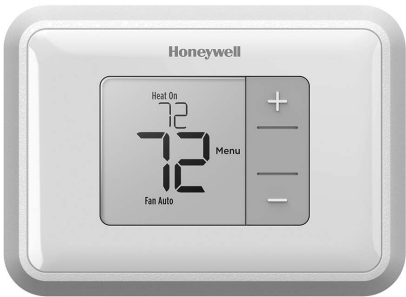


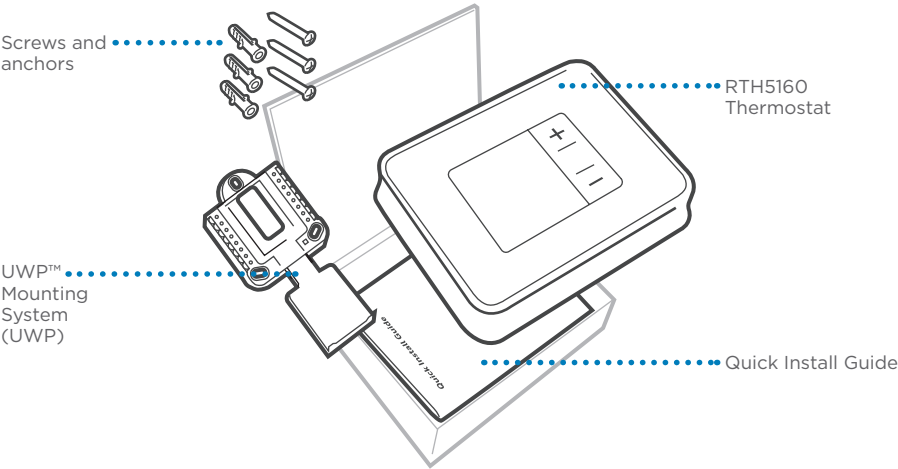
RTH5160 Series

Non-Programmable
Thermostat

Quick Installation Guide



Included in your box



Tools you will need



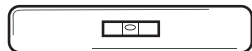
Phillips screwdriver



Small flat head screwdriver



Pencil



Level

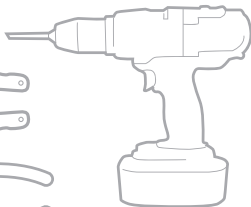
Tools you may need



Wire stripper



Needle-nose pliers

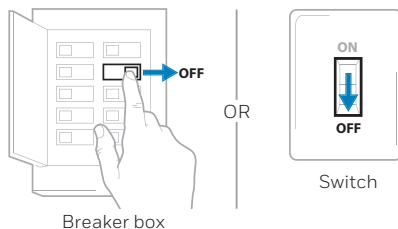


Drill and
drill bit (7/32 in)

Removing your old thermostat

1 Turn power OFF.

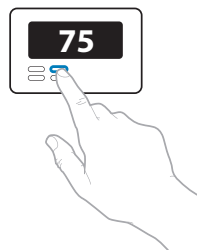
⚠ To protect yourself and your equipment, turn off the power at the breaker box or the switch that controls your heating/cooling system.



2 Check that your system is off.

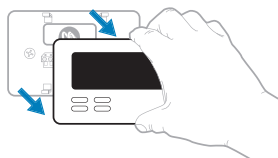
Change the temperature on your old thermostat to be above room temperature in heat mode or below it in cool mode. If you don't hear the system turn on within 5 minutes, the power is off.

Note: If you have a digital thermostat that has a blank display, skip this step.



3 Remove the old thermostat's faceplate.

On most thermostats, you can take off the faceplate by grasping and gently pulling. Some thermostats may have screws, buttons, or clasps.



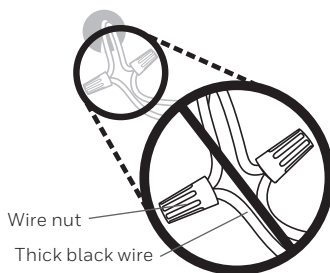
⚠ Do not remove any wires from your thermostat at this time!

4 Make sure there are no 120/240V wires.

⚠ Do you have thick black wires with wire nuts?

⚠ Is your thermostat 120V or higher?

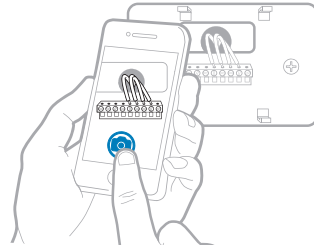
If you answered yes to either of these questions, you have a line voltage system and the thermostat will not work.



