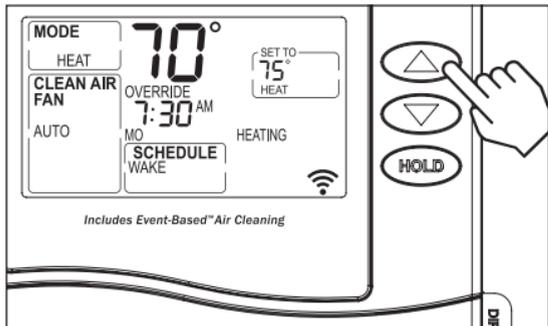
4. Press **MODE**, COOL setting flashes. Press **▲** or **▼** to adjust the cool setting.
5. Press **MODE**, CLEAN AIR/FAN setting flashes. Press **▲** or **▼** to adjust the clean air/fan setting.
6. Press **MODE** to advance the next event, and repeat steps 2-6 for LEAVE, RETURN and SLEEP events.
7. Press **MODE** to advance to the next day. Repeat steps 2-6 for each day of the week.
8. Press **MODE** to end. "DONE" will display.

The thermostat will return to normal mode if no button is pressed in 3 seconds.

OPERATION & PROGRAMMING

PROGRAM SCHEDULE OVERRIDES (TEMPORARY, PERMANENT, AWAY, HEAT BLAST)

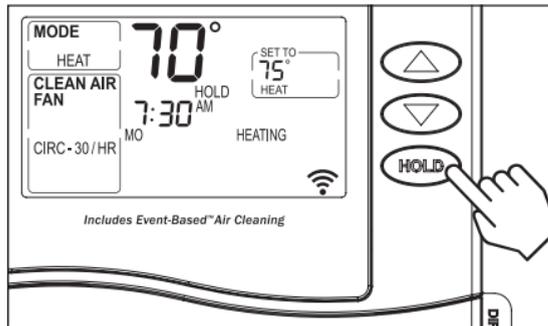
Temporary program override



Press  or  to immediately adjust the temperature. This will temporarily override the temperature setting for the current programmed time period. The new temperature setting will be maintained until the next time period of the programmed schedule.

To cancel the temporary override, press  twice.

Permanent hold



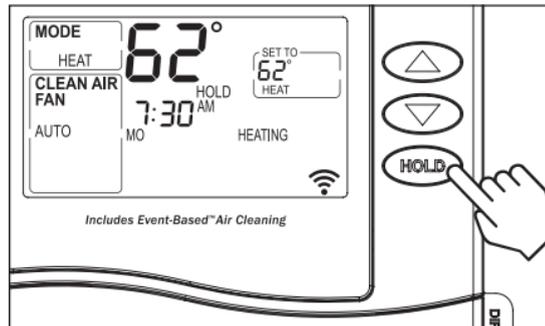
Press  to permanently hold the temperature at its current setting. This will override the temperature settings for all time periods of the programmed schedule. With the thermostat in permanent hold, the thermostat temperature can be manually adjusted and will stay at that setting until the hold is cancelled.

To cancel the permanent hold press .

OPERATION & PROGRAMMING

PROGRAM SCHEDULE OVERRIDES (TEMPORARY, PERMANENT, AWAY, HEAT BLAST)

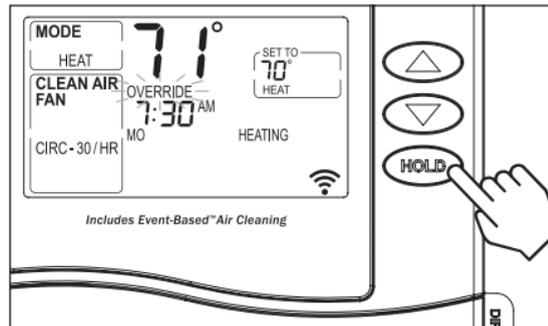
Away



The Away feature, if enabled, allows the thermostat to be set to a predefined setpoint(s) by simply pressing the Away button in your home automation interface (if supported). By default the cooling setpoint is 85°F (29.5°C), the default heating setpoint is 62°F (16.5°C) and the default clean air/fan mode is Auto. The default settings can be modified in the home automation interface (if supported).

