

# User Manual

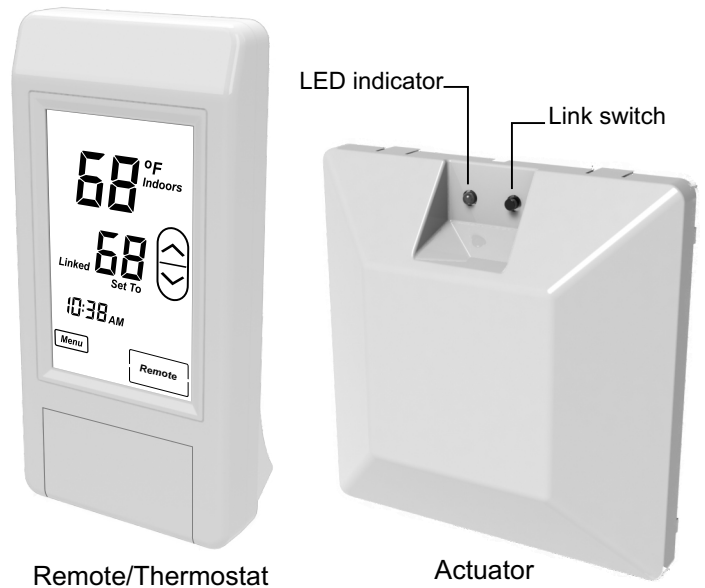
Rev A Nov 2014



## Remote Thermostat Comfort Control

The Remote Thermostat Comfort Control is a touch screen control that operates either as a remote control or a thermostat to control airflow into a space. The Remote Thermostat is battery powered and communicates wirelessly to the actuator using the FCC ISM 915MHz band.

The Remote Thermostat can be placed on a table in a space or permanently attached to a wall.



## Operating Modes

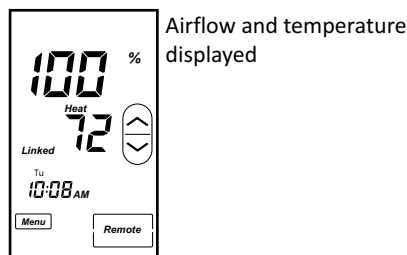
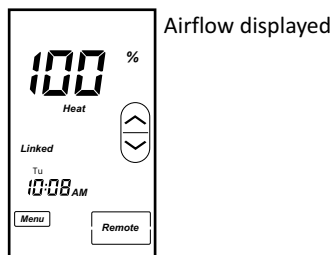
The Remote Thermostat can be operated in either Remote Control Mode or Thermostat Mode. For best performance, operate in one mode - don't repeatedly switch between modes.

### Important!

Some systems may have controls that set certain limits, such as the discharge air temperature. Check with your installer to see which mode, Remote Control or Thermostat, is best suited for your system.

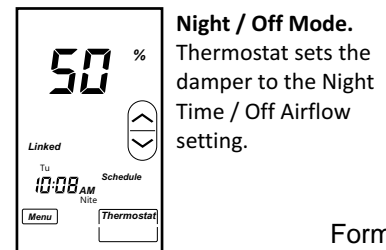
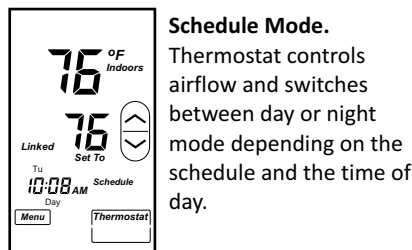
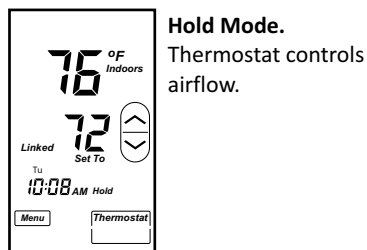
### Remote Control Mode

In remote control mode, airflow is controlled by the user and can be adjusted from 100%, fully open, to 0%, fully closed. The user simply pushes the UP or DOWN key to control the amount of airflow into the space.



### Thermostat Mode

In thermostat mode, airflow is controlled by the set point and room temperature, and whether the system is in heating or cooling. A schedule can be programmed into the thermostat to control airflow for daytime and night time, or for days off.



# LCD Touchscreen

## Important!

The remote thermostat has been designed for long battery life and will “sleep” when not in use to maintain battery life. A moderate touch is recommended to “wake up” the remote thermostat. A moderate, steady touch is recommended to operate the keys. Pressing hard will not make the thermostat respond faster and may damage the LCD touchscreen.

