

Caution

To avoid electrical shock and to prevent damage to the furnace, air conditioner, and thermostat, disconnect the power supply before beginning work. This can be done at the circuit breaker, or at the appliance.

Tools

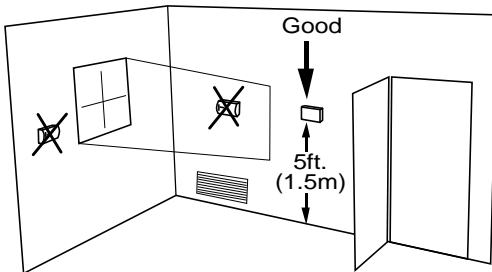
You will need #1 Phillips screwdriver (small) and Drill with 3/16-in. (4.8mm) bit for this installation.

Location

- On replacement installations, mount the new thermostat in place of the old one if possible.
- Locate the thermostat on an inside wall, about 5 ft. (1.5m) above the floor, and in a room that is used often.
- Do not install it where there are unusual heating conditions, such as: in direct sunlight; near a lamp, radio, television, radiator register, or fireplace; near hot water pipes in a wall; near a stove on the other side of a wall
- Do not locate in unusual cooling conditions, such as: on a wall separating an unheated room; or in a draft from a stairwell, door, or window.

PG 1

- On new Installations, follow the guidelines listed below.
- Do not locate in a damp area. This can lead to corrosion that will shorten thermostat life.
- Do not locate where air circulation is poor, such as: in a corner or an alcove; or behind an open door.
- Do not install the unit until all construction work and painting has been completed.
- This thermostat does not require leveling.



PG 2

CAUTION

- Your thermostat is a precise instrument. Please handle it with care.
- Turn off electricity to the appliance before installing or servicing thermostat or any part of the system. Do not turn electricity back on until work is completed.
- Do not short (jumper) across electric terminals at control on furnace or air conditioner to test the system. This will damage the thermostat and void your warranty.
- All wiring must conform to local codes and ordinances.
- This thermostat is designed for use with 24 volt AC and millivolt systems. The thermostat should be limited to a maximum of 1.0 amps; higher amperage may cause damage to the thermostat.

Label Wires to Old Unit

- Switch electricity to the furnace and air conditioner OFF; then proceed with the following steps.
- Remove cover from old thermostat. Most are snap-on types and simply pull off. Some have locking screws on the side or front. These must be loosened.
- Note the letters printed near the terminals.
- Carefully attach labels (enclosed) to each wire. Label the wires one at a time. **You must have all the wires labeled before you proceed.**

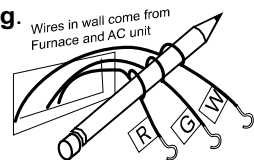
Caution

DO NOT REMOVE WIRES FROM OLD THERMOSTAT UNTIL YOU HAVE CAREFULLY LABELED THEM, WITH LABELS PROVIDED. THERE IS NO STANDARD COLOR CODE FOR THESE WIRES.

Remove old unit

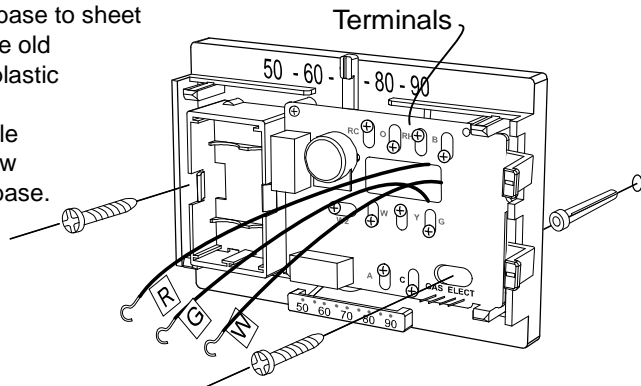
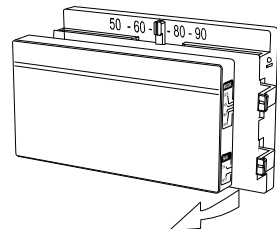
Remove the wires from the terminals of the old thermostat.

