AprilAire

Thermostats

Model S84N 1H1C
Conventional 1 Heat / 1 Cool Thermostat

Model S84N SU
Single Stage Universal Thermostat

READ AND SAVE THESE INSTRUCTIONS

TABLE OF CONTENTS

ABOUT YOUR NEW THERMOSTAT

THERMOSTAT FEATURES

- Heat Blast® raises the room temperature 3°F to 5°F.
- Easy to read, color display.
- 7 day programmability.
- Displays room temperature and temperature setting.
- Air filter and HVAC service reminders.
- Programmable fan control with fan circulation mode.
- Easy to use temperature control can override program schedule at any time.
- Progressive recovery ensures proper temperature at the start of a program event.

QUICK REFERENCE TO CONTROLS & DISPLAY

HOME SCREEN

EQUIPMENT STATUS

ROOM TEMPERATURE

ROOM TEMPERATURE SETTING

EVENT STATUS

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HEATING

70

🔥 72

⏸ HOLD 5:00 PM

UP ARROW

BACK

SELECT (OPENS MENU FROM HOME SCREEN)

DOWN ARROW

BACK   SELECT
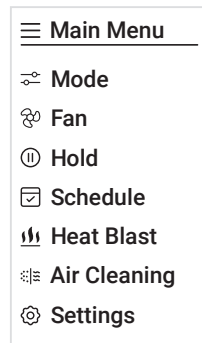
MAIN MENU

☰ **Main Menu**

⚙ **Mode**

🌀 **Fan**

⏸ **Hold**

☑ **Schedule**

🔥 **Heat Blast**

🌫 **Air Cleaning**

⚙ **Settings**
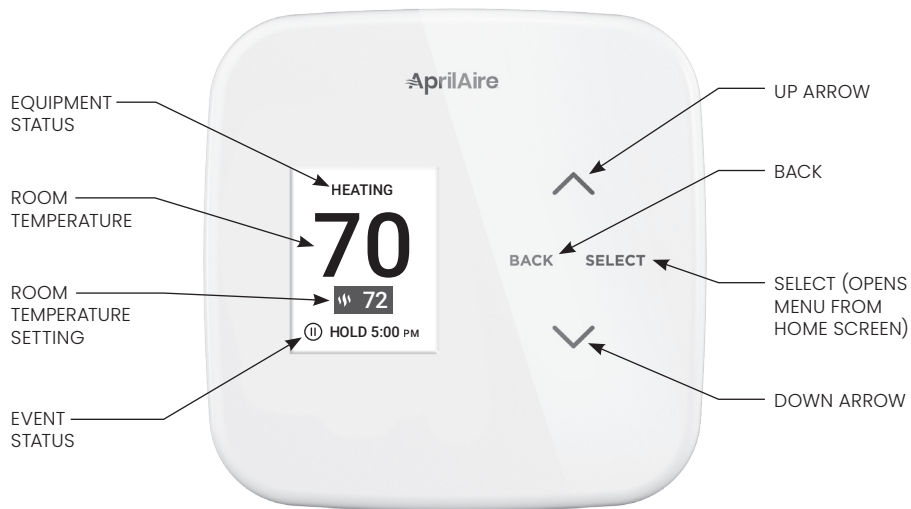
Item availability based on installed options.

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☰ Main Menu

⚙ Mode ➤

🌀 Fan

⏸ Hold

☑ Schedule

🔥 Heat Blast

⌄

BACK   SELECT
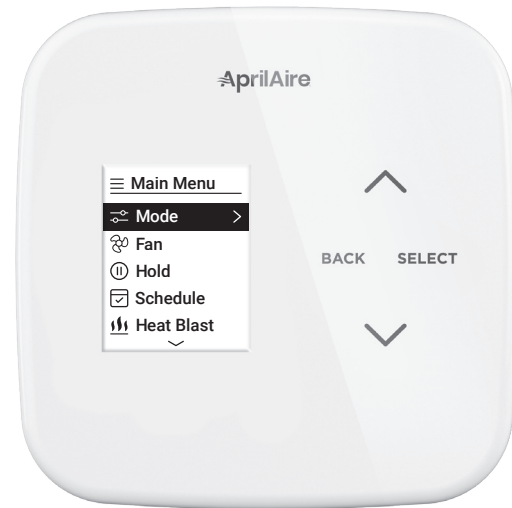
SCREEN SAVER

Starts 45 seconds after inactivity, press any button to wake the screen. **NOTE:** Screen saver is not available on thermostat installations that are not connected to C wire and run on battery power only.