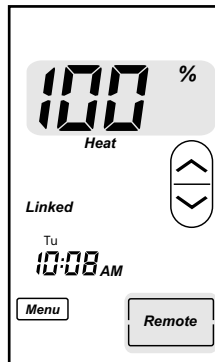
## Remote Control Operation

After the Remote Thermostat and Actuator have been linked, tested and installed by the installer, the Remote Thermostat is ready for use. In Remote Control Operation, the airflow is easily controlled by the user. The user presses the UP key to increase airflow or presses the DOWN key to decrease airflow. The airflow can be adjusted from 100% - the damper is fully open, to 0% - the damper is fully closed, or anywhere in between.

## Remote Control Mode

Make sure the Remote Thermostat is in Remote Control Mode as shown in the image.

The display indicates Remote (shown in grey) and displays airflow instead of temperature (shown in grey).

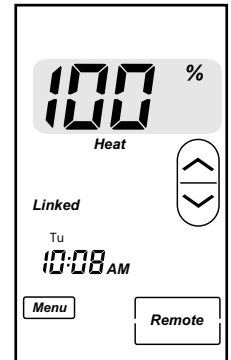


## Remote Control - Airflow Displayed

This Remote Control shows only airflow displayed (shown in grey).

1. Press the UP/DOWN keys to change the damper position and airflow.

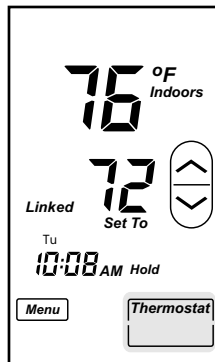
The damper can be adjusted from 100%, fully open, to 0%, fully closed, or a position in between.



## Changing to Remote Control Mode

If the Remote Thermostat is in Thermostat Mode, as shown in the image, change to Remote Control Mode.

1. Press and hold the THERMOSTAT Key (shown in grey). The key will change to Remote as shown in the previous image and airflow will be displayed instead of temperature.

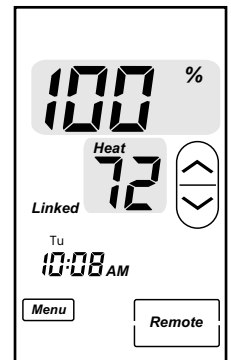


## Remote Control - Airflow & Indoor Temperature Displayed

This Remote Control shows airflow and temperature displayed (shown in grey). See Option 7 to turn on temperature in the display.

1. Press the UP/DOWN keys to change the damper position and airflow.

The damper can be adjusted from 100%, fully open, to 0%, fully closed, or a position in between.



# Thermostat Operation

In Thermostat mode, the Remote Thermostat automatically controls the amount of airflow using the room temperature, set point temperature and whether the system is in heating or cooling.

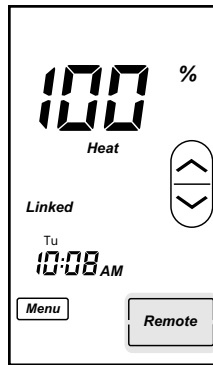
The Remote Thermostat is preprogrammed with a seven day schedule that the user can modify to a custom schedule. The thermostat will adjust the amount of airflow depending on the time and day of the week.

## Thermostat Modes

### Changing to Thermostat Mode

The Remote Thermostat is shown in the Remote Control mode.

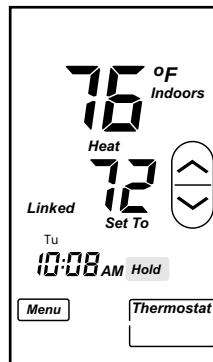
1. Press and hold the REMOTE Key (shown in grey). The key will change to Thermostat as shown below.



### Thermostat Hold Mode

In the Hold Mode, the thermostat controls airflow using the Indoor temperature and the setpoint temperature set by the user. The schedule feature is not used in the Hold Mode.

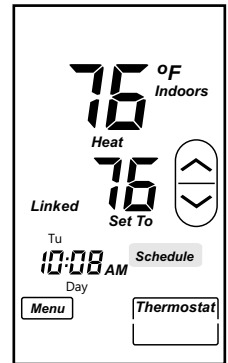
1. Press the UP/DOWN keys to set the desired temperature. The thermostat will adjust the airflow to reach the setpoint temperature.
2. To select Schedule Mode, press and hold the HOLD key (shown in grey).



