uponor

RADIANT HEATING SYSTEMS

UPONOR CLIMATE CŎNTROL™ NETWORK SYSTEM THERMOSTAT

USER MANUAL

Uponor Climate Cŏntrol™ Network System Thermostat User Manual

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Thermostat User Manual
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Section 1 –

Uponor Climate Cŏntrol™ Network System Thermostat

The Uponor Climate Cŏntrol™ Network is an integrated system built to accommodate the vast majority of a home's heating, ventilation and air conditioning (HVAC) applications. It uses a modular design to scale the system to fit any HVAC mechanical system.

This user manual provides standard operating procedures for use with the Uponor Climate Cŏntrol Network Thermostat.

Following is a list of common terms used in this manual and how they are defined for this product:

Term	Definition
CO_2 Sensor	A carbon dioxide readings in a room.
HRV	Heating-recovery ventilator
Slab	This refers to a concrete slab under which radiant heating has been installed
Setpoint	This refers to the desired thermostat setting. The room setpoint temperature is the target temperature for the room.
Zone	An area of a radiant panel served by one or more loops and individually controlled through a thermostat

Table 1-1: Terms Used in this Manual

Section 2 –
Button Function and Operation

The Climate Cŏntrol Network thermostats come with simple, easy-to-use push-buttons that allow the user to access a variety of information and setting.

The basic button types on the thermostat are:

- **Cycle button** — Press the cycle button to scroll through user settings (between setpoints and readings).
- **Mode button** — Press the mode button to scroll through setup options (heat and cool mode, schedules, etc.).
- **(+) and (–) buttons** — Press the + and – buttons to change settings (setpoints, fan speeds, etc.).

Figure 2-1: Thermostat

Thermostat Display

The Thermostat Display consists of four fields:

- **Reading** — This field displays current room temperature.
- **Status** — This field shows which parts of the heating and cooling system are currently in operation.
- **System Mode** — This field displays whether the thermostat is set to run heating, cooling, ventilation or any combination.
- **Schedule and Master** — Whether the thermostat is running a setback schedule or vacation calendar and indicates if it is the controlling thermostat for a given air zone.

Refer to **Figures 2-2 and 2-3** to view how the fields display on the vertical and horizontal thermostat respectively.

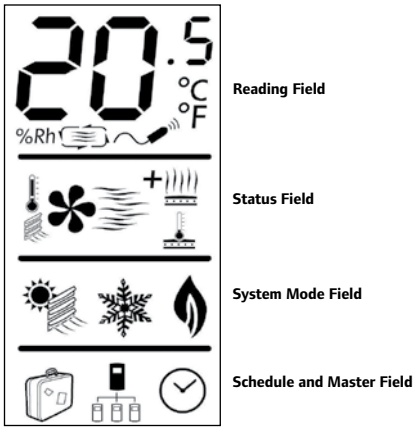


Figure 2-2: Vertical Thermostat Icon Display

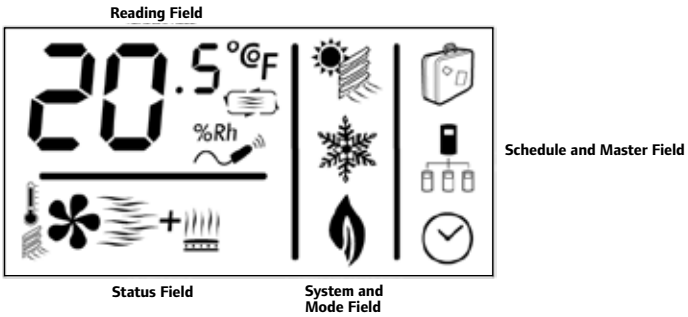


Figure 2-3: Horizontal Thermostat Icon Display

Each of the fields display specific icons to show the modes and functions of the thermostat. Refer to **Figure 2-4** and **Table 2-5** for detailed information about each icon.

