

#### **P200 Programmable Thermostat**

Installation Instructions & User Guide



Congratulations on the purchase of your White-Rodgers<sup>™</sup> thermostat! Save these instructions for future use!

Rodgers

Questions? Contact White-Rodgers™ customer service at 1-877-654-9394





White-Rodgers 8100 West Florissant Avenue St. Louis, MO 63136

© 2011 Printed in China 0037-7260A

- Failure to read and follow all instructions carefully before installing or operating this control could cause personal injury and/or property damage.
- The thermostat may stop controlling temperature and your house may freeze or overheat when batteries are too low. Batteries must be changed when appears on the display.

#### ATTENTION: MERCURY NOTICE

This product does not contain mercury. However, this product may replace a product that contains mercury. Mercury and products containing mercury must not be discarded in household trash. Do not touch any spilled mercury. Wearing non-absorbent gloves, clean up any spilled mercury and place in a sealed container. For proper disposal of a product containing mercury or a sealed container of spilled mercury, place it in a suitable shipping container. Refer to www.White-Rodgers.com for location to send product containing mercury.

These symbols are used throughout this User Guide. Watch for them to identify:





PROG Programmable Features

#### TABLE OF CONTENTS

Part 1: Before Getting Started Page 2  1.1 Check package contents  1.2 Answer questions about source of heating in your home  1.3 Assemble tools  1.4 Type off payor to your heating and eagling proton
<ul> <li>1.4 Turn off power to your heating and cooling system</li> <li>Part 2: Remove Old Thermostat and Install New Thermostat Page 4</li> <li>2.1 Expose wires connected to old thermostat</li> <li>2.2 Label and disconnect the wires</li> <li>2.3 Install new thermostat's wallplate</li> </ul>
2.4 Match and connect wires 2.5 Set switch 2.6 Install batteries 2.7 Snap thermostat to the wallplate
Part 3: Quick Setup
Part 4: Additional Thermostat Features Page 18 4.1 Customize the pre-programmed schedule 4.2 Set temporary hold at 4.3 Bypass the schedule (permanent hold) 4.4 Set change filter reminder 4.5 Change batteries 4.6 Adjust actual temperature display
Part 5: Troubleshooting Guide

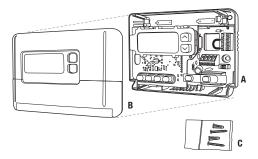
## Part 1 Before Getting Started

Before getting started, please review the following pre-installation checklist.

### 1.1 Check package contents

Open the package and verify that the following items are included:

- Thermostat wallplate (A) and cover (B)
- 2 mounting screws and wall anchors (C)
- Wire Labels
- Installation Instructions and User Guide



If any of the items shown above are missing from your package, call White-Rodgers™ customer service at 1-877-654-9394 before returning the thermostat to your place of purchase.

# **1.2 Answer questions about source of heating in your home**

- ✓ Do you have either oil or gas burning furnace?
- Do you have Hydronic Heating (steam or hot water radiators or radiant floor heating)?

#### 1.3 Assemble tools

You will need the following tools:

Flat-head screwdriver

2 AA alkaline batteries

You may also need:

- ✓ Hammer
- ✓ Drill with 3/16" (4 mm) bit
- Small pliers to bend wires



# **1.4 Turn off power to your heating and cooling system**

Typically, this is achieved by flipping a switch on the outside of the furnace/air handler to the "OFF" position.

ACAUTION Do not turn the system back on until you have completed the installation and set up of the thermostat.

# Part 2 Remove Old Thermostat and Install New Thermostat

TIP Do not disconnect wires from the old thermostat until you label all the wires according to this manual.

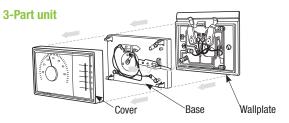
# 2.1 Expose wires connected to old thermostat

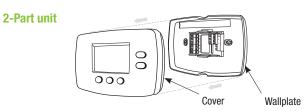
2.1.1 After turning off power to your heating & cooling system, expose wallplate with wires and wire terminals. The required steps vary depending on your old thermostat type.