5 Take a picture of how your wiring looks right now.

Be sure to include the letters next to the terminals where the wires are inserted. This will be a helpful reference when wiring your new thermostat.

Tip: If the color of your wires has faded or if 2 terminals have the same wire color, use the wire labels provided in the package to label each wire.

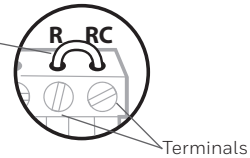


6 Record which R-wire(s) you have and write down the color of the wire(s).

Note: Do not include jumpers as a part of your count. The thermostat does not need jumpers.

Terminal	Wire Color
☐ R	_____
☐ RH	_____
☐ Rc	_____

Example of a jumper



7 Record the remaining wires and write down the color of the wires.

Check mark the wires that are connected to terminals. Next to the check mark, write down the color of the wire. **Do not include jumpers as a part of your count.**

Check all that apply (Not all will apply):

Terminal	Wire Color	Terminal	Wire Color
☐ Y	_____	☐ A or L/A	_____
☐ G	_____	☐ O/B	_____
☐ C	_____	☐ W2 or AUX	_____
		☐ E	_____
		☐ W	_____
		☐ K	_____

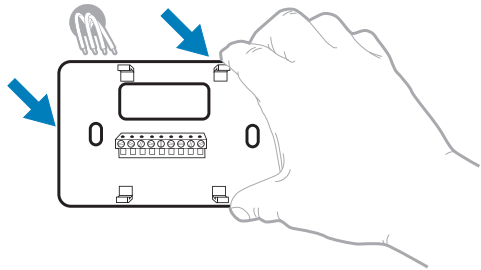
NOTES:

- **C** does not power the thermostat display or operations; batteries are always required.
- If **K** was used on old thermostat you have a wire-saver at the equipment. Re-wiring would need to be done so that Y and G are used instead of K.
- **The RTH5160 thermostat does not support L/A, S, or U terminals.**
- **If there are wires in terminals that are not listed, you will need additional wiring support.** Visit yourhome.honeywell.com/support to find out if the thermostat will work for you.

8 **Disconnect the wires and remove the old wall plate.**

Use a screwdriver to release wires from terminals. Then, use a wire label to identify each wire as it's disconnected. The letter on the wire label should match the letter on the terminal.

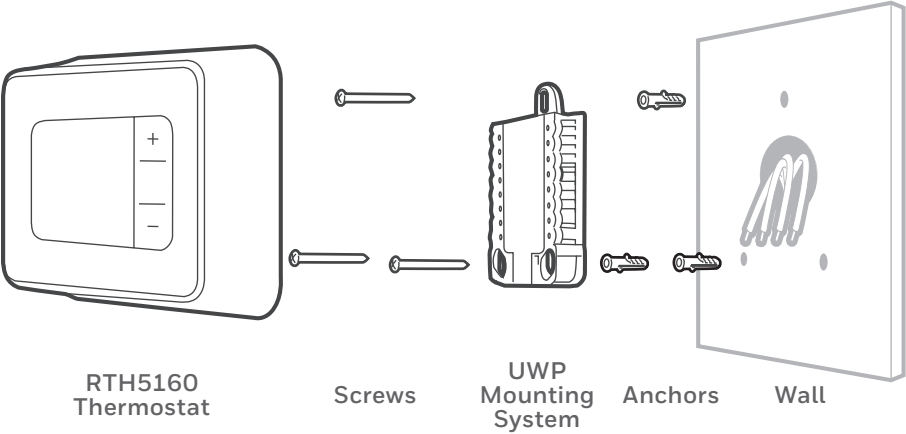
Tip: To prevent wires from falling back into the wall, wrap the wires around a pencil.