### Thermostat Schedule Mode

In the Schedule Mode, the thermostat controls airflow using the Indoor temperature and the setpoint temperature set by the user. The thermostat will follow the default schedule or the schedule set by the user.

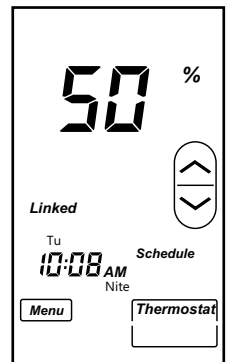
1. Press the UP/DOWN keys to set the temperature. The thermostat will adjust the airflow to reach the setpoint temperature.
2. To select Hold Mode, press and hold the SCHEDULE key (shown in grey).



### Thermostat Night Mode

In the Night Mode, the thermostat sets the damper to the Nighttime position set in Option 5. The factory default is 50%. The thermostat will go into Night mode at the time set in the schedule. The factory default is 9:00 PM.

1. To change the temperature in night mode, use the UP/DOWN keys to set the desired temperature.



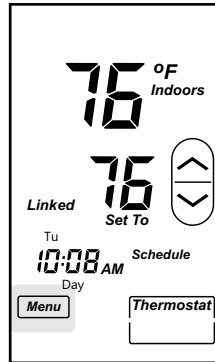
## Changing the Schedule

The Remote Thermostat is preprogrammed with a seven day schedule as shown below:

	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Day	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Night	9:00 PM	9:00 PM	9:00 PM	9:00 PM	9:00 PM	9:00 PM	9:00 PM

## Displaying the Schedule

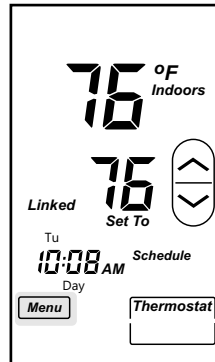
1. Press and hold the MENU key (shown in grey) until the display changes to the Monday, Day schedule and the UP / DOWN keys are not displayed.
2. Press the NEXT key to display the Day and Night schedule for each day.



## Changing the Day and Night Schedule

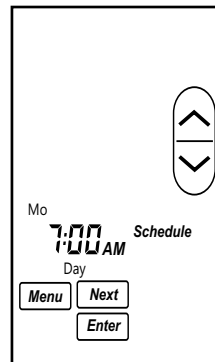
The Remote Thermostat is shown in Thermostat Mode / Schedule.

1. Press and hold the MENU key (shown in grey) until the display changes to the Monday, Day schedule and the UP / DOWN keys are displayed.
2. Use the UP / DOWN keys to change the Day start time for Monday.
3. Press NEXT to go to the Night start time for Monday and use the UP / DOWN keys to change the Night start time.



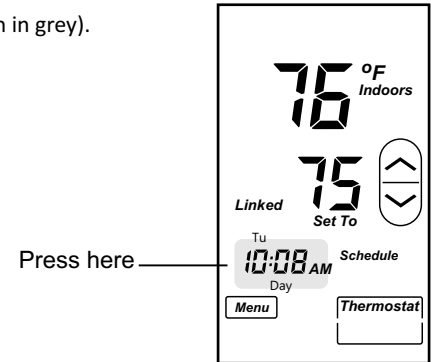
To set the schedule for a day off, select the correct day of the week. Use the UP key to scroll to OFF which follows 11:45 PM for the Day start time.

4. Or press and hold NEXT to go to the next schedule you want to change.
5. Or press ENTER if you have no more changes.



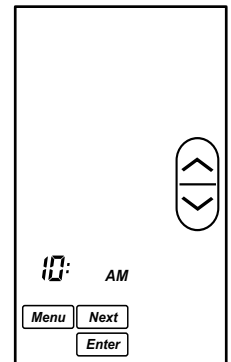
## Set the Time of Day

- Press the Time (shown in grey).



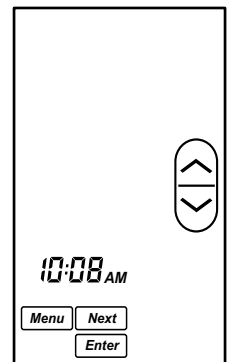
## Setting Hour

1. Press the UP / DOWN key to set the hour.
2. Press NEXT to save the changes and to continue on to change the minute.
3. Or, press ENTER to save the time and return to normal operation.