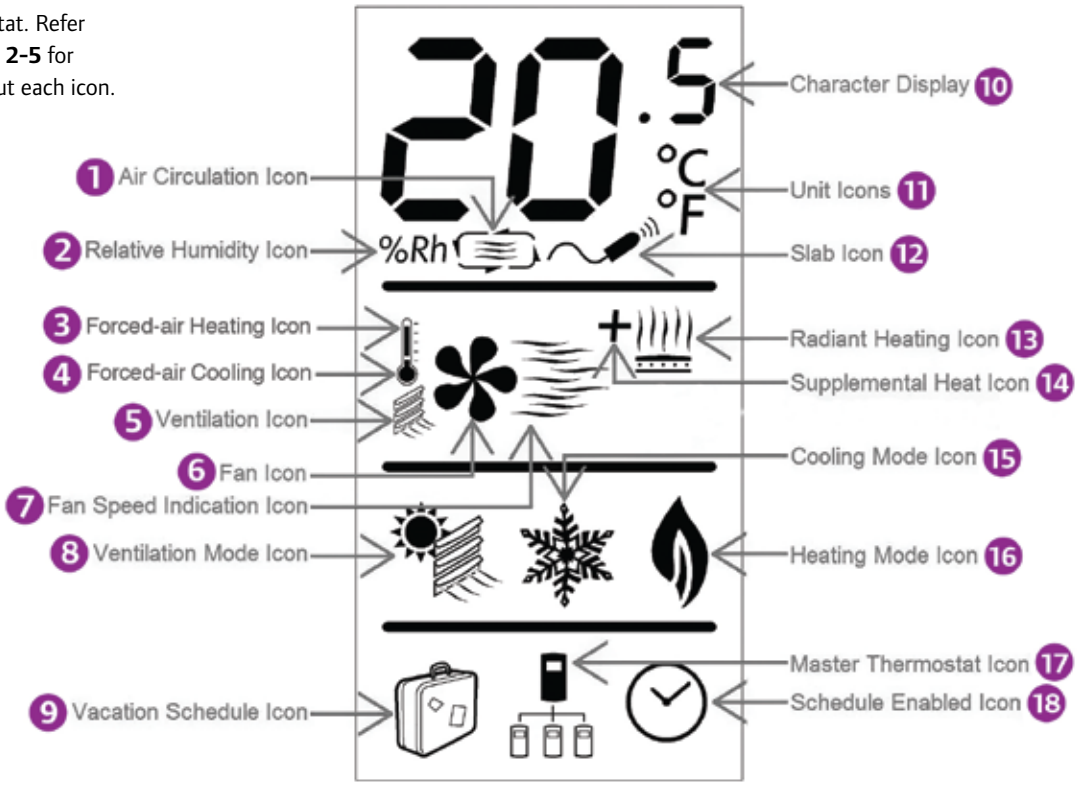


Figure 2-4: Thermostat Display

No.	Name	Description
1	**Air Circulation Icon**	Indicates a stale air call
2	**Relative Humidity Icon**	Indicates a humidity call
3	**Forced-air Heating Icon**	Indicates the furnace is delivering air heat
4	**Forced-air Cooling Icon**	Indicates the air conditioner is delivering air cooling
5	**Ventilation Icon**	Indicates the ventilation system is running
6	**Fan Icon**	Indicates the fan is running
7	**Fan Speed Indication Icon**	Indicates fan speed(if multiple speed is available)
8	**Ventilation Mode/ Outdoor Temperature Icon**	Indicates the ventilation mode is turned on (when available); also appears when the outdoor temperature is viewed
9	**Vacation Schedule Icon**	Indicates that the vacation schedule is enabled
10	**Character Display**	Displays numeric settings **Note:** When temperatures are displayed in °F, only full degree increments are available.
11	**Unit Icons**	Displays the current units (°C or °F)
12	**Slab Icon**	Indicates when the slab settings are viewed or modified
13	**Radiant Heating Icon**	Indicates the radiant heating system is running
14	**Supplemental Heat Icon**	Indicates when supplemental heating is running (e.g., baseboard heating)
15	**Cooling Mode Icon**	Indicates the system is in cooling mode
16	**Heating Mode Icon**	Indicates the system is in heating mode
17	**Master Thermostat Icon**	Indicates that the thermostat is designated as an air zone's master thermostat
18	**Schedule Enabled Icon**	Indicates that a schedule is enabled

Table 2-1: Thermostat Display Icon Descriptions

Note: All of the above icons may not always be viewable or displayed, depending on how the Climate Cŏntrol Network-system is set up.

Section 3 –
Using the Thermostat

Outdoor Temperature

Press the **cycle** button once to view the outdoor temperature. The LCD shows both the outside temperature and the outdoor temperature icon as shown in **Figure 3-1**.

