

CT41A Heating/Cooling Thermostat

INSTALLATION INSTRUCTIONS



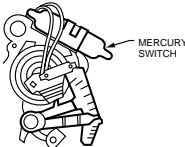
Heating/Cooling
15 to 30 Vac Thermostat

Congratulations on the purchase of your new thermostat!

YOUR NEW CT41A THERMOSTAT

Your new CT41A Thermostat replaces most 15 to 30V, 4-wire, heating/cooling system thermostats. The CT41A is suitable for gas or oil heat or electric air conditioning systems.

Direct questions about this thermostat to our Web site at www.honeywell.com/yourhome or call the customer information line at 1-800-468-1502.



TYPICAL LOCATION OF A MERCURY SWITCH IN A THERMOSTAT

M10614



MERCURY NOTICE

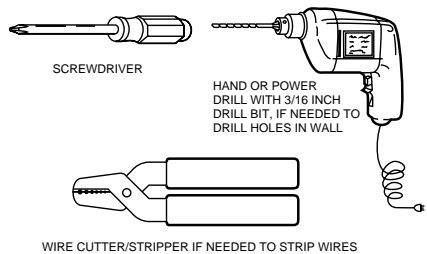
If this control is replacing a control that contains mercury in a sealed tube, do not place your old control in the trash. Dispose of it properly.

Contact your local waste management authority for instructions regarding recycling and the proper disposal of an old control.

1 PREPARE FOR INSTALLATION

If you are unsure about wiring procedures, please call a qualified service technician for assistance.

- To correctly install your new thermostat, follow these step-by-step instructions. It is recommended that, as you read, understand, and complete each step, you place a check mark in each box provided.
- See Your New CT41A Thermostat section above to determine the thermostat suitability for compatibility with your home system. If not, return it to the retailer. Acquire the required installation tools and supplies, as needed. See Fig. 1.



WIRE CUTTER/STRIPPER IF NEEDED TO STRIP WIRES



LEVEL, IF NEEDED TO LEVEL THERMOSTAT FOR APPEARANCE

M20551

Fig. 1. Required installation tools/supplies.



2 REMOVE OLD THERMOSTAT

- ❑ Test to be sure your heating and air conditioning systems (where applicable) are working correctly. If not, contact your local heating/air conditioning dealer. To avoid compressor damage, do not operate the cooling system when outdoor temperature is below 50°F (10°C).

CAUTION

Equipment Damage Hazard.
Handling wires during installation can damage equipment.
 Disconnect power at furnace or main breaker/ fuse box before beginning installation.

- ❑ Carefully unpack your new thermostat and save the package of screws, the instructions and the receipt.
- ❑ Remove the cover from the old thermostat. If it does not snap off when pulled firmly from the bottom, check for a screw that locks on the cover.
- ❑ Before removing the old thermostat from the wall, look at it carefully to locate the heat anticipator adjustment mechanism, see Fig. 2. Make a note here _____ of the anticipator setting for future reference. The heat anticipator pointer, if adjustable, is set at one of a series of numbers representing the (electrical) current rating of the primary control of your system (in amperes). The numbers range from 0.18 to 1.0. If no heat anticipator/indication is showing, do not be concerned; move on to the next step.

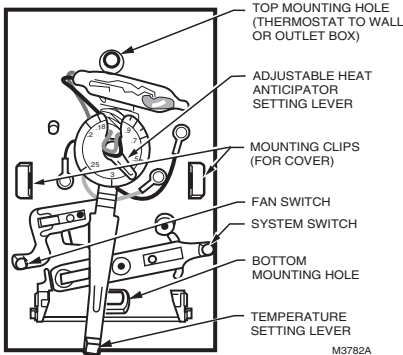


Fig. 2. Locating heat anticipator adjustment mechanism.

- ❑ Loosen screws holding thermostat to subbase, wallplate or wall and lift away.
- ❑ Disconnect wires from old thermostat or subbase. As you disconnect each wire, tape the end and label it with the letter of the terminal designation. If there are only two wires, they do not require labeling. Wrap wires around a pencil to keep them from falling back into the wall as shown in Fig. 3.

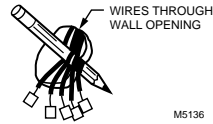


Fig. 3. Wrapping wires around pencil.

- ❑ Keep the old thermostat for reference until your new thermostat is functioning smoothly.