CURRENT TIME

ROOM TEMPERATURE

OUTDOOR TEMPERATURE (S84N SU ONLY IF INSTALLED)

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11:11 AM

70

84°
Outside

BACK   SELECT
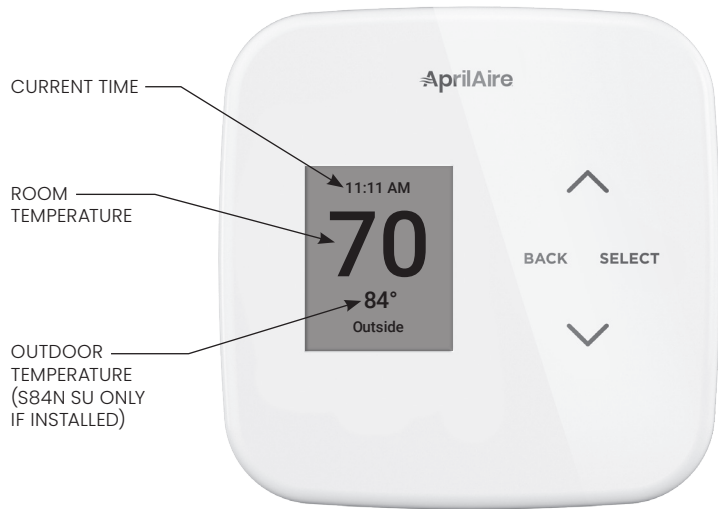
POWER OPTIONS

The thermostat is dual power. It can either use 24 VAC, 2 "AA" batteries or both (to provide backup power for the clock). Batteries are optional if the thermostat was connected to AC power when installed. For model S84N SU, 24 VAC must be connected in order for the system fault to operate. The thermostat has a memory backup that saves the thermostat's settings in case of a power interruption.

OPERATION

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

1. Press **SELECT** to enter **Main Menu**.

2. Use ∧ or ∨ to select the **Mode** option.

3. Press **SELECT** to enter **Mode** menu:

4. Use ∧ or ∨ to select the desired mode.

   Heat: Thermostat controls only the heating system.

   Cool: Thermostat controls only the cooling system.

   Auto: (if enabled in installer setup) Thermostat automatically selects heating or cooling depending on the indoor temperature.

   Emergency Heat: (only for heat pumps with auxiliary heat) Thermostat controls auxiliary heat. Heat pump will not operate in **Em Heat** mode.

   Off: Heating and cooling systems are off.

5. Press **SELECT** to save the mode and return to the home screen, or **BACK** to exit without saving.
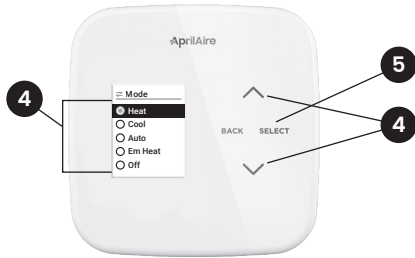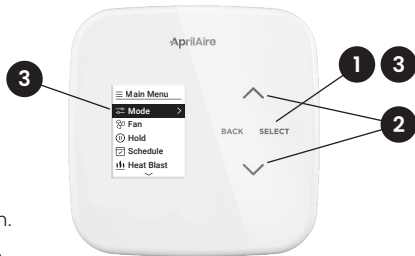
CHANGE TEMPERATURE SETTING

1. From the **Home** screen press ∧ or ∨ to adjust the current temperature setting.

2. The temperature setting will enlarge during adjustment.

3. The temperature setting will take effect 3 seconds after the last adjustment or press **SELECT** to save and return to the home screen.