Figure 3-1: Outdoor Temperature Icon

Viewing the Room Temperature Setpoint

The thermostat displays the current room temperature while static or while no button is pressed. The display returns to the current room temperature after five seconds of the last button press.

Changing the Room Temperature Setpoint

The room temperature setpoint is the target temperature for the room that the thermostat controls. When viewing the room temperature on the display, use the (**+**) or (**–**) buttons to change the room temperature setpoint.

- Press the (**+**) button to increase the room temperature setpoint by 1.0°F or 0.5°C degree increments depending on the temperature units displayed.
- Press the (**–**) button to decrease the room temperature setpoint by 1.0°F or 0.5°C degree increments depending on the temperature units displayed.

Viewing the Slab Temperature

Note: The slab temperature readings and settings are only available if the slab sensor is installed.

The slab temperature is the current temperature of the radiant panel. This temperature is viewable for radiant heating and/or radiant cooling.

To view the slab temperature, press the **cycle** button three times or until the display shows the slab icon blinking. The display now shows the temperature of the slab.

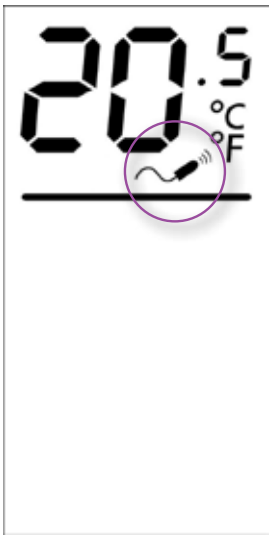


Figure 3-2: Slab Temperature Icon

Changing the Slab Temperature Setpoint

Note: Slab temperature readings and settings are only available if the slab sensor is installed.

The slab temperature setpoint is the target temperature of the radiant panel. To change the slab temperature setpoint, use the following procedure:

- Press the **cycle** button three times or until the blinking slab icon appears.
- Press the (**+**) button to increase the slab temperature setpoint by 1°F or 0.5°C degree increments depending on the temperature units displayed. Press the (**–**) button to decrease the slab temperature setpoint by 1°F or 0.5°C degree increments depending on the temperature units displayed.

Section 4 –
Selecting the Operating Mode

Important: This section is important to the operation of the Uponor Climate Cŏntrol™ Network System. If the proper mode is not set by the user, the system will not operate the respective equipment to maintain the temperatures set by the user. The system will, however, maintain predetermined minimum and maximum default temperatures to keep the home or building from freezing or over heating.

The user can manually set the thermostat to Heat, Cool, Auto or Auto with Scheduling Enabled modes depending on which mechanical systems are installed. Following is a brief description of these modes.

- **Off Mode —** This mode indicates the thermostat is off. Heating and cooling equipment will only operate if the temperature exceeds the freeze- or heat-protection limits.
- **Heat Mode —** When activated, this mode supplies heat to the zone that the thermostat controls through the radiant floor, forced air and baseboard. When the current room temperature falls 0.5° below the setpoint, heat mode becomes activated. The heat will shut off when the room temperature rises 0.5° above the setpoint.
- **Cool Mode —** When activated, this mode supplies cooling to the zone the thermostat controls through radiant floor or forced air. When the current room temperature rises 1.0° above the setpoint, cool mode is activated. The cooling will shut off when the room temperature cools to 1.0° below the setpoint. This function is only permitted if cooling equipment is installed.
- **Auto Mode —** The thermostat automatically operates the cooling and heating systems separately to maintain the current room temperature setpoint.
- **Auto with Scheduling Enabled Mode —** The thermostat automatically operates the cooling and heating systems according to the schedule selected.

Selecting Modes

Use the (**+**) and (**–**) buttons to select heat, cool and auto modes. To toggle between these modes, use the following procedure:

- Press the **mode** button once.
- Press the (**+**) or (**–**) button for the desired mode as shown in **Figure 4-1**.