Your old thermostat may consist of:

 3 parts: a cover, base and wallplate or

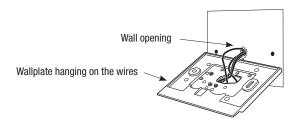
• 2 parts: a cover and wallplate





- The Cover: This usually pulls off, but is sometimes secured by a screw which must be loosened.
- The Base: This either pulls off or needs to be removed by loosening screws under the cover.
- The Wallplate: This is removed by loosening the screws that hold the thermostat to the wall.

2.1.2 Loosen all screws holding the old thermostat's wallplate to the wall. Do not disconnect the wires from terminals. Allow the wallplate to hang loosely on the wires.



#### TIP

- Ignore wire colors. There is no standard color code for thermostat wires.
- ✓ Ignore existing wire labels, if they are present.
- ✓ Use the provided labels to label/re-label the thermostat wires.
- ✓ The new labels must remain on the wires at least until the installation process is complete.
- ✓ No two wires can have the same label.

#### 2.2 Label and disconnect the wires

2.2.1 Note you may see two types of wiring in the old thermostat:

Wires leading from the wall to a terminal on the thermostat

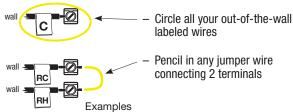
wa

 Wires connecting one terminal to another (jumper wire).
 These don't have to be labeled.



#### 2.2 Label and disconnect the wires (cont.)

- 2.2.2 Label each wire that comes out of the wall and attaches to terminals on the old thermostat. Use labels provided with your new thermostat.
- 1. Note the letter printed near each wired terminal
- 2. For each out-of-the-wall wire:
  - find its terminal letter(s) in the left column of the table on page 9,
  - label the wire according to the **right column** of the table.
- 3. Make the following notes in the right column of the table on page 9:



You'll need this information further in the installation process!

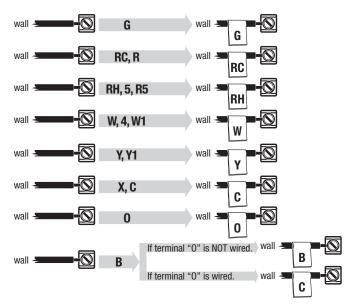
Note: No thermostat installation uses all of the wires shown on page 9. In most cases, between 4 and 5 terminals are wired.

**ACAUTION** Mislabeling the wires could result in damage to your heating and cooling unit.

Contact White-Rodgers™ Customer Service at 1-877-654-9394 if your old thermostat contains any *wired* terminals not listed in the table.

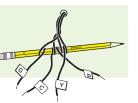
If the OLD thermostat's terminal is wired into the wall and identified by this letter...

...Then label its wire with this letter:



2.2.3 After labeling all the wires, use a screwdriver to disconnect each wire from its terminal. Remove the old thermostat.

TIP Make sure that the wires don't fall into the wall after you detach them from the old thermostat. You may choose to tape them to the wall or tightly wind them around a pencil or screwdriver.

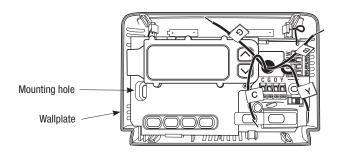


- 8

#### 2.3 Install new thermostat's wallplate

**ACAUTION** Do not allow wires to touch each other or parts on the thermostat. Doing so could result in damage to your heating and cooling unit.

- 2.3.1 Detach the new thermostat's wallplate from the rest of the thermostat and position the wallplate on the wall according to the illustration below, passing the labeled wires through the wire hole in the center of the wallplate.
- 2.3.2 With the wallplate flush against the wall, mark mounting holes with a pencil.



