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Product Overview

Congratulations on your thermoSmart purchase! You are well on your way to better comfort and energy savings in your home.

The major components of the thermoSmart system are listed below:

- **smartGrate**: The smartGrate replaces your existing registers and adjusts to maintaining your desired temperature.
- **smartTemp**: The smartTemp allows you to view the current temperature of your room and lets you adjust your desired temperature.
- **Coordinator**: The Coordinator syncs all the SmartGrates and comfort controllers in your household and allows you to set schedules to save energy.
- **HVAC Controller**: The HVAC Controller interfaces with your furnace to turn it on or off.
Energy Saving Overview

thermoSmart is designed to more efficiently heat up each room to its desired temperature.

The system accomplishes this goal by adjusting the opening of the smartGrate’s louvers.

As the smartGrates in each room open and close based on the current and desired temperature of that room, heat is allocated to where it is most needed.

This allows for each room to reach its desired temperature faster and allows your furnace to be on for a shorter time than it would be without thermoSmart.

The heat-up time reduction coupled with the scheduling features leads to significant energy savings. Over one heating season, you can save an amount equivalent to taking 2 cars off the road!

Troubleshooting

smartTemp
Problem: There is nothing on the smartTemp screen.
  Check: Did you replace the batteries?
  Check: Are the batteries put in the correct way? Are they pushed in all the way in?
  Try: Pressing the reset button to activate it.

Coordinator
Problem: There is nothing on the Coordinator screen.
  Check: Is the power cord plugged all the way in?
  Try: Turning off the power (switch on left side) and turning it back on.
  If nothing else works, remove the Coordinator cover and press the Reset button on the board. (Warning: This will erase scheduling that you manually typed in).

smartGrate
Problem: The smartGrate does not move.
  Check: Is there low battery? [Look on the same room’s smartTemp to check]. Did you replace the batteries?
  Check: Are the wires detached from the servo?
  Check: Are the nuts loose on the linkages?
  Check: Have you entered the code on the Coordinator yet? Is the code correct?

HVAC Controller
Problem: Neither of the LEDs on the HVAC Controller is lit. OR the furnace does not appear to the turning off or on.
  Check: Is the wiring done correctly? Double check with Table A.
Coordinator Usage

Run Program
- Use ▼ ▲ to select ‘Run Program’ from Main Menu, press OK.
- If you would like to run one of the named programs, use ▼ ▲ to scroll to the desired program and press OK to move to the first confirmation page. Note: there will be an X next to the program that is currently running, if applicable. If you would like to run the program use ▼ ▲ to select ‘Yes’; if you would not like to run the program use ▼ ▲ to select ‘No’. Press Menu automatically. OK: if you have chosen to run the program a message will appear confirming the success; you will return to the Main Menu.
- If you would like to run the ‘Hold’ program use ▼ ▲ to scroll to this program and press OK to move to the confirmation page. Note: the Hold program will set every room to be the same temperature until another program is run. This is typically used as a vacation feature. If you would like to run the Hold program use ▼ ▲ to select ‘Yes’; if you would not like to run the program use ▼ ▲ to select ‘No’. Press OK: if you have chosen to run the Hold program you will be brought to the temperature input page. Use ▼ ▲ to set the temperature that you would like to hold the system at. Press OK when you have set the correct temperature – you will automatically return to the Main Menu.

Package Contents
Your Premium thermoSmart Package should contain the following items:
- smartGrate (x5)
- Coordinator (x1)
- Coordinator Back (x1)
- #4 Screws (x4)
- Wall Mounts (x6)
- smartTemp (x5)
- HVAC Controller (x1)
- #6 Screws (x4)
smartGrate Installation

smartGrate installation involves replacing your existing grates with thermoSmart grates. Install one smartGrate in every room you wish to have enhanced temperature control.