Wiring Labels		Étiquettes de fils		Riquelques autres les câbles	
Apply these wiring labels to each wire and to appropriate terminal designation on your thermostat.		L'appliquez ces étiquettes de fils à chaque câble et à l'assignation des bornes appropriées de votre thermostat.		On doit étiqueter les câbles et les bornes de votre thermostat.	
B	B	Y2	Y2	C	C
G	G	H	H	L	L
R	R	RC	RC	RH	RH
WVR	WVR	W	W	W1	W1
X	X	X1	X1	X2	X2
				Y	Y
				Y1	Y1
				Y2	Y2
				W2	W2
				W3	W3

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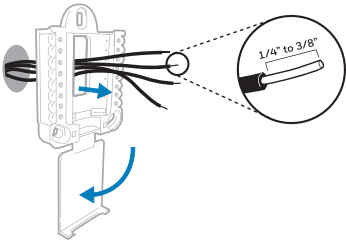
Installing your RTH5160 thermostat



9 **Bundle and insert wires through the UWP.**

Pull open the UWP and insert the bundle of wires through the back of the UWP.

Make sure at least **1/4 inch** of each wire is exposed for easy insertion into the wire terminals.



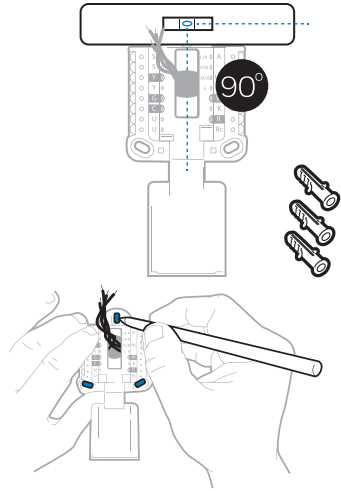
10 Insert the wall anchors.

It is recommended that you use the wall anchors included in the box to mount your thermostat.

You can use the **UWP** to mark where you want to place the wall anchors.

- Level the wall plate.
- Mark the location of the wall anchors using a pencil.
- Drill the holes.
- Insert wall anchors.
- Make sure anchors are flush with wall.

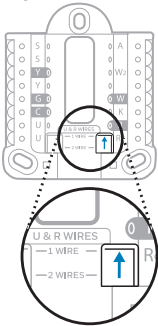
Tip: Use a 7/32 drill bit.

**11 Set R-switch position and insert R-wire(s).**

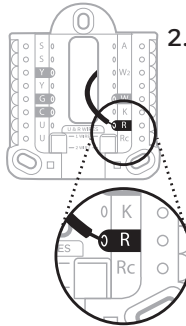
Set the R-switch up or down based on your wiring notes in **Step 6**.

⚠ Insert wires into the inner holes of the terminals on the UWP. The tabs will stay down once the wire is inserted.

NOTE: Alternate wiring options are shown on pages 11-12.

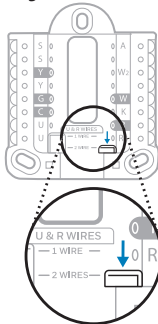
If you have 1 R-wire (R, Rh, or Rc)

1. Set R-switch to the **up** position.

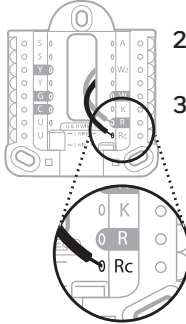


2. Insert your **R-wire (R, Rh or Rc)** into **R-terminal**.

or

If you have 2 R-wires (R or Rh, and Rc)

1. Set R-switch to the **down** position.



2. Insert your **Rc wire** into **Rc-terminal**
3. Insert your **R or Rh wire** into **R-Terminal**.

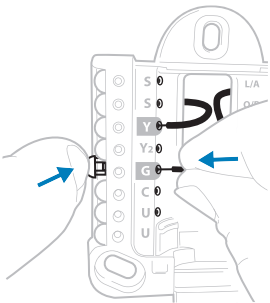
12 Connect remaining wires.

Depress the tabs to put the wires into the inner holes of the corresponding terminals on the UWP (one wire per terminal) until it is firmly in place.

Gently tug on the wires to verify they are secure.

Tip: If you need to release a wire again, push down the corresponding terminal tab on the side of the UWP.

NOTE: Alternate wiring options are shown on pages 11-12.