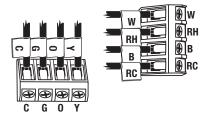
- 2.3.3 Move the wallplate aside. Drill the mounting holes using a 3/16" drill bit. With a hammer, tap the wall anchors, provided in the package, into the drilled holes.
- 2.3.4 Position the wallplate on the wall again and screw the mounting screws into the wall anchors. Do not use a power screwdriver, you may damage your thermostat.

10

#### 2.4 Match and connect wires

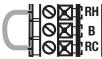
2.4.1 Match each wire coming from the wall to its corresponding terminal, as shown in the illustration below. Insert each wire into the hole on the side of its matching terminal. Using a screwdriver, tighten the screw securely. DO NOT REMOVE THE WIRE LABELS.

TIP No thermostat installation uses all of the wires shown below. In most cases, between 4 and 5 terminals are wired. The remaining terminals will not be used.



A CAUTION A maximum of one wire from the wall can be wired into each terminal.

2.4.2 In the new thermostat, a jumper wire connects the RC and RH terminals.

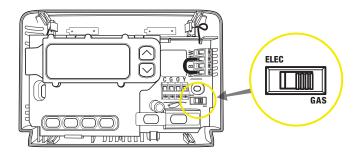


If, in your OLD thermostat	Then		
Terminals <b>RC and RH (or 5, or R5)</b> were connected by a jumper wire,	leave the jumper wire in place in the new thermostat.		
There was a terminal <b>R</b> , which you then labeled RC according to 2.2.2,	leave the jumper wire in place in the new thermostat.		
Terminals <b>RC and RH (or 5 or R5)</b> were NOT connected by a jumper wire,	remove the jumper wire from the new thermostat.		
If you're not sure whether terminals RC and RH were connected in your old			

#### 2.5 Set switch

Find a switch located in the lower right corner of the wallplate labeled **ELEC/GAS**. Set it as follows:

- If you have either a gas or oil furnace, set the switch to GAS.
- If you do NOT have a gas or oil furnace, set the switch to **ELEC**.



#### 2.6 Install batteries

Install 2 AA alkaline batteries (not included) into the battery compartment at the top of the thermostat.

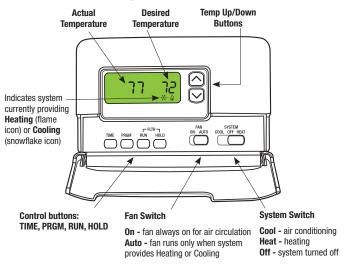
### 2.7 Snap thermostat to the wallplate

until instructed.

**ACAUTION** Do not restore power to the heating and cooling system

# **Part 3 Quick Setup**

### 3.1 Get to know your thermostat



### 3.2 Set fan and system switches

- 1. Open the thermostat cover door.
- 2. Set the FAN switch to AUTO.
- 3. Set the SYSTEM switch to COOL (to turn on cooling) or HEAT (to turn on heating).
- 4. Press RUN.



COOL OFF HEAT

#### 3.3 Select options

Press the **PRGM** and **RUN** buttons simultaneously.

You will be prompted to answer 8 "Options" questions, shown below.

- As each option is presented:

  Use the \$\frac{\lambda}{\text{buttons}}\$ buttons to answer each question.

  Use **HOLD** button to advance to the next question and the TIME button to return to the previous question.





	□ FLTR □
TIME PRGM	RUN / HOLD
Previous	Next

Options	<b>Default Setting</b>	Additional Information
1. Set the temporary Hold Time ( <b>HOLD</b> )	0:00	Select desired time, in 15-minute increments, for the duration of a temporary override of the current temperature. If you are not sure what to chose, 2 hour setting is usually a good starting point.
2. Do you want the Cycle Rate to be Fast or Slow?	FA (fast)	Select <b>SL</b> (slow) if you have Hydronic (water or steam) heating. Otherwise, select default <b>FA</b> .
3. Do you want the display light on ( <b>d-L</b> ) for a short time after any key is pressed?	ON	Use default <b>ON</b> to enable backlight