See **HOW TO MODIFY PROGRAM SCHEDULES** on pages 16-17 for more information.
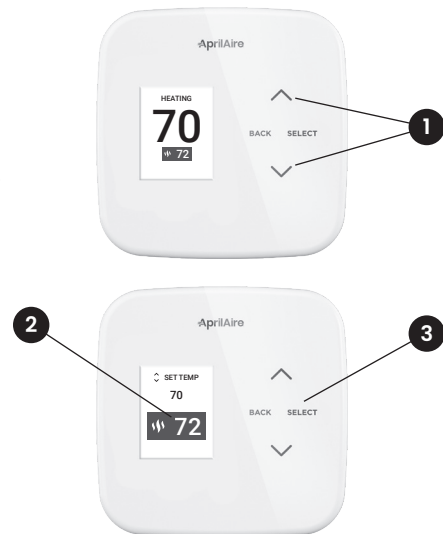
SELECT FAN SETTING (AUTO / ON / CIRCULATE)

When the fan mode is changed during a program event, it remains in that mode until the next event starts. The fan must be programmed to **Fan On** in the schedule to run continuously through all events.

1. Press **SELECT** to enter **Main Menu**.

2. Use ∧ or ∨ to select the **Fan** option.

3. Press **SELECT** to enter **Fan** menu:

4. Use ∧ or ∨ to select the desired fan mode.

   On: Fan runs continuously. Use this mode for maximum air circulation/filtering.

   Auto: Fan runs only when the heating or cooling system is on.

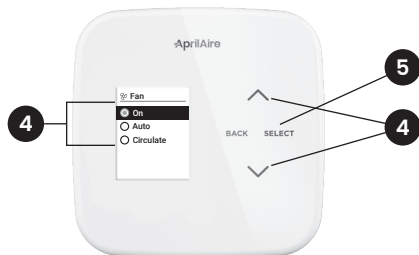   **Circulate:** Same as **Auto**, but ensures the fan is on for at least 30 minutes per hour. Use this mode for a balance of energy savings and air circulation/cleaning.

5. Press **SELECT** to save the fan mode and return to the home screen, or **BACK** to exit without saving.
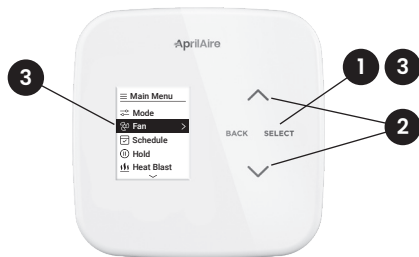
MAINTENANCE REMINDERS

Maintenance reminders are set up by the installer to indicate when the equipment is due for service. If a maintenance reminder is displayed, call your HVAC dealer for service. They can be reset by selecting the **Reset** option on the reminder message or in the **Reset Service Reminders** option found in the **Settings** menu.

INDOOR AIR QUALITY FUNCTIONS

EVENT-BASED™ AIR CLEANING (IF INSTALLED)

1. Select **Air Cleaning** from the **Main Menu**. Air Cleaning has two temporary events and three persistent modes that can be set. Air cleaning will activate the fan for the purpose of air cleaning.

2. **Events** (temporary)

   3 Hrs: When selected, the air cleaner will run for 3 hours continuously and then return to the most recent mode of **Auto**, **Continuous**, or **Off**. This option only cleans the air when needed; an example would be after vacuuming.

   24 Hrs: When seasonal allergies spike and outside air quality is at its worst, choose this option. Your air cleaner will run continuously for 24 hours, then return to the most recent mode of **Auto**, **Continuous**, or **Off**.

NOTE: The thermostat will manage fan and air cleaning selections when the selections overlap.
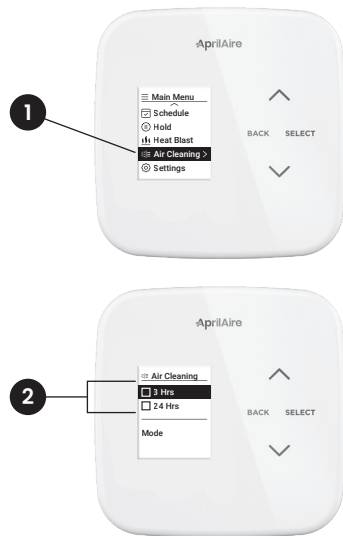
3. **Modes** (persistent)

   Auto: 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.

   Continuous: 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.

   Off: The air cleaner will not run the fan for the sole purpose of air cleaning.