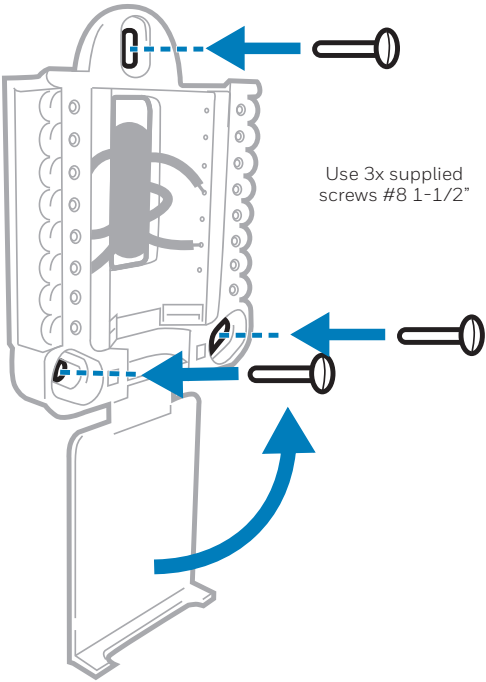
This wiring is just an example, yours may vary.

13 Confirm wiring matches snapshot.

Please confirm wiring matches terminals from the photo you took in Step 5.

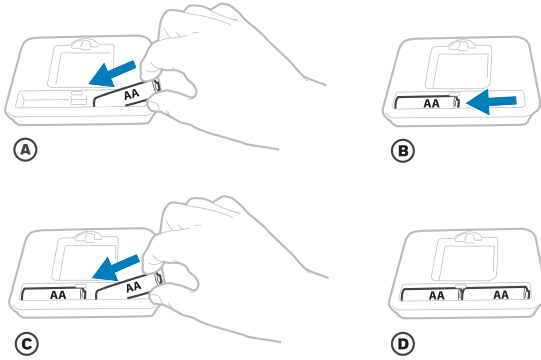
14 Mount the UWP and close the door.

Mount the UWP using the provided screws. Install all three screws for a secure fit on your wall. Close the door after you're finished.

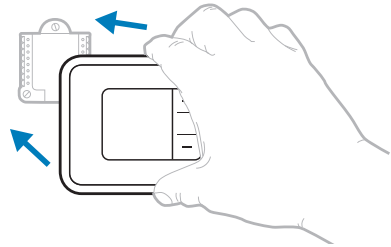


15 Install batteries.

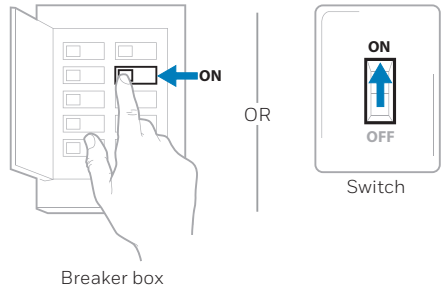
Insert two AA alkaline batteries in the back of the thermostat as shown.

**16 Attach your thermostat.**

Align the thermostat onto the UWP and firmly snap it into place.

**17 Turn your power ON.**

Turn on the power at the breaker box or switch that controls the heating/cooling system.



System Setup

Now that you have installed your thermostat, please follow the steps below to setup your system and personalize your thermostat.

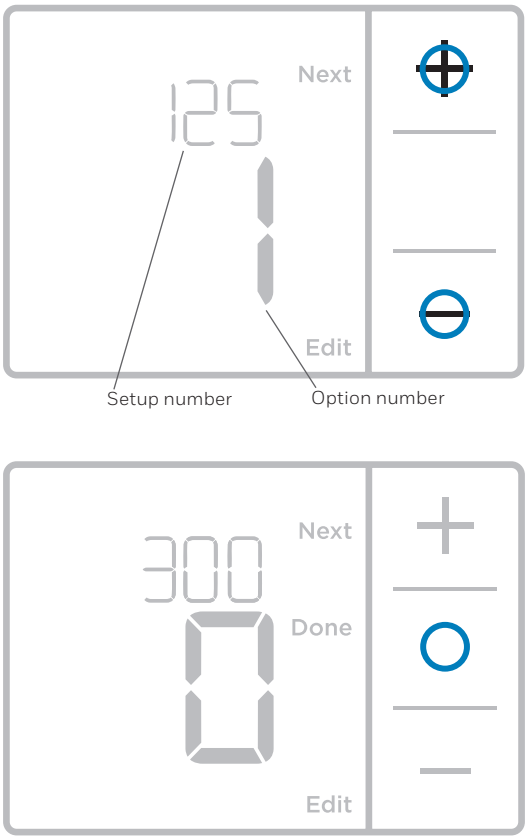
18 Select System Setup options.

Press **Edit** (-) to change values or select from available options. Then press **Next** (+) to save changes and advance to the next System Setup number.