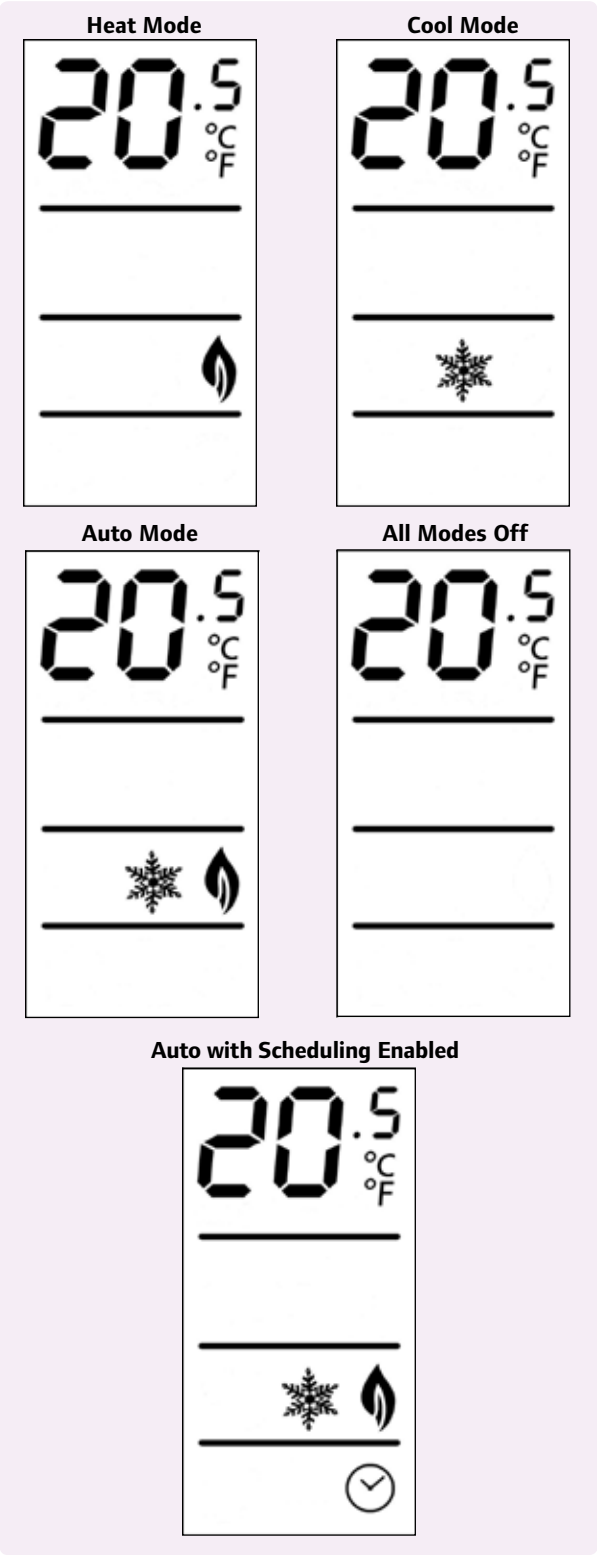


Figure 4-1: Selecting Modes

Section 5 –
The Fan

The fan speed readings and settings are only available if forced-air heating or cooling is installed. The installing contractor will need to configure for the forced-air system.

The user can manually control the fan operation for furnaces or air handlers. If the timing feature is enabled, the fan will stop after the length of time defined at system setup (four hours is the default for both HRVs and fans). If this feature is not enabled, the fan must be manually turned on and off.

To turn the fan on and off, use the following procedure.

1. Press the **cycle** button until the blinking fan and fan-speed icons appear within the Status Field. (See Thermostat Display section on **page 6**.)
2. Press the (**+**) button to turn the fan on; press the (**–**) button to turn the fan off.

If multiple fan speeds are available (1 to 3), pressing the (**+**) or (**–**) buttons will scroll through the different speeds shown by the waves to the right of the fan icon. Fewer waves indicate a lower fan speed.