3 WIRE AND MOUNT THERMOSTAT

- ❑ Connect wires from the wall to the matching terminals on the back of the thermostat. See Fig. 4. Tighten the screws.

NOTE: If terminal designations on old thermostat do not match those on new thermostat, see Table 1.

Table 1. Terminal Functions.

Old Thermostat Terminal Marking	Function	New Thermostat Terminal Marking
G or F	Fan	G
Y or C or M or Y ₁	Cooling	Y
W or H or W ₁	Heating	W
RC, V, VC or B	Power	Your 5-wire system cannot use this thermostat; use a CT87B instead.
RH, M, VR, 4, A or R	Power	R

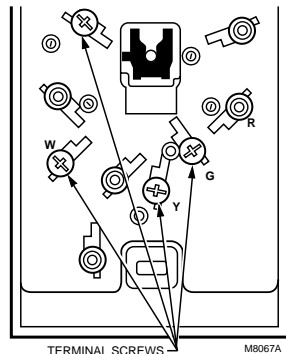


Fig. 4. Connect wires from wall to thermostat matching terminals.

- ❑ Push excess wire back into wall and plug hole with nonflammable insulation to prevent drafts from affecting thermostat operation.
- ❑ Remove thermostat cover by pulling outward on right edge of cover until it snaps free of the thermostat base.
- ❑ Fasten thermostat to wall or vertical outlet box with a screw through the top mounting hole. See Fig. 2 for hole location.
- ❑ Place a bubble level or plumb line against the thermostat to find the level position. See Fig. 5. Start a screw in the center of the bottom mounting hole. (Move the temperature setting lever, if necessary, to uncover the mounting hole.)

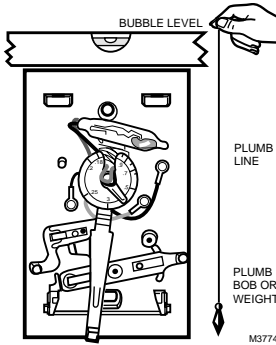


Fig. 5. Level thermostat.

- ❑ Recheck for level positioning and firmly tighten both mounting screws.
- ❑ Be sure you have the current draw anticipator setting for your system. This is the number you wrote in the box in step 2 Remove Old Thermostat section. If you could not find the current draw for step 2, look on your primary control at the furnace. See Fig. 6. (The primary control is usually a gas valve, zone valve, or a relay or burner control box with the thermostat wires connected to it. For electric heat, add the fan relay current, usually 0.2A to 0.4A.)

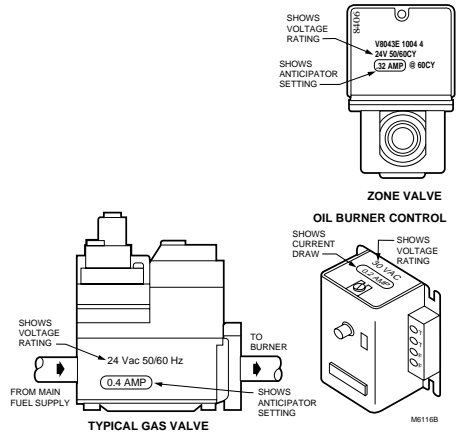


Fig. 6. Locate your system current draw anticipator setting.

- ❑ Set the heat anticipator indicator at the rating printed on the primary control. See Fig. 7.



CAUTION

Heat Anticipator Hazard.
Setting heat anticipator too low can cause anticipator burnout.

Set heat anticipator at recommended rating to avoid shorting out your valve or control and prevent burnout of your heat anticipator.

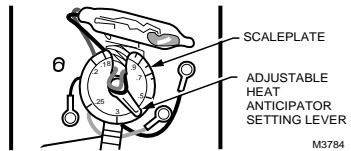


Fig. 7. Set heat anticipator indicator to match your primary control rating.

- ❑ Press thermostat cover firmly onto the mounting clips. See Fig. 2.

4 CHECK OUT THERMOSTAT

The System switch controls as follows:

Heat: heating system only operates.

Off: heating and air conditioning systems are disconnected.

Cool: air conditioning system only operates.

The Fan switch controls as follows:

Auto: fan operates when heating or air conditioning system operates.

On: fan operates continuously.

NOTE: In the following instructions, disregard heating or air conditioning directions if not applicable to your system.

CAUTION

Compressor Damage Hazard.

Operating at too low of an outdoor temperature can cause compressor damage.

Do not operate cooling if outdoor temperature is below 50°F (10°C).