- Make sure the wires **do not fall back inside** the wall.
- Wind them around a pencil to **keep them from falling**.
- Remove the old thermostat from the wall. Fill wall opening with fiber glass insulation to prevent drafts.



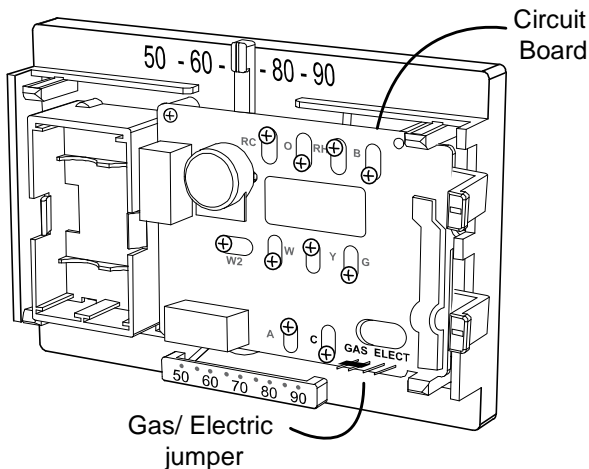
Mount the 3M-10

- Separate front from back of unit. Grasp the front of the unit and the back of the unit and pull apart. The thermostat body away from the base.
 - Hold the base against the wall, with the wires coming through the opening below the terminal block.
 - Position the base for best appearance
 - Attach the base to the wall with the two screws provided.
 - If you are mounting the base to sheet rock or if you are using the old mounting holes, use the plastic anchors provided.
- Drill a 3/16-in. (4.8mm) hole for the insert at each screw location, then mount the base.



Gas-Electric Selection

- If you have Electric Heat or a Heat Pump you must place the Gas/Electric jumper in the ELECT position (thermostat controls the Fan).
- If you have Gas Heat the Gas/Electric Jumper should be in the GAS position (furnace controls the Fan).




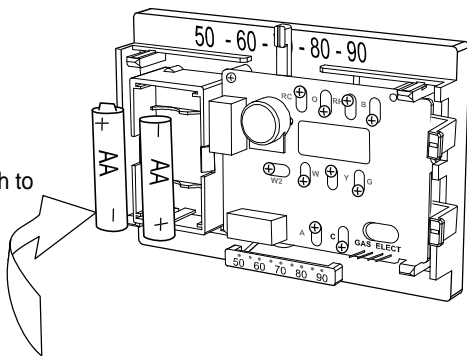
Install Batteries

The 3M-10 requires batteries to operate your system.

Switch MODE switch to OFF and the FAN switch to AUTO.

- Insert 2 AA alkaline batteries according to the polarity noted in the compartment.

NOTE: Replace the batteries once a year or when this low battery indicator appears  on the right side of the unit.



Power Options

Please be aware of the following power options

- 1) The 3M-10 can run on batteries only. (2AA Alkaline)

The batteries will last well over 1 year. If the batteries are not replaced the thermostat will stop working.

- 2) The 3M-10 can run on the C wire if available.

As shown in the wiring diagrams, The C wire is the other side of the 24VAC heating transformer. If the C wire is used, the batteries are not needed.

Wire Connections

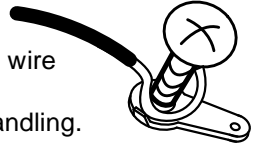
Make sure your wires are labeled. This is necessary to determine which step-by-step wiring diagram you should use. This may require you to find the 'other end' connection for each wire on your heating or air conditioning equipment and read the label there.

If you have a Zoned Heating/Cooling system with multiple thermostats, please refer to our website at www.radiothermostat.com/filtrete for installation notes or call 1-888-607-5824

Before you Connect Wires

Please refer back to these guidelines for safe and secure wire connections.