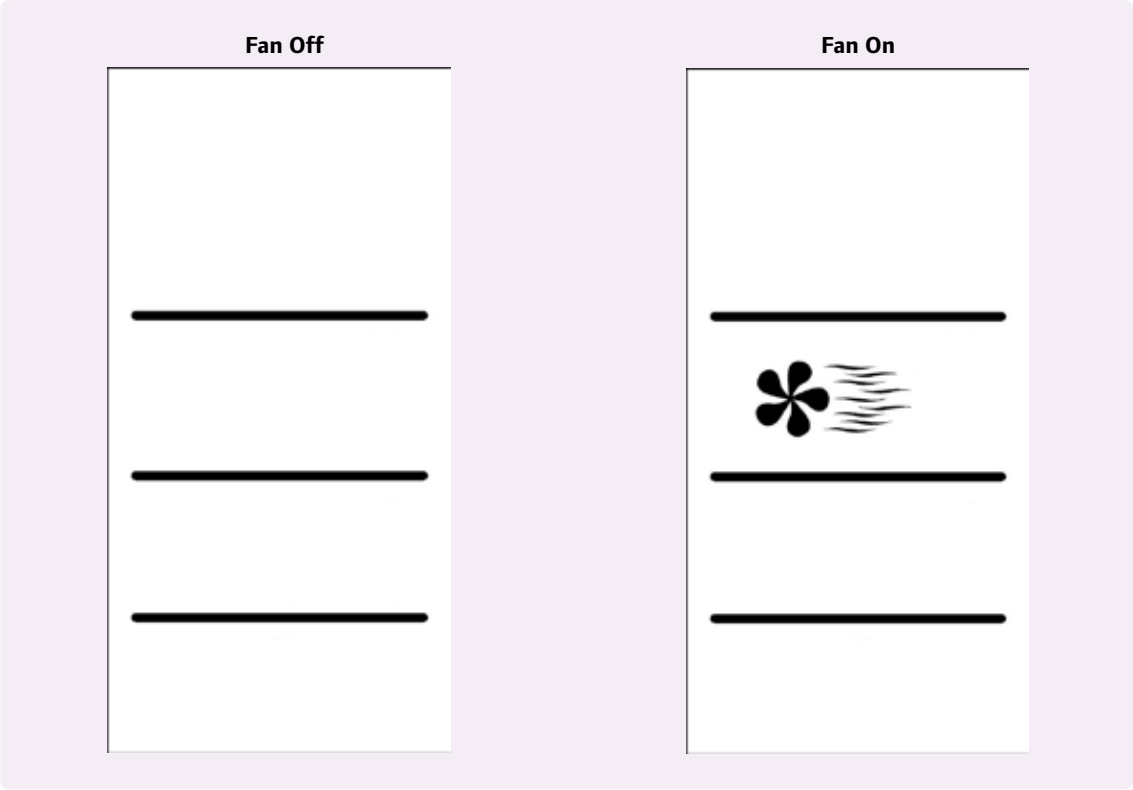


Figure 5-1: Fan Off and Fan On Icons

Section 6 –
Using the Ventilation Mode

The ventilation option is only available if an HRV is installed and active on any given thermostat. The installing contractor will need to configure the controls.

This mode operates independently of the heat, cool, auto and off modes. If the system incorporates an HRV, the thermostat controls the air change rate (fresh air) in the zone. If the CO_2 sensor is configured, ventilation will shut off at the predefined setpoint after being manually turned on.

Turning Ventilation Mode On and Off

To turn the ventilation mode on and off, use the following procedure.

1. Press the **mode** button until the display in **Figure 6-1** appears.
2. Press the (**+**) button to turn the vent on; press the (**–**) button to turn the vent off.