Before you begin, you will need:

1 x smartGrate
4 x #6 Screws
Phillips Screwdriver
Power Drill
Pencil

Installing the smartGrate

1. Remove your existing grate.
2. Clear the dust from the register opening.
3. Align one smartGrate with the register opening.
4. Mark the location of the smartGrate mounting holes and remove the grate from the register opening.
5. Drill holes at your marked spots on the wall.
6. Realign the smartGrate and screw in four #6 screws to secure the smartGrate

Coordinator Usage

• The room select page will have all of the rooms grouped by schedule. You can only edit rooms from one group at a time, but you can select multiple rooms (up to all) from the same group to edit at the same time. Use ▼ ► to scroll through the list of rooms and press OK when a desired room is selected. When you have selected all of the rooms you want to edit together, scroll to ‘Done’ at the bottom of the list of rooms and press OK to move to the edit page.
• You will see the entire current schedule for the room(s). Use ◄ ▼ to move between the different spots and lines to make any edits. Use ▼ ► to change the hour, minute, AM/PM, or temperature. If you would like to have less than four temperature changes per day, make sure that the hour or minute for the line(s) that you are not using reads --. Press OK when you have made all of the desired changes to return to the Schedule Program Menu.

• Delete Program
• Use ▼ ► to select ‘Delete Program’ from Add/Edit Room Menu, press OK.
• Use ▼ ► to select the program name that you would like to delete, press OK to move to first confirmation page. Note: you can select ‘Exit’ from the list if you do not wish to delete any programs – pressing OK with this selected will return you to the Schedule Program Menu. If you would like to delete the program use ▼ ► to select ‘Yes’; if you would not like to delete the program use ▼ ► to select ‘No’. Press OK: if you have chosen to delete the program a message will appear confirming the success; you will return to the Schedule Program Menu automatically.
**Coordinator Usage**

- The Saturday schedule defaults to the Monday-Friday schedule. Use ▼ ▲ to move between the different spots and lines to make any edits. Use ▼ ▲ to change the hour, minute, AM/PM, or temperature. If you would like to have less than four temperature changes, make sure that the hour or minute for the line(s) that you are not using reads --. When you are done with your Saturday schedule, press OK to move to the Sunday schedule.
- Repeat the same scheduling step. Press OK when you are done with your Sunday schedule. If you have not scheduled all of the rooms at this point, you will return to the room select page. The scheduled rooms will have an X next to them. Select the rooms that you would like to schedule together and repeat the scheduling process until all of the rooms have been scheduled. When you press OK on the last schedule, you will be brought to the program naming page.
- Use ▼ ▲ to choose the first letter in the program name. You will be able to choose which program you want to have running on the Coordinator, so pick a name that makes sense, such as Normal, Vacation, Winter, etc. Press-▲ to move to the next letter, and repeat until you have inputted the program name that you desire. Note: you are limited to a maximum of 14 letters for the program name. Press OK to return to Schedule Program Menu.

- **Edit Program**
  - Use ▼ ▲ to select ‘Edit Program’ from Schedule Program Menu, press OK.
  - Use ▼ ▲ to select the program that you would like to edit, press OK to move to the next page.

**Wall Mount Installation**

Wall mounts are used to mount every smartTemp. The Coordinator may be wall-mounted or desktop mounted based on your preference.

The wall mount may be attached in two different ways: with removable adhesive tape or with screws.

**Before you begin, you will need:**

1 x Wall Mount
Power Drill (if attached with screws)
2 x #4 1/2” screws

**Installing the Wall Mounts**

**Using Adhesive**

1. Remove the backing of the 3M adhesive on the back of the wall mount.
2. Determine the location you would like to install the wall mount.
3. Press the front of the wall mount firmly against the wall for five seconds.

**Using Screws**

1. Position the wall mount on the wall and mark the locations of the mounting holes with a pencil.
2. Drill holes at your marked spots on the wall.
3. Reposition the wall mount on the wall and screw into place with two #4 screws.

**Installation**
smartTemp Installation

One smartTemp must be installed with each grate. The smartTemp will allow you to set your desired temperature for each room with temperature control.

Before you begin, you will need:

1 smartTemp
1 Wall Mount
2 AA Batteries

Installing the Comfort Controller

1. Please follow the directions on Page 7 to install the wall mount before proceeding.
2. Remove the battery cover from the back of the smartTemp. Insert two AA batteries and close the battery cover, as shown in Figure 1.
3. Slide the smartTemp onto the wall mount.

Figure 1:
Adding the batteries.

Coordinator Usage

message will appear confirming the success; you will return to the Add/Edit Room Menu automatically.

Schedule Program

- Use ▼ ▲ to select ‘Schedule Program’ from Main Menu, press OK.

