

# REGISTER

POWERFUL PERFORMANCE  
FOR ANY ROOM



For how-to videos or more information, please visit:  
<http://cadetheat.com/install/register>

ESPAÑOL ver la guía del propietario en [cadetheat.com/espanol/register](http://cadetheat.com/espanol/register)

**CADET**   
INVITING WARMTH

cadetheat.com  
855.CADET.US  
Vancouver, Washington



tested to UL standards

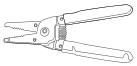
# IMPORTANT INSTRUCTIONS

⚠ When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

1. Read all instructions before installing or using this heater.
2. This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, etc. and curtains at least 3 feet (0.9 meters) from the front of the heater and keep them away from the sides and rear.
3. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
4. Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
5. Do not use outdoors.
6. To disconnect heater, turn control(s) to off, and turn off power to heater circuit at main disconnect panel.
7. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
8. To prevent a possible fire, do not block air intakes or exhaust in any manner.
9. A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
10. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
11. CAUTION – High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 3 feet (0.9 m) from the front of the heater and away from the side.

## SAVE THESE INSTRUCTIONS

### TOOLS REQUIRED



Wire Strippers



Wire Connectors



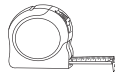
1 1/2" Wood Screws



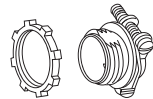
Straight and Phillips Screwdrivers



Drill and Drill Bits



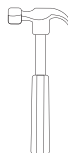
Tape Measure



1/2" Cable Clamp Connector



Volt Meter



Hammer



Stud Finder

A multi-purpose tool or something to cut your existing drywall or gypsum board.

# INSTALLATION INSTRUCTIONS

- All electrical work and materials must comply with the National Electric Code (NEC), the Occupational Safety and Health Act (OSHA), and all state and local codes.
- Use copper conductors only.
- DO NOT install the heater directly above bathtub or sink. DO NOT install in shower stall area. Manufacturer recommends a minimum 2 foot (61 cm) side clearance.
- Heater must be installed in a wall can:
  - Model RM - wall can model RMC
- DO NOT install the heater in a floor, in the ceiling, below a towel bar, behind a door, or anywhere the air discharge may be blocked in any manner.
- A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
- Connect grounding lead to grounding wire provided. Keep all foreign objects out of heater.
- CAUTION – High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 3 feet (0.9 m) from the front of the heater and away from the side.

## ⚠️ KNOW YOUR VOLTAGE! ⚠️

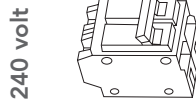
If you are uncomfortable working with electricity, running electrical supply wire or installing a circuit breaker, please consult a licensed electrician.

- Make sure the heater is the same voltage as the electrical supply wires you're using. The wire size must be correct for the voltage, the heater wattage and the circuit breaker.
- CHECK YOUR BREAKER! If you're replacing an existing heater, check the labels of the old heater and use the same voltage.

single-pole breaker



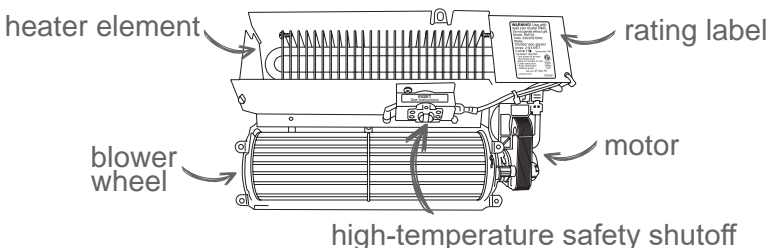
double-pole breaker



- Connecting a 120 volt heater to a 240 volt electrical supply will destroy the heater and void your warranty! Connecting a 240 volt heater to a 120 volt electrical supply will only give you one quarter of the heat output.

Unanswered questions? Call our technical support team in Vancouver, Washington at **855.CADET.US**.