See “System Setup options” on the next page for a full list of System Setup numbers and options.

Repeat until all of the System Setup options have been set, and then press **Done**. The thermostat will save and exit to the home screen.

19 Continue to “System operation settings” on page 10.



NOTE: To re-enter the System Setup from the Home Screen, press and hold the **Menu** button for approximately 5 seconds.

System Setup options

System Setup Number and Description	Options (factory default in bold)
125 = Temperature Indication Scale	0 = Fahrenheit 1 = Celsius
200 = Heating System Type	1 = Conventional Forced Air Heat 2 = Heat Pump 3 = Radiant Heat (Boiler) 5 = None (Cool Only)
	<i>Note: This option selects the basic system type your thermostat will control.</i>
205 = Heating Equipment Type	Conventional Forced Air Heat: 1 = Standard Efficiency Gas Forced Air 2 = High Efficiency Gas Forced Air 3 = Oil Forced Air 4 = Electric Forced Air 5 = Hot Water Fan Coil
	Heat Pump: 7 = Air to Air Heat Pump
	Radiant Heat: 9 = Hot Water Radiant Heat 12 = Steam
218 = Reversing Valve O/B	0 = 0 (O/B in Cool) 1 = B (O/B in Heat)
	<i>Note: This option is only displayed if the Heat Pump configured. Select whether reversing valve O/B should energize in cool or in heat.</i>
220 = Cool Stages / Compressor Stages (200=Conv / 200=HP)	0, 1 , 2
	<i>Note: Select how many Cool or Compressor stages of your equipment the thermostat will control. Maximum of 2 Cool stages or 1 Compressor stage. Set value to 0 if you do not have Cool Stage/Compressor Stage.</i>
221 = Heat Stages / Backup Heat Stages	Heat Stages: 1 , 2 Backup Heat Stages: 0, 1
	<i>Note: Select how many Heat or Aux/E stages of your equipment the thermostat will control. Maximum of 2 Heat Stages for conventional systems. Maximum of 1 Aux/E stage for systems with more than 1 heating equipment type. Set value to 0 if you do not have Heat Stage/Backup Heat Stage.</i>
300 = System Changeover	0 = Manual 1 = Automatic
	<i>Note: Thermostat can automatically control both heating and cooling to maintain the desired indoor temperature. To be able to select "automatic" system mode on thermostat home screen, turn this feature ON. Turn OFF if you want to control heating or cooling manually.</i>

NOTE: Once you have cycled through all of the System Setup numbers, press **Done** to save and exit to the home screen.

Setup Complete

You have now finished installing and setting up your thermostat.

System operation settings

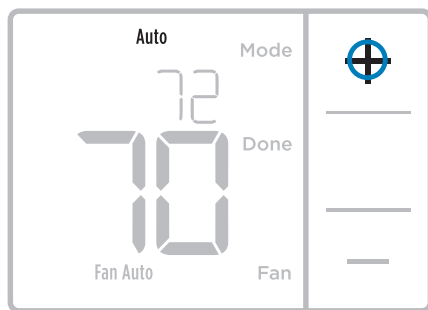
- 1 Press **Menu**, and then press the **Mode (+)** button to cycle to the next available System mode.
- 2 Cycle through the modes until the required System mode is displayed, and then press **Done**.

NOTE: Available System modes vary by model and system settings.

System modes:

- **Auto:** Thermostat selects heating or cooling as needed.
- **Heat:** Thermostat controls only the heating system.
- **Cool:** Thermostat controls only the cooling system.
- **Em Heat (only for heat pumps with auxiliary heat):** Thermostat controls Auxiliary Heat. Compressor is not used.
- **Off:** Heating and cooling system is off. Fan will still operate if fan is set to On.

NOTE: Heat On/Cool On may flash for 5 minutes due to compressor protection.



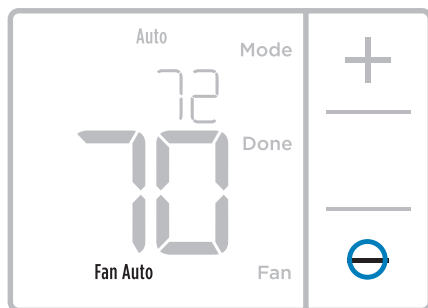
Fan operation settings

- 1 Press **Menu**, and then press the **Fan (-)** button to cycle to the next available Fan mode.
- 2 Cycle through the modes until the required Fan mode is displayed, then press **Done**.