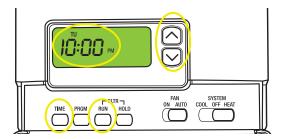
Options	<b>Default Setting</b>	Additional Information
4. Do you want the Energy Management Recovery (E) function to be enabled?	ON (enabled)	Select default <b>ON</b> .  Ensures the desired temperature is reached by the designated program schedule time
5. Do you want to be reminded when it is time to change the air filter? (FLTR)	000 (no reminder)	Select default <b>000</b> for now. To set a filter-change reminder, see section 4.4
6. Compressor Lockout ( <b>LOC</b> )	OFF	Select <b>ON</b> to provide protection to your Heating and Cooling System's compressor
7. How much displayed temperature offset do you want?	OHI (no offset)	Select default <b>OHI</b> for now. To adjust the actual temperature reading, see section 4.6
8. Do you want temperature displayed in °C (Celsius) or °F (Fahrenheit)?	°F (Fahrenheit)	

When you have answered all 8 questions, press the RUN button.

# 3.4 Turn on power to your heating and cooling system

#### **PROG** 3.5 Set time and date

- 1. Press the **TIME** button. The display will show the **hour**.
  - Using the ♦ buttons adjust the hour.
- 2. Press the **TIME** button. The display will show minutes.
  - Using the buttons adjust the minutes.
- 3. Press the **TIME** button. The display will show the day of the week.
  - Using the buttons adjust the day.
- 4. Press the RUN button.



# **Congratulations!**

You have completed the basic setup of your new thermostat. It's ready to use.

To read about additional thermostat features, continue to section 4.

## **PROG 3.6 Review pre-programmed schedule**

The thermostat is set to control temperature according to the following pre-programmed, energy-efficient schedule. If this schedule meets your needs, no further action is required.

		Mon - Fri		Sat - Sun	
	Period	Start Time	Temp	Start Time	Temp
	Morning	6 am	70°F	6 am	70°F
HEAT	Day	8 am	62°F	8 am	62°F
뽀	Evening	5 pm	70°F	5 pm	70°F
	Night	10 pm	62°F	10 pm	62°F
	Morning	6 am	78°F	6 am	78°F
占	Day	8 am	85°F	8 am	85°F
1000	Evening	5 pm	78°F	5 pm	78°F
	Night	10 pm	82°F	10 pm	82°F

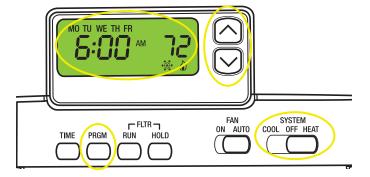
To customize this schedule, continue to the next page (section 4.1).

### **Part 4 Additional thermostat features**

# PROG 4.1 Customize the pre-programmed schedule

You can change the day, time period or temperature settings of the pre-programmed schedule.

- Set the SYSTEM switch to COOL (to program the cooling schedule), or to HEAT (to program the heating schedule).
- Press the **PRGM** button. The start time and temperature of the first weekday (Monday through Friday) time period (Morning) is displayed.
  - Use the ♦ buttons to set the temperature for that time period.
  - Press the **TIME** button to modify the start time of that time period.
     Use the \$\sigma\$ buttons to adjust the start time in 15-minute increments.

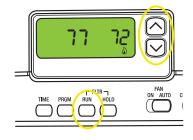


- Press the PRGM button. The start of the next weekday time period (Day) is displayed. Program Day and then Evening and Night time periods for weekdays as you programmed Morning.
  - Press **PRGM** after each time period is programmed.
- 4. Once the weekday periods are set, repeat the programming steps to program time periods for **SA** (Saturday) and then **SU** (Sunday).
- 5. When you are finished customizing the schedule, press **RUN**.

### **PROG** 4.2 Set temporary hold at

You can override a programmed temperature for a brief period of time.

- 1. Use the \( \rightarrow \) buttons to raise or lower the desired temperature.
- 2. The override will automatically cancel after a period of time defined in Setup Question 1 (see Table 3.3 of the manual).
- 3. Cancel the override by pressing the **RUN** button.