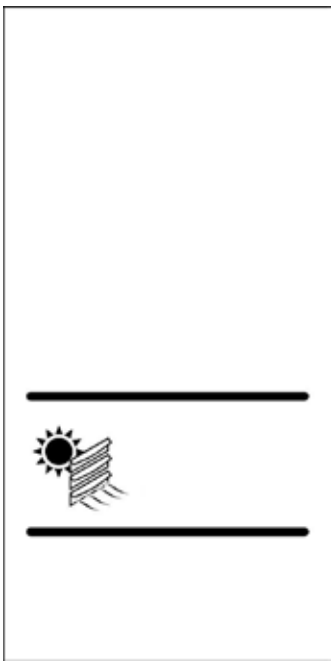


Figure 6-1: Ventilation Mode On

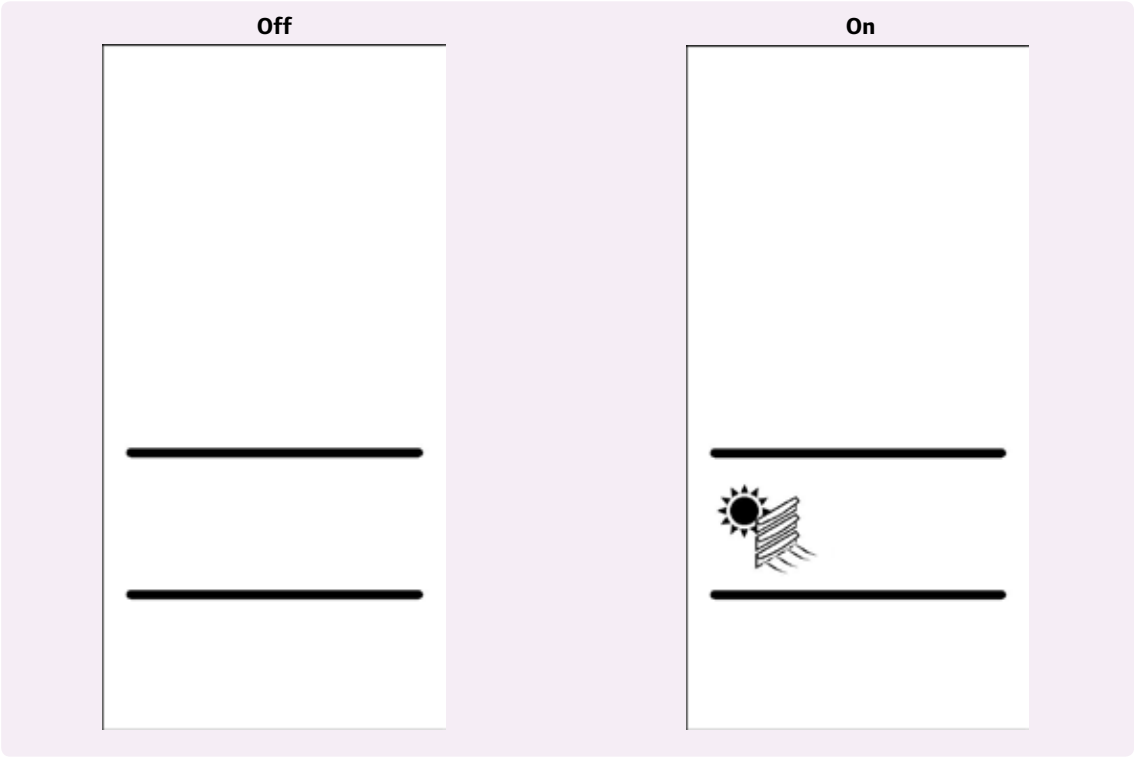


Figure 6-2: Ventilation Mode Off and On

Section 7 –
Changing Ventilation Fan Speed

Note: The ventilation fan speed readings and settings are only available if an HRV is installed and active on any given thermostat. The installing contractor will need to configure the controls for the ventilation fan.

If the system incorporates an HRV, the thermostat controls the humidity and air change rate (fresh air) in the zone. The thermostat can control an HRV with up to three speeds: low, medium and high. (Note that some applications may not include all three speeds.)

An air-to-air heat exchanger or HRV can be operated in the following modes depending on the type of equipment installed and how the contractor set up the functionality during installation:

For two-speed equipment

- Off
- Continuous low fan speed
- On for 20 minutes, then off for 40 minutes on high fan speed
- Continuous high fan speed