NOTE: If air cleaning is installed, air cleaning will still occur during normal fan operation during heating, cooling or other indoor air quality events.
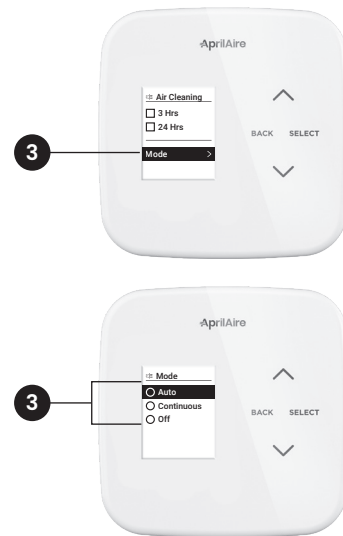
PROGRAM SCHEDULE AND HOLDS

SET TIME AND DATE

1. Select **Settings** from the **Main Menu**.
2. From the **Settings** menu, select **Clock** the to set the time, or **Date** to set the date.

UNDERSTANDING PROGRAM SCHEDULES

The daily schedule is split into four sections:

Wake: Temperature you would prefer to wake up to.

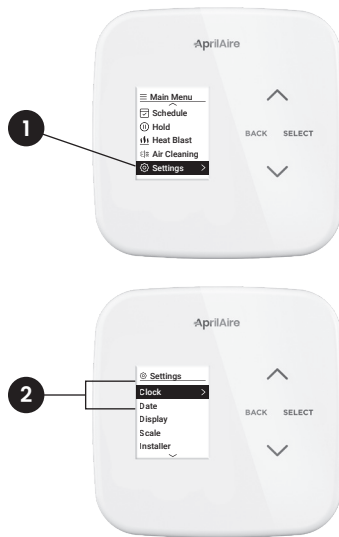**Leave:** Temperature when you are away from the house.

Return: Temperature you would prefer to return home to.

Sleep: Temperature you would prefer while sleeping.

The times and temperatures shown in **TABLE 1** are the defaults. The start time and temperature of each section can be changed to fit your schedule. We recommend these settings, since they can reduce your heating/cooling expenses. The fan program is pre-set to **Auto** for all events.

TABLE 1 – DEFAULT SCHEDULE

| Event Designator | Start Time | Set Temperature | | Fan |
		Heat	Cool	
Wake	6:00 AM	70°F (21°C)	78°F (25.5°C)	Auto
Leave	8:00 AM	62°F (16.5°C)	85°F (29.5°C)	Auto
Return	5:00 PM	70°F (21°C)	78°F (25.5°C)	Auto
Sleep	10:00 PM	62°F (16.5°C)	82°F (27.5°C)	Auto

PROGRESSIVE RECOVERY

The Progressive Recovery feature allows Pre-Heating or Pre-Cooling PRIOR to a scheduled event in order to reach the desired temperature at the start of that scheduled event. **Example:** According to **TABLE 1**, the **Wake** time is 6:00 am, the **Wake** heat set point is 70°F and the **Sleep** set point is 62°F. The heat will turn on prior to 6:00 am so that the temperature reaches 70°F by the time the **Wake** event begins.
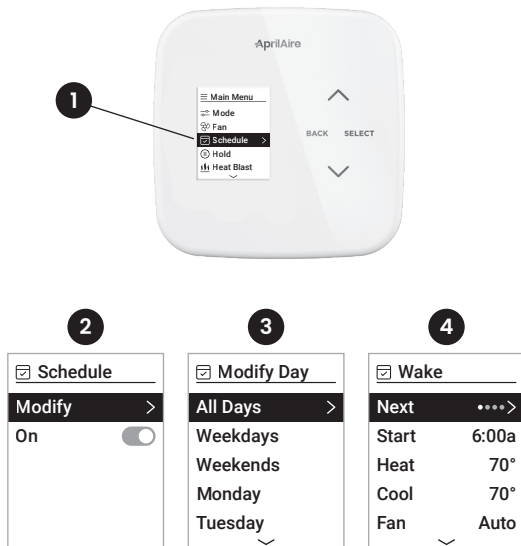
1. From the **Schedule** option in the **Main Menu**, you can turn the schedule **On** or **Off**, and make changes to the schedule.
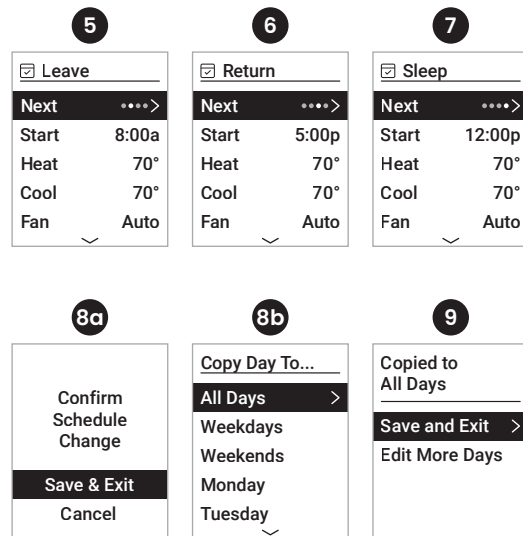
   Modify: The event start time, temperature, and fan mode can be adjusted for each event of each day.