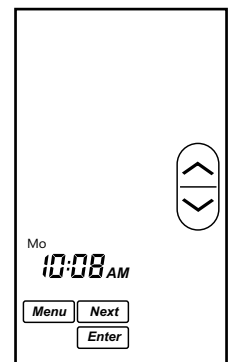
## Setting the Minute

1. Press the UP / DOWN key to set the minute.
2. Press NEXT to save the changes and to continue on to change the day of the week.
3. Or, press ENTER to save the time and return to normal operation.



## Setting the Day

1. Press the UP / DOWN key to set the day.
2. Press ENTER to save the change and return to normal operation.



## Table Top and Wall Mounts

The Remote Thermostat is shipped with a foot for table top use and a sub-base for wall mounting.

### Important!

The sub-base snaps are not designed for repeatedly removing and installing the Remote Thermostat on the sub-base.

Attach the foot to the back of the Remote Thermostat by snapping it into place.



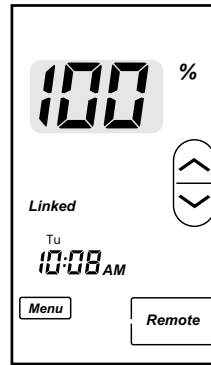
Or, install the sub-base on an interior wall about 5 feet above the floor and out of sunlight using two screws as shown. The Remote Thermostat snaps onto the sub-base.



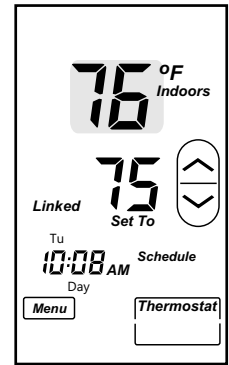
## Calibrating the Temp Sensor

1. Press AIRFLOW or INDOOR TEMPERATURE (shown in grey).

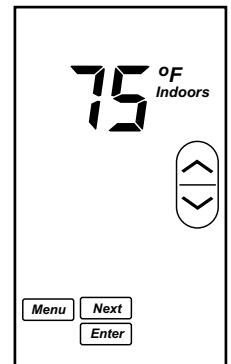
### Remote Control Mode



### Thermostat Mode



2. Use the UP / DOWN keys to set the Indoor Temperature to the calibrated value.
3. Press ENTER to save the change and return to normal operation.



## Installing Batteries

### Installing Batteries for the First Time

1. Slide the battery cover down and install two AA batteries being sure to observe the polarity.

The Remote Thermostat will power up in Remote Control Mode.

Observe the word Link in the display indicating the Remote Thermostat is ready to Link to a wireless actuator.

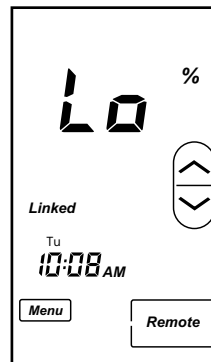
2. Set the correct time and day.



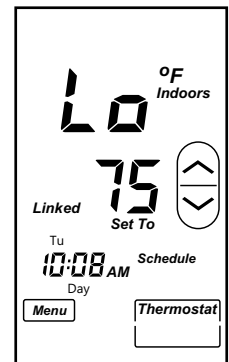
## Low Battery Indicator

When the battery voltage drops down, the LCD will display "Lo" indicating that the batteries need to be changed. Low battery voltage may reduce range. Batteries should be replaced with AA alkaline. Refer to Installing Batteries in manual.

### Remote Control Mode



### Thermostat Mode



### Replacing Batteries

After replacing the batteries, set the correct time and of day. The remote thermostat retains its link to the actuator. This is indicated by the word Linked in the display.

## Options and Factory Defaults

Options are set using the Menu key. The MENU key is also used to set the schedule.

Scroll through the options by pressing and holding the MENU. Schedule options are displayed first, then Options. Continue to press and hold until Option 01 is displayed. Continue to press and hold MENU to see all options. Press ENTER to return to normal operation.

The following options are available. Some options should be set by the installer and have been indicated as Installer.