- Take care **not to damage the labels** for each wire in handling.
- Strip insulation 3/8 in. (9.5mm) from wire ends.
- Connect labeled wires only to a terminal with corresponding letter.
- Bend the wire slightly, insert the wire under the contact plate and tighten the screw down onto the wire.



Caution

Do not allow wires to touch each other or parts on unit. Wires must be routed through the hole in the back plate, below the terminal block, or they will hit parts on the cover.

WIRE LABEL LIST

R - Single source power for heat/cool (R connected to RC and RH using the jumper wire)

RH or R - Heating Power

RC - Cooling Power

W - Heating return

G - Fan return

Y - Compressor return

H - Humidifier (built into the furnace)

W2 - 2nd stage heat in NORMAL, auxiliary heat in PUMP mode.

A - For 3 wire zoned heating systems

C - AC power for the thermostat if available

O - Damper control (Zoned heating) or heat pump changeover valve (powered in COOL)

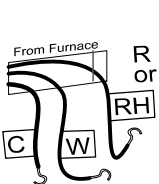
B - Damper control (Zoned heating) or heat pump changeover valve (powered in HEAT) **NOTE: Do not connect both O and B on a heat pump. Connect O to O & tape off B.**

X - Tape off X

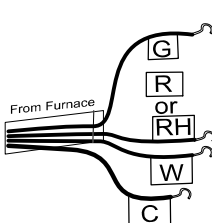
E - Tape off E

What Wires Do You Have?

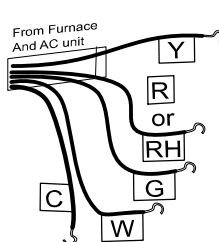
The Wire Label List shows wire labels used on thermostats. Please determine what wires you have and select the correct wiring diagram to "go to" on pages 8-9. If you have a **HEAT PUMP** select a wiring diagram on pg 9.



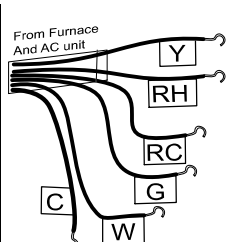
Go To Page 11



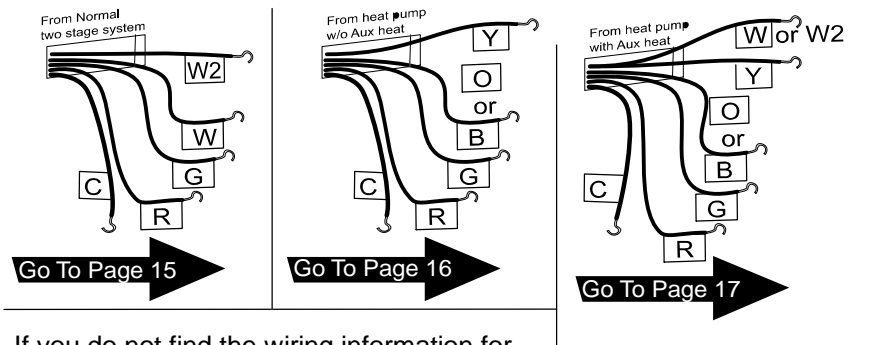
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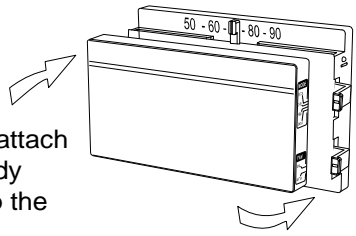
Go To Page 14



If you do not find the wiring information for your system try our website www.radiothermostat.com/filtrete for more information or call our customer service hotline at 888-607-5824.

Wire Connections cont

When you have finished connecting the wires attach control unit to wall unit. Hook the top of the body onto the base, swing the body down, and snap the body onto the base.



Check Unit

Follow these procedures to verify you have correctly installed the unit.