Make Program

- Use ▼ ▲ to select ‘Make Program’ from Schedule Program Menu, press OK.
- Select all of the rooms that you would like to have the same schedule: use ▼ ▲ to scroll through the list of rooms and press OK when a desired room is selected. When you have selected all of the rooms you want to schedule together, scroll to ‘Done’ at the bottom of the list of rooms and press OK to move to the input page. Note: you will have to schedule all of the rooms, but there is no maximum for the number of rooms you can have with the same schedule.
- You will first schedule Monday-Friday. Use ▼ ▲ to choose the hour at which you would like your temperature to change. Press ▼ to move to minute, use ▼ ▲ to choose the minute (in 15-minute increments). Press ▼ to move to AM/PM, use ▼ ▲ to choose AM or PM. Press ▼ to move to temperature, use ▼ ▲ to set your desired temperature for this time. Press ▼ to move to the next line if you would like to have a different temperature at another time. You may input up to four temperature changes – if you would not like to use all four lines, leave the time as --:--. When you are done with your Monday-Friday schedule, press OK to move to the Saturday schedule.
Coordinator Usage

Add/Edit Room
• Use ▼ ▲ to select ‘Add/Edit Room’ from Main Menu. Press OK.

• Enter New Code
  • Use ▼ ▲ to select ‘Enter new code’ from Add/Edit Room Menu, press OK.
  • Find the code for the grate/room that you would like to add to the system. Use ▼ ▲ to choose the first letter in the code. Press ◄ to move to the next letter, and repeat until all six letters are correct. Press OK to move to naming page. Use ▼ ▲ to choose the first letter in the room name. Press ◄ to move to the next letter, and repeat until you have inputted the room name that you desire. Note: you are limited to a maximum of 14 letters for the room name. Press OK to return to Add/Edit Room Menu.

• Edit Room Name
  • Use ▼ ▲ to select ‘Edit room name’ from Add/Edit Room Menu, press OK.
  • Use ▼ ▲ to select the room name that you would like to edit, press OK to move to edit page. Use ▼ ▲ to move between spaces, use ◄ ◄ to change letters, press OK when finished editing name to return to Add/Edit Room Menu.

• Delete Room
  • Use ▼ ▲ to select ‘Delete room’ from Add/Edit Room Menu, press OK.
  • Use ▼ ▲ to select the room name that you would like to delete, press OK to move to first confirmation page. If you would like to delete the room use ▼ ▲ to select ‘Yes’; if you would not like to delete the room use ▼ ▲ to select ‘No’. Press OK: if you have chosen to delete the room a

Coordinator Installation

The Coordinator is used to set schedules for heating rooms that utilize the thermoSmart system.

The Coordinator may be wall mounted or desktop mounted depending on your preference.

Before you begin, you will need:

1 Coordinator
1 Coordinator Back
or
1 Wall Mount
2 x #4 1/2" screws

Installing the Desktop Coordinator
1. Slide the Coordinator back onto the Coordinator as shown in Figure 1.
2. Plug the Coordinator plug into the nearest wall outlet.
3. Plug the power cord into the Coordinator as shown in Figure 2.
4. Turn on the Coordinator as shown in Figure 3.
Coordinator Installation (Continued)

Wall-Mounting the Coordinator:
1. Please follow the directions on Page 7 to install the wall mount before proceeding.
2. Slide the Coordinator onto the wall mount.
3. Plug the Coordinator plug into the nearest wall outlet.
4. Turn on the Coordinator.

Coordinator Usage

• Date
  - Use ▼ ▲ to select ‘Date’ from Settings Menu, press OK.
  - Use ▼ ▲ to choose the current day of the week. Press ▶ to move to month, use ▼ ▲ to choose the month. Press-▶ to move to day, use ▼ ▲ to choose the day. Press ▶ to move to year, use ▼ ▲ to choose the year. Press OK to save the date and return to the Settings Menu.

• °F/°C
  - Use ▼ ▲ to select °F/°C from Settings Menu, press OK.
  - Use ▼ ▲ to choose °F or °C. Press OK to return to the Settings Menu.

• Restrict Thermostat – By restricting a room you will remove the temperature-setting ability of the Comfort Controller – it will only function to show and measure the current room temperature. The room temperature can be set at the Coordinator.
  - Use ▼ ▲ to select ‘Restrict Thermostat’ from Settings Menu, press OK.
  - Use ▼ ▲ to choose the room that you would like to change the restriction setting for. Press OK to move to confirmation page. Note: an X next to a room name denotes that the room is already restricted – select this room if you would like to un-restrict it. If you would like to restrict the room use ▼ ▲ to select Yes; if you would like to un-restrict the room use ▼ ▲ to select No. Press OK to return to the Settings Menu.