To cancel Away at the thermostat press .

Heat Blast®



The Heat Blast® feature will raise the current room temperature by 3°F to 5°F based on the Installer Setup, and then resume normal operation. To activate a Heat Blast, press the Heat Blast button in the home automation interface (if supported).

Note: Heat Blast can only be activated in the home automation interface (if supported), and is only available if it is enabled in the Installer Setup and the thermostat is in Heat or Emergency Heat mode.

To cancel Heat Blast at the thermostat press , or the  or  buttons.

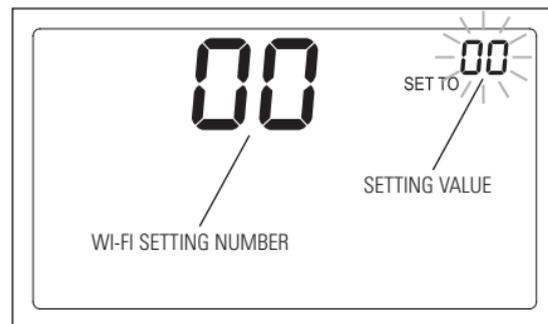
WI-FI MAINTENANCE AND TROUBLESHOOTING

ACCESSING WI-FI SETTINGS MENU

The following instructions explain how to enter the Wi-Fi Settings menu and change settings. The table on page 15 describes each setting. Default settings are shown in bold.

How to enter the Wi-Fi settings menu to change settings.

Press and hold **CLEAN AIR** and  for three seconds. The screen will display the first setting.



Press  or  to change the setting.

Press **MODE** to change to the next option.

Press **MODE** after the last setting. "DONE" will be displayed.

The thermostat will return to Normal mode if no button is pressed in 60 seconds.

WI-FI MAINTENANCE AND TROUBLESHOOTING

ACCESSING WI-FI SETTINGS MENU

Wi-Fi setting	Description	Factory default setting (bold) and setting range
47. Wi-Fi Disconnect and Clear Settings	Disconnects the Thermostat from the router and clears the Wi-Fi settings. Use this to set the thermostat back to provisioning mode so it can be connected to a new Wi-Fi router.	0: No 1: Yes
48. Turn Wi-Fi Radio On/Off	Use to turn the Wi-Fi radio on or off. Wi-Fi settings will be maintained if the radio is set to Off.	0: Off 1: On
49. Unregister the Thermostat	Unregisters the thermostat from an Aprilaire account. Use this when the thermostat needs to be registered to a new Aprilaire account. For instance, if you have purchased a home with the thermostat already installed, this setting would allow you to clear the previous registration so that you can register the thermostat to your account. Note: This option is only available if the thermostat is configured to be used with an Aprilaire account.	0: No 1: Yes

CLEARING ROUTER SETTINGS

If you purchase a new Wi-Fi router or change the security settings on your existing router the router settings in the thermostat need to be cleared so the new Wi-Fi router settings can be entered. To do this, enter the Wi-Fi settings menu as described in the Accessing Wi-Fi Settings Menu section on page 14. Change the setting for Wi-Fi Disconnect and Clear Settings to Yes then press **MODE** three times, "DONE" will be displayed. This will remove all of the previous Wi-Fi settings. Refer to Wi-Fi Setup on pages 5-6 for instructions on connecting the thermostat to your Wi-Fi Network.

WI-FI MAINTENANCE AND TROUBLESHOOTING

DISABLING THE WI-FI RADIO

To turn off the Wi-Fi radio on the thermostat, enter the Wi-Fi settings menu as described in the Accessing Wi-Fi Settings Menu section on page 14. Change the setting for Turn Wi-Fi Radio On/Off to Off and then press **MODE**, "DONE" will be displayed. This will turn off the Wi-Fi radio, but maintain all network settings. To turn the Wi-Fi radio back on simply enter the Wi-Fi setting menu and change the setting for Turn Wi-Fi Radio On/Off to On and then press **MODE**, "DONE" will be displayed.