To check Fan: (If you connected the G wire)

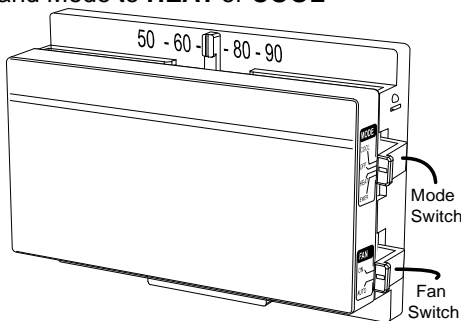
- Switch Mode to OFF during fan test.
- Switch the FAN switch to the ON position. Verify air is blowing from vents.
- After test, return to Fan switch to **AUTO**, and Mode to **HEAT** or **COOL**

To check HEAT mode:

- Set the mode switch to HEAT. Set the fan switch AUTO.
- Adjust the temperature control to raise the target temp to 90°.
- Wait 5 min.
- Verify that heat is blowing from the system.

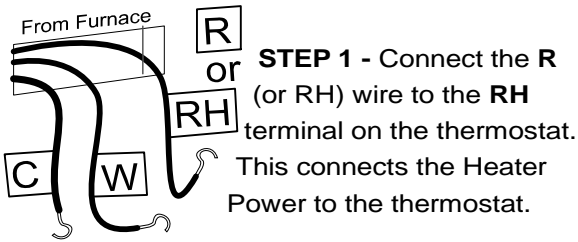
To check COOL mode:

- Set the mode switch to COOL.
- Adjust the temperature control to 5° below the room temperature.
- Wait 5 min.
- Verify that cool air is blowing from the system.



Congratulations, you have successfully installed your unit. Please proceed to the OPERATING Guide to initialize the new thermostat.

REMEMBER, Mode Switch must be in HEAT or COOL to operate.



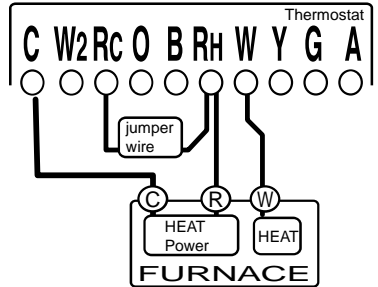
STEP 1 - Connect the **R** (or RH) wire to the **RH** terminal on the thermostat. This connects the Heater Power to the thermostat.

STEP 2 - Connect the **W** wire to the **W** terminal on the thermostat.

This connects the heater control line to the thermostat.

Your Heater is now connected to the thermostat.

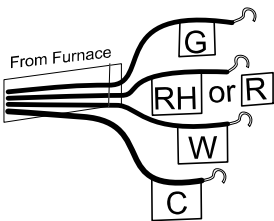
2 WIRE Heating (GAS MILLIVOLT or 24vac)



NOTE: Wires marked with the dotted line are optional.

PG 11

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STEP 1 - Connect the **R** (or RH) wire to the **RH** terminal on the thermostat. This connects to the Heater Power .

STEP 2 - Connect the **W** wire to the **W**

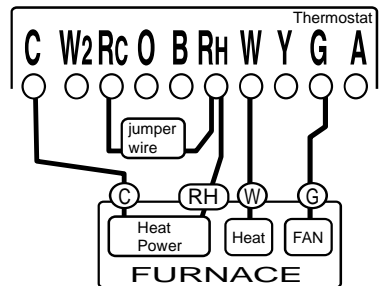
terminal on the thermostat. This connects the heater control line to the thermostat.

STEP 3 - Connect the **G** wire to the **G** terminal on the thermostat.

This connects the Fan to the thermostat.

Your system is now connected to the thermostat.

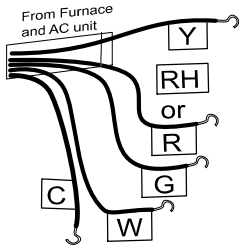
3 WIRE



NOTE: Wires marked with the dotted line are optional.