• Language
  - Use ▼ ▲ to select ‘Language’ from Settings Menu, press OK.
  - Use ▼ ▲ to choose your desired language. Press OK to save selection and return to the Settings Menu.
Coordinator Usage

Basic Operations
- The HOME button – after pressing once, returns you to the default screen showing all rooms and their current temperatures.
- The BACK button – moves to previous page each time pressed.
- The OK button – press when finished entering all information. Will move back to last sub-menu if at last step, or move forward to next page if there are more steps.
- The 34 buttons – move left or right when entering information (ex: move between letters when inputting a room name).
- The 65 buttons – move through letters or numbers when entering information (ex: go through letters A-Z for each letter of room name).

Main Menu
- Press any button to get to the Main Menu from the default screen.
- If on a screen other than default, press BACK until you return to the main menu.

Settings
- Use ▼ ▲ to select ‘Settings’ from Main Menu. Press OK.
- Time
  - Use ▼ ▲ to select ‘Time’ from Settings Menu, press OK.
  - Use ▼ ▲ to choose the current hour. Press ► to move to minute, use ▼ ▲ to choose the minute. Press ► to move to AM/PM, use ▼ ▲ to choose AM or PM. Press OK to save the time and return to the Settings Menu. The time in the upper right hand corner of the screen should update to the new time.

HVAC Controller Installation

The HVAC Controller is used to integrate the thermoSmart system with your heating or air conditioning system. You will need to replace your existing thermostat with the HVAC Controller.

Before you begin, you will need:

1 HVAC Controller
Phillips Screwdriver
Power Drill
Pencil

Installing the HVAC Controller
1. Turn off the power that supplies your current thermostat. CAUTION: Flag the fuse or breaker switch with a piece of tape to make sure no one turns the power back on while you are still working.
2. Remove existing thermostat front cover. DO NOT DISCONNECT WIRES YET.
3. Mark the wires with the letters corresponding to the hole the wire is secured into as directed by the table below:

<table>
<thead>
<tr>
<th>Wire</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rh</td>
<td>Heating power supply</td>
</tr>
<tr>
<td>Rc</td>
<td>Cooling power supply</td>
</tr>
<tr>
<td>W</td>
<td>Heating signal</td>
</tr>
<tr>
<td>Y</td>
<td>Cooling signal</td>
</tr>
<tr>
<td>G</td>
<td>Fan</td>
</tr>
</tbody>
</table>
HVAC Controller Installation (Continued)

1. Carefully disconnect the wires from the thermostat, ensuring that the wires do not get damaged or fall back into the wall.
2. Pull wires through the wiring hole in the back of the HVAC Controller and align the Controller in the desired location on the wall.
3. Position the HVAC Controller back piece on the wall and mark the locations of the mounting holes with a pencil.
4. Remove the back from the wall and drill marked holes with a drill bit and your power drill.
5. Pull the wires through the wiring hole and realign the back on the wall.
6. Secure the back of the HVAC Controller to the wall with four #4 mounting screws.
7. Secure the wires in the brackets in accordance with the correct wiring convention.
8. Secure the front and back of the HVAC Controller by pushing the tab and snap fitting them together.
9. Turn the power back on.

smartTemp Usage

Basic Operations
- The ◀ button – increases the desired temperature by 1 degree each time pressed.
- The ▶ button – decreases the desired temperature by 1 degree each time pressed.

Reading the Screen
- Temperature Settings
  - The default screen will show the current room temperature in either Celsius or Fahrenheit depending on the preference set on the Coordinator.
  - When you press the ◀ or ▶ button the temperature on the screen will change to show the desired temperature that you set. After an idle time of three seconds the screen will revert to the default.

- Override
  - If the Coordinator is overriding the temperature set by the user on the smartTemp to minimize heat-up time and maximize energy savings, an OVERRIDE message will appear on the bottom of the screen.

- Low Battery
  - In the lower right hand corner of the screen there is a battery image showing the amount of battery left. When there is low battery (< 10% remaining) the battery image will turn from black to red and begin to flash. Once you replace your two AA batteries the image will return to black and show the new battery level.