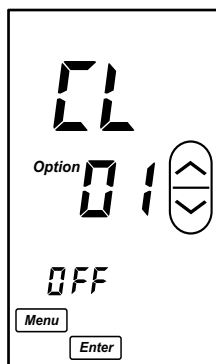
Option 1	Cleaning the touch screen	User	Default = Off	Options = Off or On
Option 2	Changing the LCD contrast	User	Default = 10	Options = 1 - 10
Option 3	Setting discharge air temp to detect heating	Installer	Default = 95°	Options = 85° - 120°
Option 4	Setting discharge air temp to detect cooling	Installer	Default = 65°	Options = 60° - 75°
Option 5	Setting the night time or off airflow	User	Default = 50%	Options = 20% - 100%
Option 6	Set the change in damper position per degree	Installer	Default = 10%	Options = 5% - 25%
Option 7	Turning on temperature in the display in Remote Control Mode	User	Default = Off	Options = Off or On
Option 8	Set the minimum airflow allowed	Installer	Default = 0%	Options = 0% - 50%

### Option 1: Cleaning the Touch Screen

This option disables the touchscreen for 30 seconds to enable you to clean the touchscreen

1. Press and hold the MENU key to display Option 01.
2. Press the UP key to select On.
3. Press the ENTER key to start a 30 second count down.

During the 30 second countdown, use a damp, soft cloth to clean the touchscreen. After 30 seconds, the remote thermostat returns to normal operation.

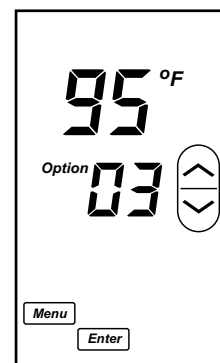


### Option 3: Setting discharge air temperature for detecting heating call

**Factory Default → 95°**

If the discharge air temperature is below the default of 95 degrees, a heating call will not be detected and the thermostat will not control airflow properly. Use this option to lower the temperature setting for discharge air so a heating call will be detected.

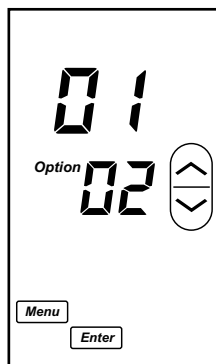
1. Press and hold the MENU key to display Option 03.
2. Use the UP / DOWN keys to change the heating detect setpoint temperature.
3. Press ENTER to save the changes and return to normal operation.
4. Or press and hold MENU to save the changes and display the next option.



### Option 2: Changing the LCD Contrast

**Factory Default → 1**

1. Press and hold the MENU key to display Option 02.
2. Use the UP / DOWN keys to change the LCD contrast.
3. Press ENTER to save the changes and return to normal operation.
4. Or press and hold MENU to save the changes and display the next option.

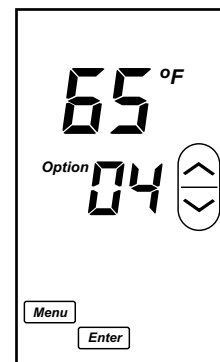


### Option 4: Setting discharge air temperature for detecting cooling call

**Factory Default → 65°**

If the discharge air temperature is above the default of 65 degrees, a cooling call will not be detected and the thermostat will not control airflow properly. Use this option to raise the temperature setting for discharge air so a cooling call will be detected.

1. Press and hold the MENU key to display Option 04.
2. Use the UP / DOWN keys to change the cooling detect setpoint temperature.
3. Press ENTER to save the changes and return to normal operation.
4. Or press and hold MENU to save the changes and display the next option.

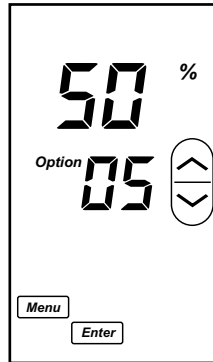


## Option 5: Setting the Night or Off Airflow

**Factory Default → 50%**

This option sets the airflow during night mode or on days off.

1. Press and hold the MENU key to display Option 05.
2. Use the UP / DOWN keys to change the night time / off airflow.
3. Press ENTER to save the changes and return to normal operation.
4. Or press and hold MENU to save the changes and display the next option.

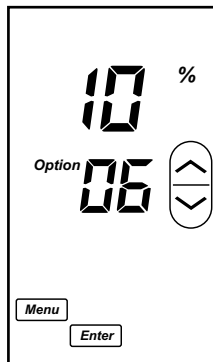


## Option 6: Setting the change in damper position per degree

**Factory Default → 10%**

This option sets how much the damper position will adjust for each degree difference between room temperature and the set point temperature.

1. Press and hold the MENU key to display Option 06.
2. Use the UP / DOWN keys to set the change in damper position for each degree difference between setpoint and room temperature.
3. Press ENTER to save the changes and return to normal operation.
4. Or press and hold MENU to save the changes and display the next option.