For three-speed equipment

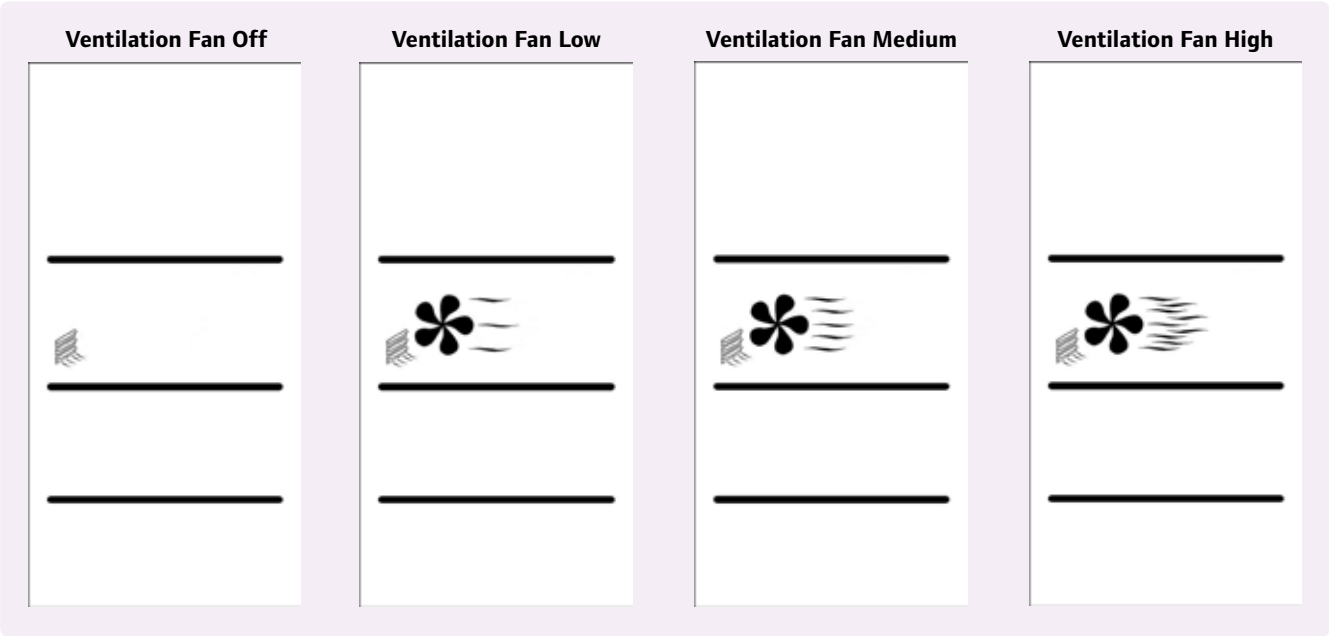
- Off
- Continuous low fan speed
- On for 20 minutes on high fan speed, then off for 40 minutes
- Continuous medium fan speed
- Continuous high fan speed

Note: For optimal ventilation and effect, it may be necessary to run furnace or air handler fans to re-circulate the fresh air. Consult your installing contractor with any questions.

When manually switching a multi-speed HRV to medium or high speed, the HRV fan will return to automatic control after the length of time defined at system setup (four hours is the default for both HRVs and fans).

Follow this procedure to activate or change the ventilation operation.

1. Press the **cycle** button until the display shows the fan, fan speed and ventilation icons blinking.
2. Press the (**+**) button to increase the fan speed and the (**–**) button to decrease the fan speed. Refer to **Figure 7-1** for the ventilation fan speed displays.



Note: The off, low and high icons appear with a two-speed HRV. The off and high icons appear with a one-speed HRV.

Figure 7-1: Ventilation and Fan Speed Displays

Section 8 –

Viewing the Relative Humidity Reading

The relative humidity reading displays the current level of humidity in the room and is always available for viewing even if humidity control equipment is not installed.

To view the relative humidity reading, press the **cycle** button four times or until the display shows the relative humidity icon as shown in **Figure 8-1**.

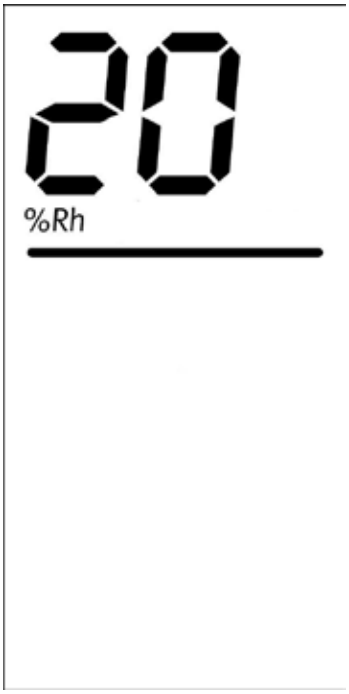


Figure 8-1: Relative Humidity Reading

Section 9 –

Changing the Relative Humidity Setpoint

The relative humidity setpoint is the target for the relative humidity in the zone the thermostat is controlling or monitoring. To change the relative humidity setpoint, use the following procedure.

1. Press the **cycle** button four times or until the display shows the relative humidity icon.
2. Press the (**+**) button to increase the relative humidity setpoint by 1% increments; press the (**–**) button to decrease the relative humidity setpoint by 1% increments.

Note: The Climate Cŏntrol™ Network System will automatically limit the range for the humidity setpoint based on the outdoor temperature. This control will prevent the area from becoming too moist (which can cause condensation on windows, ceilings, etc.) or too dry (which can cause drywall cracking, wood flooring shrinkage, etc.)

Section 10 –
Changing the Units of Temperature

To toggle between Celsius and Fahrenheit temperature units, use the following procedure.