   On/Off: When the **Schedule** is turned **Off** the thermostat will continue to control at the current temperature setting until adjusted with ⋀ and ⋁.

2. Select **Modify** to change default schedule settings.

3. Select the group of days or day you would like to modify.

4. Adjust **Wake** details (**Start**, **Heat**, **Cool**, **Fan**, and/or select **Next** to proceed.

1

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☰ Main Menu
⇌ Mode
❄ Fan
🗓 Schedule ＞
⏱ Hold
⋔ Heat Blast

BACK   SELECT

2

☑ Schedule
| Modify | ＞ |
| On | ⬤ |

3

☑ Modify Day
All Days	＞
Weekdays	
Weekends	
Monday	
Tuesday	

4

☑ Wake
Next	••••＞
Start	6:00a
Heat	70°
Cool	70°
Fan	Auto

5. Adjust **Leave** details and/or select **Next** to proceed.

6. Adjust **Return** details and/or select **Next** to proceed.

7. Adjust **Sleep** details and/or select **Next** to proceed.

8. **a)** If you modified a group of days you can **Save & Exit** back to the **Home** screen.
   b) Or if you modified a single day you can copy the settings to another day or group of days.

9. If you choose to copy, you will see this confirmation message, then you can return to the **Modify** menu to make changes to another day by selecting **Edit More Days** or return to the **Home** screen by selecting **Save and Exit**.

5

☑ Leave
Next	••••＞
Start	8:00a
Heat	70°
Cool	70°
Fan	Auto

6

☑ Return
Next	••••＞
Start	5:00p
Heat	70°
Cool	70°
Fan	Auto

7

☑ Sleep
Next	••••＞
Start	12:00p
Heat	70°
Cool	70°
Fan	Auto

8a

Confirm
Schedule
Change

Save & Exit

Cancel

8b

Copy Day To...
All Days	＞
Weekdays	
Weekends	
Monday	
Tuesday	

9

Copied to
All Days

| Save and Exit | ＞ |

Edit More Days

HEAT BLAST® (IF INSTALLED)

Heat Blast® will raise the current room temperature 3ºF to 5ºF based on the installer set-up, and then resume normal operation.

To activate Heat Blast, select **Heat Blast** from the **Menu**, and use the **Select** button to set the toggle to **ON**.

NOTE: Heat Blast button 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, select **Heat Blast** from the **Menu**, and use the **Select** button to set the toggle to **OFF**.

PROGRAM SCHEDULE HOLDS

TEMPORARY HOLD

Press ∧ or ∨ to immediately adjust the temperature when the schedule is running. This will temporarily hold the temperature setting until the next scheduled event.

A temporary hold can also be set from the **Hold** option in the **Menu**. The end time of the hold can also be adjusted from here.

The temporary hold can be canceled from the **Hold** option in the **Menu**, or by adjusting the temperature back to the scheduled temperature.

SETUP MENU

TABLE 2 – USER SYSTEM SETTINGS TABLE	
Clock	Set time.
Date	Set date.
Display	Display can be disabled during sleep for light sensitive locations. (Not available when battery only powered.)
Scale	Change temperature scale from Fahrenheit to Celsius.
About	Contains thermostat model number and software/hardware version.
Reset Reminder	Reset expired service reminders.

LIMITED WARRANTY

Your Research Products Corporation AprilAire® Thermostat 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 HALL BE EFFECTIVE UPON INSTALLATION .

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

WARRANTY REGISTRATION

Visit us online at **www.aprilaire.com** to register your AprilAire product. If you do not have online access, please mail a postcard with your name, address, phone number, email address, product purchased, model number, date of purchase, and dealer name and address 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.

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