REMOVING THE THERMOSTAT FROM A my.aprilaire.com ACCOUNT

The thermostat can only be registered to one **my.aprilaire.com** account. If you need to remove the thermostat from an existing account so it can be registered to a new account, it can be done at the thermostat. This may need to be done for instance if you have purchased a home with the thermostat and need to remove the thermostat from the previous owner's account and register it to your account. To do this, enter the Wi-Fi settings menu as described in the Accessing Wi-Fi Settings Menu section on page 14. Change the setting for Unregister the Thermostat to Yes and then press **MODE** twice, "DONE" will be displayed. This will remove the thermostat from any account that it is currently registered to. Refer to **Wi-Fi Thermostat App User Guide** and then **Start Up** on **my.aprilaire.com** for instructions on registering the thermostat to a new my.aprilaire.com account.

TROUBLESHOOTING WI-FI CONNECTION

The Wi-Fi connection status is communicated through the use of the radio strength indicator. The following table describes the various statuses and the corresponding radio bar display.

WI-FI MAINTENANCE AND TROUBLESHOOTING

Wi-Fi connection status	Radio status indicator
Normal Operation.	Wi-Fi signal strength is indicated by the appropriate number of bars. 
The thermostat Wi-Fi settings have not been entered. Refer to Wi-Fi Setup on pages 5-6 for instructions for entering the Wi-Fi settings.	The frame is displayed and the bars cycle from 0 to 4. 
The thermostat cannot connect to the Wi-Fi router. Verify that the router is functioning properly.	The frame and all bars flash on and off. 
Indicates the thermostat was not configured properly when connecting to the router. Confirm there is no IP conflict and repeat Wi-Fi setup. Note: If the thermostat is configured to work with an Aprilaire account this indicates that the thermostat cannot connect to the Aprilaire Cloud. Confirm that the internet connection is working.	The display will alternate between displaying the frame and all bars. 
There is an internal error with the thermostat Wi-Fi radio. The thermostat will continue to control the HVAC, but will not be able to connect to Wi-Fi. Contact an HVAC professional for repair.	The frame will flash on and off. 
Wi-Fi radio turned off. Refer to the Accessing Wi-Fi Settings Menu section on page 14 for information about turning the Wi-Fi radio on.	Not displayed.

ELECTRONIC THERMOSTAT FIVE YEAR LIMITED WARRANTY

Your Research Products Corporation Aprilaire® Thermostat unit is expressly warranted for five (5) years from date of installation to be free from defects in materials or 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 such five (5) year period and which is returned, together with the date of installation, no later than thirty (30) days after said five (5) 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 OF FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID FIVE 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 exclusions or limitations 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.

WARRANTY REGISTRATION

Visit us on-line at www.aprilaire.com to register your Aprilaire product. If you do not have on-line access, please mail a postcard with your name, address, phone number, product purchased and date of purchase to: Research Products Corporation, P.O. BOX 1467, Madison, WI 53701.

Your Warranty Registration information will not be sold or shared outside of this company.

FCC DECLARATION

Compliance Statement (Part 15.19)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning (Part 15.21)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Interference Statement (Part 15.105 (b))

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC RF Radiation Exposure statement

To comply with FCC/IC RF exposure limits for general population / uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

IC STATEMENT

RSS-GEN, Sec. 7.1.2

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

RSS-GEN, Sec. 7.1.3

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The logo for Aprilaire, featuring the word "Aprilaire" in a stylized, italicized font with a registered trademark symbol. A wavy underline is positioned beneath the letters "i", "l", and "a".

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www.aprilaire.com

61001122 7.15
B2206490A

U.S. Patent Numbers 8,146,376, 8,596,078 and other patents pending.
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