1. Press the **mode** button until the display shows the temperature units.
2. Press the (**+**) or (**–**) button to select the desired temperature unit.

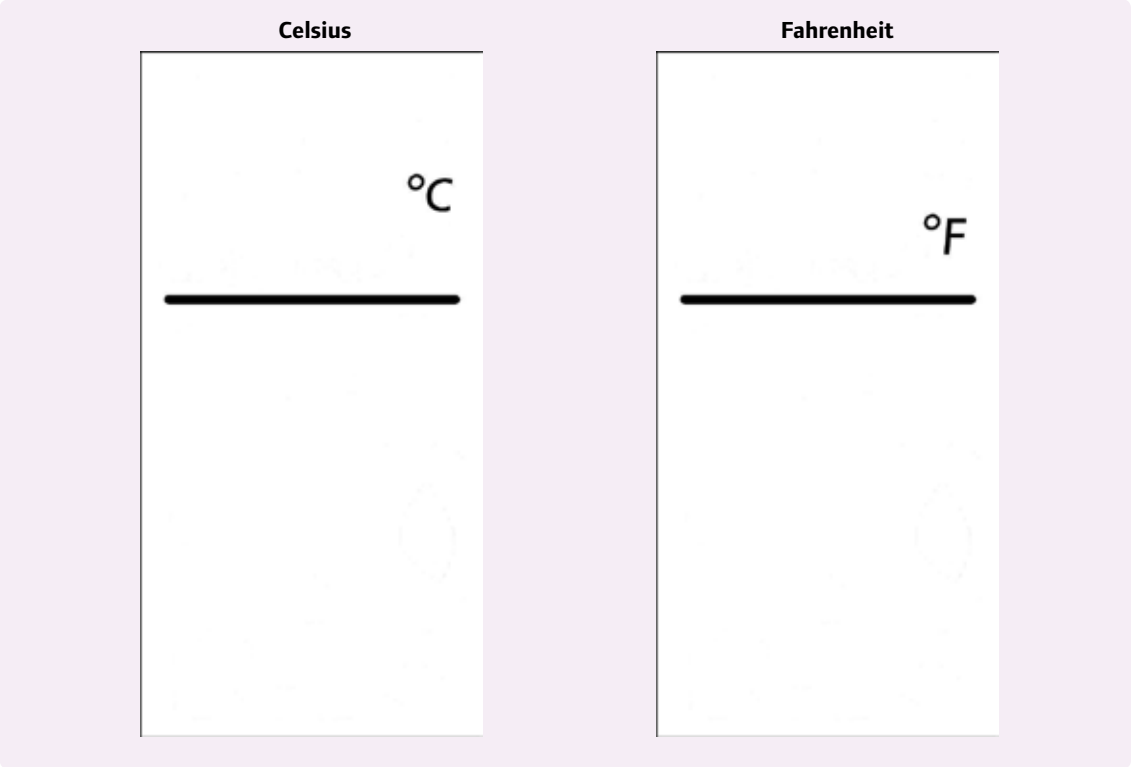


Figure 10-1: Celsius and Fahrenheit Temperature Units

Section 11 –
Setting the Backlighting Time

To change how long the backlight stays on after pressing a button, use the following procedure.

1. Press the **mode** button until the display in **Figure 11-1** appears.
2. Press the (**+**) button to increase the backlight on time or press the (**–**) button to decrease the backlight on time. The range is 0 to 30 seconds.

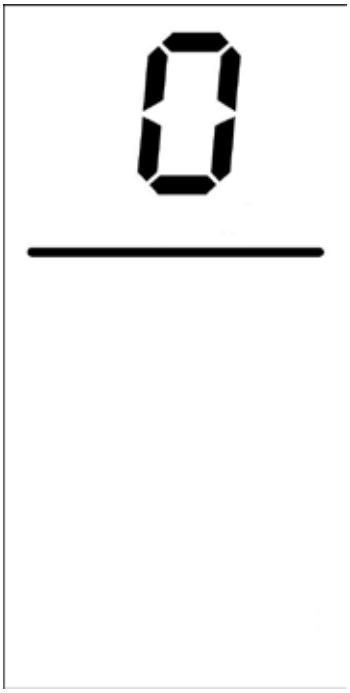


Figure 11-1: Setting the Backlighting Time

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