NOTE: Available Fan modes vary with system settings.

Fan modes:

- **Auto:** Fan runs only when the heating or cooling system is on.
- **On:** Fan is always on.



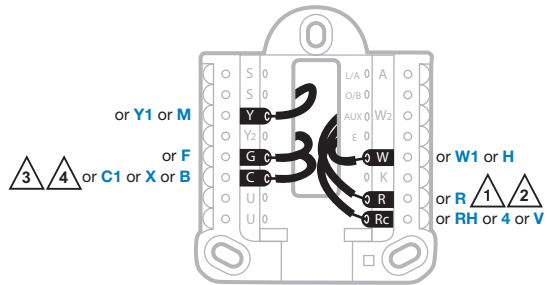
Wiring—conventional systems

Alternate wiring (conventional systems)

If labels do not match terminals, connect wires as shown below (see notes, below).

NOTES:

1. If you must connect both **R** and **Rc** wires, set the R Slider Tab to the **down** position (2 wires).
2. If your old thermostat had both **R** and **RH** wires, set the R Slider Tab to the **down** position (2 wires). Then connect the **R** wire to the **Rc** terminal, and the **RH** wire to the **R** terminal.
3. If your old thermostat had only 1 **C** or **C1** wire, connect it to the **C** terminal. If your old thermostat had 2 **C** or **C1** wires, wrap each separately with electrical tape and do not connect them.
4. **C** does not power the thermostat display or operations; batteries are always required.



Wiring—heat pump

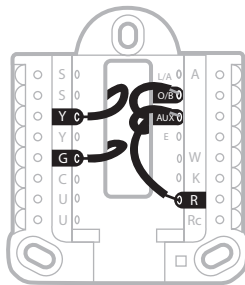
Connect wires: heat pump

- 1 Match each labeled wire with same letter on new thermostat.
- 2 Insert the wires into the matching terminal.

NOTE: If you have difficulty inserting wires, you may have to press down the terminal push button next to the corresponding terminal.

Labels don't match?

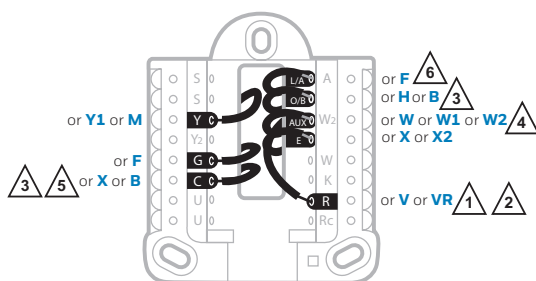
If labels do not match letters on thermostat, see “Alternate wiring (conventional systems)” above.



Alternate wiring (for heat pumps only)

NOTES:

1. Keep R Slider Tab in the **up** position (1 wire).
2. If your old thermostat had both **V** and **VR** wires, stop now and contact a qualified contractor for help.
3. If your old thermostat had separate **O** and **B** wires, attach the **B** wire to the **C** terminal. If another wire is attached to the **C** terminal, stop now and contact a qualified contractor for help.
4. If your old thermostat had **Y1**, **W1** and **W2** wires, stop now and contact a qualified contractor for help.
5. **C** does not power the thermostat display or operations; batteries are always required.
6. This model doesn't support the heat pump fault alert (L/A terminal). If this is desired, please contact a contractor for replacement model.



Battery replacement

Batteries are required to provide power. Install fresh batteries immediately when the low battery icon appears. The icon appears about two months before the batteries are depleted.

Even if the low battery icon does not appear, you should replace batteries once a year, or before leaving home for more than a month.



If batteries are inserted within two minutes, the time and day will not have to be reset. All other settings are permanently stored in memory, and do not require battery power.

NOTE: When replacing batteries, alkaline batteries are recommended.

Alerts screen

- 1 You will see the alert icon  and the alert number on the screen.



- 2 Press **Next** (+) to see additional alerts, if any. Then press **Done** to go back to the home screen.

NOTE: If the alert is a critical alert, you may not be able to access the home screen and should call a HVAC professional.