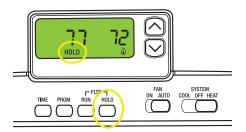


# PROG 4.3 Bypass the schedule (permanent hold)

You can manually override the currently-programmed temperature indefinitely.

- 1. Use the \( \rightarrow \) buttons to raise or lower the desired temperature.
- 2. When the desired temperature is displayed, press the **HOLD** button. "HOLD" will be displayed at the bottom of the screen.
- 3. The override will last until you cancel it.

  Cancel the override by pressing the RUN button.

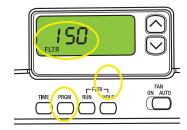


#### 4.4 Set change filter reminder

The thermostat can display a reminder when it is time to change the air filter on your heating and cooling system.

To enable Change Filter reminder:

- 1. Press the **PRGM** and **RUN** buttons simultaneously.
- 2. Press the **HOLD** button four (4) times until you see **FLTR** in the display.
- Using the buttons select the number of hours until you would like to be reminded of the filter change. The hours increase in increments of 50.
- 4. Press RUN when you are finished.
- 5. Once the set time has elapsed, **FLTR** will be displayed on the screen.
- Reset the reminder by pressing the HOLD and RUN buttons simultaneously.

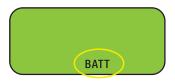


### **4.5 Change batteries**

When the thermostat displays



0R



you need to replace batteries with 2 new AA alkaline batteries.

## 4.6 Adjust actual temperature display

Your thermostat was accurately calibrated at the factory. However, if you would like the displayed temperature to read higher or lower than the actual temperature, you can adjust the displayed temperature by +/- 4 degrees.

To adjust the actual temperature display:

- 1. Press the **PRGM** button and **RUN** buttons simultaneously.
- Press the **HOLD** button to advance through the options until you reach a screen where "HI" or "LO" is displayed.
- Use the \$\sigma\$ buttons to adjust the actual temperature; from 4:HI to 4:L0.
- 4. Press RUN.



Default setting

- no temperature adjustment

### **Part 5 Troubleshooting Guide**

Problem	Possible Cause	Action
Snowflake icon blinking	5-minute lockout enabled to protect compressor	No action needed: should stop blinking after 5 minutes
No Heat, No Cool, or No Fan	Blown fuse / tripped circuit breaker	Replace fuse or reset breaker
	Furnace power switch to <b>0FF</b>	Turn switch to <b>ON</b>
	Furnace blower compartment door or panel loose or not properly installed	Replace door panel in proper position to engage safety interlock or door switch
	Loose connection to thermostat or system	Tighten connections
	Low Batteries	Replace batteries
Thermostat & Indoor Thermometer Setting Disagree		The thermometer can be adjusted +/- 4 degrees. See Temperature Display Adjustment in the Configuration Menu section

#### **5 Troubleshooting Guide (continued)**

Problem	Possible Cause	Action
No Display or no backlight	Low Batteries	Replace batteries
Thermostat doesn't follow the scheduled program	AM or PM set incorrectly in the program	Check the current settings including AM and PM designations for each time period
	AM or PM set incorrectly on the thermostat's clock	each time penou
Heating or Cooling starts earlier than programmed	Energy Management Recovery function activated. See Table 3.3, Step 4 for details	No action required

#### **Reset Operation**

If a voltage spike or static discharge blanks out the display or causes erratic thermostat operation, you can reset the thermostat by pressing all three buttons (**TIME**, and **both** \$\sqrt{}\$ buttons) simultaneously. This reset will restore your thermostat's initial factory setting.

**ACAUTION** Remember to turn off your heating / cooling system BEFORE resetting your thermostat. You will then have to go through a full initial setup described in Part 3 and Part 4 of the manual before you can turn your Heating & Cooling system back on. Failure to follow this instruction may lead to your Heating & Cooling system damage or malfunction.