PG 12

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STEP 1 - Connect the **Y** wire to the **Y** terminal on the thermostat.
This connects to the Cooler compressor.

STEP 2 - Connect the **RH** or **R** wire to the **RH** terminal on the thermostat.
This connects the Heater/Cooler Power.

This connects the Heater/Cooler Power.

STEP 3 - Connect the **W** wire to the **W**

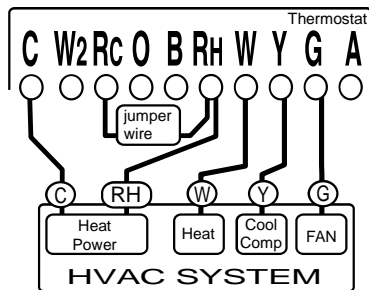
terminal on the thermostat.
This connects to the heater control line.

STEP 4 - Connect the **G** wire to the **G** terminal on the Thermostat.

This connects to the Fan.

Your HVAC system is now connected to the thermostat.

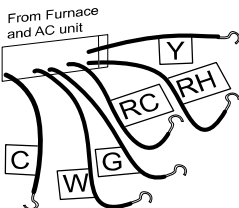
4 WIRE NON_HEAT PUMP



NOTE: Wires marked with the dotted line are optional.



PG 13



STEP 1 - Remove the Jumper wire.

STEP 2 - Connect the **Y** wire to the **Y** terminal on the thermostat. This connects to the Cooler compressor.

STEP 3 - Connect the **RH** wire to the **RH** terminal on the thermostat. This connects to the Heater Power .

STEP 4 - Connect the **RC** wire to the **RC** terminal on the thermostat. This connects to the Cooling Power .

STEP 5 - Connect the **W** wire to the **W** terminal on the thermostat.

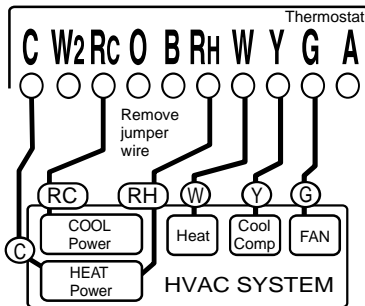
This connects to the heater control line.

STEP 6 - Connect the **G** wire to the **G** terminal on the Thermostat.

This connects to the Fan.

Your HVAC system is now connected to the thermostat.

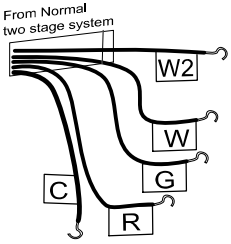
5 WIRE NON_HEAT PUMP



NOTE: Wires marked with the dotted line are optional.



PG 14



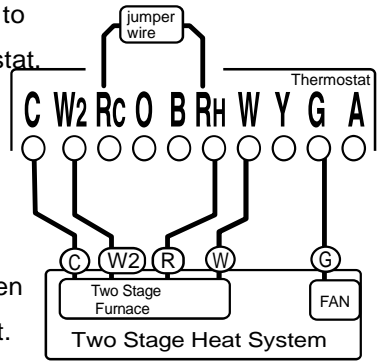
STEP 1 - Connect the **G** wire to the **G** terminal on the thermostat.

This connects the Fan.

STEP 2 - Connect the between **W** wire to **W**. This connects the 1st stage heat.

STEP 3 - Connect the between **W2** wire to **W2**. This connects the 2nd stage heat.

STEP 4 - Connect the **R** wire to the **RH** terminal on the Thermostat. This connects to the 24vac power.



NOTE: Wires marked with the dotted line are optional.

Your HVAC system is now connected to the thermostat. (If the system also has AC, connect it per instructions for **RC** and **Y** on pg 14)



STEP 1 - Connect the **G** wire to the **G** terminal on the thermostat.