Alerts codes

Number	Alert/Reminder	Definition
170	Internal Memory Error	The memory of the thermostat has encountered an error. Please replace the thermostat.
173	Thermostat Temperature Sensor Error	The sensor of the thermostat has encountered an error. Please replace the thermostat.
405	Low Battery Alert	The batteries are getting low. Replace them within two months.
407	Critical Low Battery	The batteries are almost depleted and should be replaced as soon as possible.

Troubleshooting

If you have difficulty with your thermostat, please try the following suggestions. Most problems can be corrected quickly and easily.

Display is blank	Make sure fresh AA alkaline batteries are properly installed (see page 7).
Cannot change system setting to Cool	Check System Setup Option 220 to make sure the options are set to either 1 or 2 (see page 9).
Fan does not turn on when heat is required	Check System Setup Option 205 to make sure it is set to match your heating equipment (see page 9).
Heating system is running in cool mode	Check System Setup Option 200 or 218 to make sure it is set to match your heating and cooling equipment (see see page 9).
Heating or cooling system does not respond	Press Menu and then Mode to set system to Heat. Make sure the temperature is set higher than the Inside temperature. Press Menu and then Mode to set system to Cool. Make sure the temperature is set lower than the Inside temperature. Check circuit breaker and reset if necessary. Make sure power switch at heating & cooling system is on. Make sure furnace door is closed securely. Wait 5 minutes for the system to respond.
Heat On / Cool On flashing on the screen	Compressor protection feature is engaged. Wait 5 minutes for the system to restart safely, without damage to the compressor.
Heat pump issues cool air in heat mode, or warm air in cool mode	Check System Setup Option 200 or 218 to make sure it is set to match your heating and cooling equipment (see page 9).

1-year limited warranty

Honeywell warrants this product, excluding battery, to be free from defects in the workmanship or materials, under normal use and service, for a period of one (1) year from the date of purchase by the consumer. If at any time during the warranty period the product is determined to be defective or malfunctions, Honeywell shall repair or replace it (at Honeywell's option).

If the product is defective,

(i) return it, with a bill of sale or other dated proof of purchase, to the place from which you purchased it; or

(ii) call Honeywell Customer Care at 1-800-468-1502. Customer Care will make the determination whether the product should be returned to the following address: Honeywell Return Goods, Dock 4 MN10-3860, 1985 Douglas Dr. N., Golden Valley, MN 55422, or whether a replacement product can be sent to you.

This warranty does not cover removal or reinstallation costs. This warranty shall not apply if it is shown by Honeywell that the defect or malfunction was caused by damage which occurred while the product was in the possession of a consumer.

Honeywell's sole responsibility shall be to repair or replace the product within the terms stated above. HONEYWELL SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.

THIS WARRANTY IS THE ONLY EXPRESS WARRANTY HONEYWELL MAKES ON THIS PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE ONE-YEAR DURATION OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

If you have any questions concerning this warranty, please write Honeywell Customer Relations, 1985 Douglas Dr, Golden Valley, MN 55422 or call 1-800-468-1502. In Canada, write Retail Products ON15-02H, Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Toronto, Ontario M1V4Z9.

**CAUTION: ELECTRICAL HAZARD**

Can cause electrical shock or equipment damage. Disconnect power before beginning installation.

**CAUTION: MERCURY NOTICE**

If this product is replacing a control that contains mercury in a sealed tube, do not place the old control in the trash. Contact your local waste management authority for instructions regarding recycling and proper disposal.

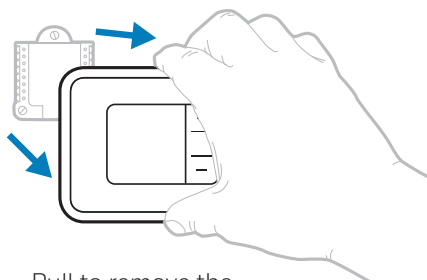
**ALERT: HHW PROPER DISPOSAL**

This product is an electronic device and considered Household Hazardous Waste (HHW). It should not be disposed of with other household waste. Contact your local waste management authority for instructions regarding recycling and proper disposal.

Customer assistance

For assistance with this product,
please visit
<http://yourhome.honeywell.com>.

Or call Honeywell Customer Care
toll-free at **1-800-468-1502**.



Pull to remove the
thermostat from the
UWP.

Home and Building Technologies

In the U.S.:

Honeywell

1985 Douglas Drive North

Golden Valley, MN 55422-3992

customer.honeywell.com

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