Allow compressor to remain off for five minutes before restarting.

Refer to manufacturer's recommendations.

- Turn on power to the heating/air conditioning system.

- Observe system operation for at least one cycle on both heating and air conditioning. To observe:
- Place the System switch at the Heat position and the Fan switch at the Auto position. Move the temperature setting lever 10°F (6°C) below room temperature. The heating equipment should turn on. A short warmup period may be required before system fan turns on.

NOTE: Some systems have a time delay that can prevent operation up to five minutes.

- Turn the Fan switch to On. The system fan should turn on and operate continuously. The system blower should continue to operate at any System switch or thermostat setting.

5 THERMOSTAT

- Place the System and Fan switches at the desired settings for operation.

6 TROUBLESHOOTING (TABLE 2)

Your Honeywell thermostat requires little or no attention. Most problems can be resolved according to Table 2.

NOTE: If your system is heating-only or air conditioning-only, disregard sections not applicable to your system.

Table 2. Recommended Corrective Action for Your System.

Symptom	Problem	Corrective Action
No heat	System switch is at Off of Cool position.	Move System switch to Heat position.
	Blown fuse or tripped circuit breaker.	Replace fuse or reset circuit breaker.
	Furnace power switch is at Off.	Turn furnace power switch to On.
	No pilot flame.	Relight pilot flame according to furnace manufacturer instructions.
	Incorrect connections to thermostat.	With power to furnace at Off, tighten all mounting and terminal screws. Repair frayed or broken wires.
	Other.	Contact a qualified service technician for assistance.
Furnace turns on and off.	Burner On period is too short.	Remove the thermostat cover and move the heat anticipator lever counterclockwise (left) one scale mark. Replace the cover and wait several hours for the system to stabilize.
Major swings in temperature greater than 2°F (1°C) when outside temperature is stable.	Burner On period is too long.	Remove the thermostat cover and move the heat anticipator lever clockwise (right) one scale mark. Replace the cover and wait several hours for the system to stabilize.
Thermostat setting and thermometer reading disagree.	Thermostat is not level.	Recheck the thermostat position on the wall. Use bubble level to make sure it is level. See step 3 and Fig. 5.
	Thermostat is affected by drafts or radiant heat.	Contact a qualified service technician to change the location.
	Thermometer is out-of-calibration.	Recalibrate. See step 7.
No air conditioning.	System switch is in Off or Heat position.	Move switch to Cool position.
	Blown fuse or tripped circuit breaker.	Replace fuse or reset circuit breaker.
	Compressor switch (located outdoors) is turned off.	Move switch to On position.
	Incorrect connections to thermostat.	With power to system off, tighten all mounting and terminal screws. Repair broken wires.
	Other.	Contact service technician for assistance.

7 RECALIBRATE THERMOMETER

If the thermostat setpoint and the thermometer reading do not agree, the thermometer may need recalibration.

Follow this procedure:

- Remove thermostat cover.
- Set the cover on a table near an accurate thermometer.
- After allowing five or ten minutes for stabilization, compare the readings.
- If the readings are the same, replace the cover and put the system into operation.
- If the readings are different, insert a hex head wrench into the thermostat shaft and turn it until the thermometers have the same reading. See Fig. 8.
- Replace cover and put the system into operation.

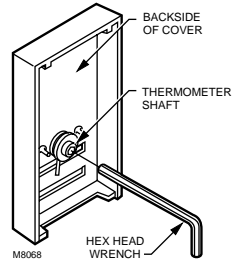


Fig. 8. Adjusting thermometer calibration.

Limited One-Year 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 defective or malfunctions, Honeywell shall repair or replace it (at Honeywell's option) within a reasonable period of time.

If the product is defective,

- (i) return it, with a bill of sale or other dated proof of purchase, to the retailer from which you purchased it, or
- (ii) package it carefully, along with proof of purchase (including date of purchase) and a short description of the malfunction, and mail it, postage prepaid, to the following address:

Honeywell Return Goods
Dock 4, MN10-3860
1885 Douglas Dr N
Golden Valley, MN 55422

Canada: Honeywell Limited/Honeywell Limitée
Product Services ON15
35 Dynamic Dr
Scarborough, Ontario M1V 4Z9

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 N, MN10-1461, Golden Valley, MN 55422. In Canada, write Retail Products ON15, Honeywell Limited/Honeywell Limitée, 35 Dynamic Dr, Scarborough, Ontario M1V 4Z9.

Honeywell

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