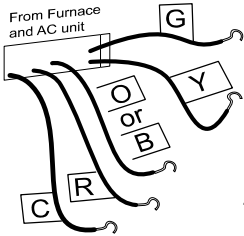
This connects the Fan.

STEP 2 - Add a jumper wire between **W** and **Y**.

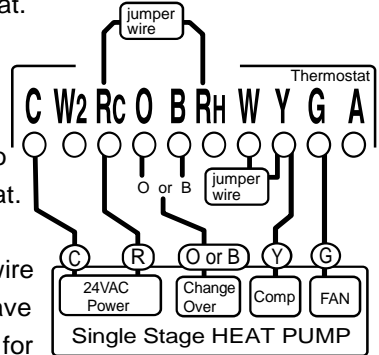
STEP 3 - Connect the **Y** wire to the **Y** terminal on the thermostat. This connects the Compressor.

STEP 4 - Connect the **O** or **B** wire to the **O** or **B** terminal on the thermostat. (If you have both **O** and **B** contact your local HVAC contractor for further help) This connects the change over valve.

STEP 5 - Connect the **R** wire to the **RC** terminal on the Thermostat. This connects to the 24vac power.



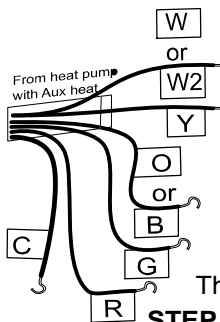
HEAT PUMP w/o Auxiliary Heat



NOTE: Wires marked with the dotted line are optional.

Your HVAC system is now connected to the thermostat.





STEP 1 - Connect the **G** wire to the **G** terminal on the thermostat.

This connects the Fan.

STEP 2 - Add a jumper wire between **W** and **Y**.

STEP 3 - Connect the **Y** wire to the **Y** terminal on the thermostat.

This connects the Compressor.

STEP 4 - Connect the **O** or **B** wire to the

O or **B** terminal on the thermostat. (If you have *both* **O** and **B** wires, use the **O** and tape off the **B**).

This connects the change over valve.

STEP 5 - Connect the **R** wire to the **RC** terminal on the Thermostat.

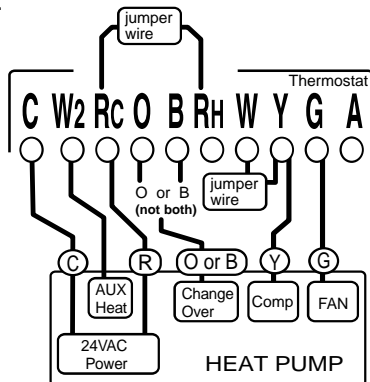
This connects to the 24vac power.

STEP 6 - Connect **W** or **W2** to **W2** on the thermostat.

This connects the AUX heat.

Your HVAC system is now connected to the thermostat.

HEAT PUMP with Auxiliary Heat

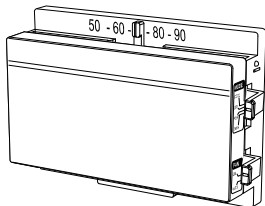


NOTE: Wires marked with the dotted line are optional.



3M-10 Features

The 3M-10 can be used with most 24 volt gas, oil or electric heating and air conditioning systems, heat pump systems with or without auxiliary heat, Normal 2 Stage systems, Zoned Hot-Water, Zoned Forced air systems, or gas millivolt heating systems. It cannot be used with 120 volt heating systems or. Ask The Home Depot for other thermostats to control those systems.



The 3M-10 is digital. You can program your desired Heat and cool temperature by setting the dial. The unit uses no harmful mercury.

A 5-minute minimum off time in COOL protects your air conditioning system from being damaged.

Two "AA" batteries (not included) are used to run the thermostat in some installation. "C" wire installations can make batteries last many times longer.

Customer Support: 888-607-5824

or Visit our website www.radiothermostat.com/filtrete

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