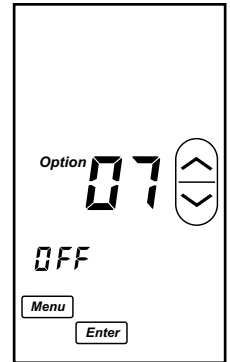


## Option 7: Turning on Temperature Display in Remote Control Mode

**Factory Default → Off**

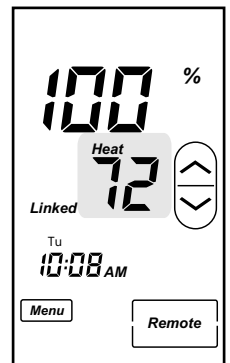
This option displays the room temperature on the display in remote control mode. The UP / DOWN keys are used to adjust airflow.

1. Press and hold the MENU key to display Option 07.
2. Use the UP / DOWN keys to turn the option on or off.
3. Press ENTER to save the changes and return to normal operation.
4. Or press and hold MENU to save the changes and display the next option.



The temperature (shown in grey) is displayed below the airflow %.

After the first command, the remote control will display whether the system is in heating (Heat) or in cooling (Cool). The system mode is determined by a temperature sensor in the actuator measuring the discharge air temperature.

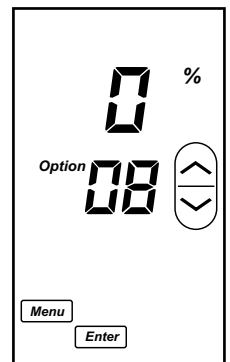


## Option 8: Setting the minimum airflow allowed.

**Factory Default → 0%**

This option sets the minimum airflow allowed and can be used to minimize damper noise.

1. Press and hold the MENU key to display Option 08.
2. Use the UP / DOWN keys to set the minimum airflow allowed.
3. Press ENTER to save the changes and return to normal operation.



## Quick Tips and Trouble Shooting

### Touchscreen

The remote thermostat has been designed for long battery life and will “sleep” when not in use to maintain battery life. A moderate touch is recommended to “wake up” the remote thermostat. A moderate, steady touch is recommended to operate the keys. Pressing hard will not make the thermostat respond faster and may damage the touchscreen.

### Which Mode - Remote or Thermostat?

Operating the remote thermostat in Remote Mode is the easiest operating mode and gives the user direct control over the amount of airflow. The user can select 0% airflow up to 100% airflow.

In Thermostat Mode, the airflow will adjust depending on the indoor temperature, set point and whether the system is in heating or cooling. The user can choose to run the thermostat in Hold mode or Schedule mode. In Schedule mode the thermostat controls airflow and switches between day or night mode depending on the schedule and the time of day.

### Changing Batteries or Loss of Battery Power in the Remote Thermostat

Changing batteries or loss of battery power will not affect the link between the remote thermostat and the actuator, or reset Options or Schedule. The Time of Day will need to be reset. After inserting batteries, the remote thermostat powers up in Remote Control mode. Press the DOWN key to change the airflow and initiate the actuator.

### Loss of Power to Actuator

A loss of power to the actuator will not affect the link between the actuator and the remote thermostat. The actuator will retain it's unique link, very similar to a garage door opener.

When the actuator is powered back up, the actuator will go to the fully open position, indicated by a solid green LED. The actuator will respond immediately if the user adjusts airflow or after a period of time when the remote thermostat routinely communicates to the actuator.

### Indoor Air Temperature Isn't Changing

Make sure the HVAC system is on and in a heating or cooling call. The remote thermostat adjusts the airflow to the space. It does not control the HVAC system and therefore will not call for heating or cooling.

### Remote Thermostat / Actuator Doesn't Seem To Be Responding

Ensure the actuator has power. You may be able to observe the LED light on the actuator through the diffuser. The LED light will either be green, red or yellow. No light indicates that the actuator is not powered.

Ensure that the HVAC system is on. If the HVAC system is not on, the actuator is not going to detect a heating or cooling call and therefore will not respond.

If the thermostat is in Schedule Mode, the thermostat may be following a schedule and gone into Night / Off Mode. In Night / Off Mode, airflow will adjust to the setting set in Option 5. Or, if a day off has been set in the schedule, the thermostat may have gone into Night / Off mode.

## Quick Tips and Trouble Shooting

### Can the Remote Thermostat and Actuator be unlinked?

The Remote Thermostat and Actuator can be unlinked and restored to factory defaults. However, this should only be done by the installer. See Factory Restore on page 8. of the Installer Manual.

## 5-Year Limited Warranty

The 5-year warranty is limited to the repair or replacement of defective product due to parts failure or defective workmanship.

**CARNES®**

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