## PARTS OF YOUR HEATER



# INSTALLATION INSTRUCTIONS

## TIPS BEFORE YOU BEGIN

- **Verify power has been turned off before starting any work!**
- The Register model RM can only be mounted with the element up. It cannot be mounted in the ceiling. For multiple heater wiring, see page 6.
- For cleaner performance and longer heater life, install your heater 12 inches from the floor.
- All models can be installed to be Americans with Disabilities Act (ADA) compliant. Check your state and local requirements.
- A thermostat is required for all models. An electronic wall thermostat is recommended for ultimate comfort and energy savings.
- The wall can label arrow shows the correct mounting orientation (arrow must point up).

### STEP 1 Cut a hole in the wall next to a wall stud

If you haven't installed drywall yet, skip this step.

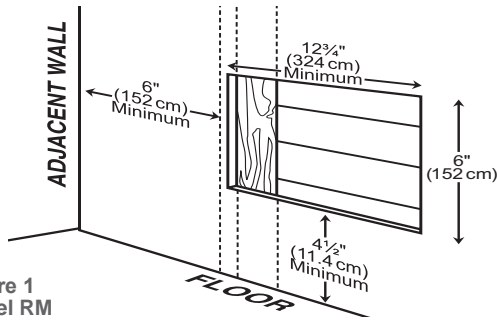


Figure 1  
Model RM

### STEP 2 Locate or route electrical supply wires

Route the electrical supply wire from the circuit breaker to the wall thermostat, and then to the heater location.

Remove a knockout from the wall can and attach the supply wire with a cable clamp connector (not included) leaving a minimum of 6 inches wire lead (See Figure 2).

### STEP 3 Mount the wall can

If you haven't installed drywall yet, make sure the front of the wall can extends beyond the front edge of the wall stud to match the drywall depth (Figure 2).

If you already have drywall installed, rotate the wall can into the cutout legs first. Keep the front of the wall can flush with the drywall.

Fasten the wall can to a stud (on either left or right side), with two screws (not included) through the larger holes provided in the wall can (Figure 2).

tip: if not installing at minimum height, for additional support in new construction, legs can bend 90 degrees on the wall can (see Figure 2).

Proceed to STEP 4. If you have a multi-watt model and want to lower the wattage, proceed to HOW TO CHANGE THE WATTAGE.

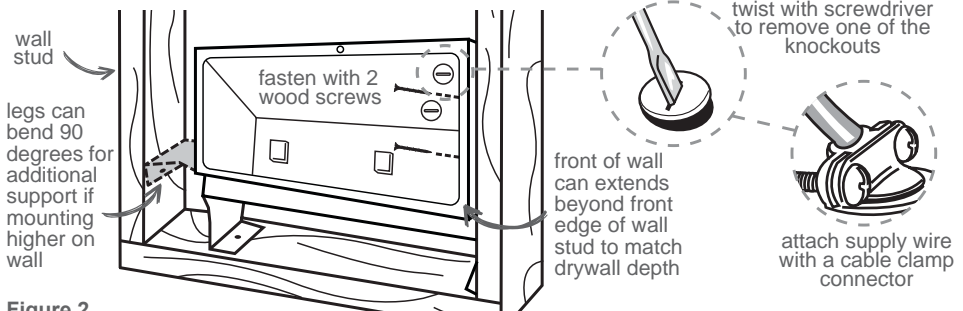


Figure 2

# INSTALLATION INSTRUCTIONS

## INSERT THE HEATER ASSEMBLY IN THE WALL CAN

### STEP 4 Wire connections

Your heater has two connection wires and the wall can has a green grounding wire. Your supply wire has two connection wires and a supply ground wire.

1. Connect supply ground wire to green grounding wire in wall can (See Figure 3).
2. Connect one of the supply wires to one of your heater wires with a wire connector (not included):
  - A. for 240 volts, it doesn't matter which heater wire (Figure 3);
  - B. for 120 volts, connect the neutral (white) supply wire to the white heater wire (Figure 3).
3. Connect the remaining supply wire to the remaining heater wire with a wire connector (not included) (See Figure 3).
4. Insert the bottom edge of the heater assembly into the bottom of the wall can (See Figure 3).
5. Push all wires back into the side of the wall can. Make sure connections are tight and none of the wires are caught between the heater assembly and the wall can.
6. Attach the heater assembly at top of the wall can with screw provided.

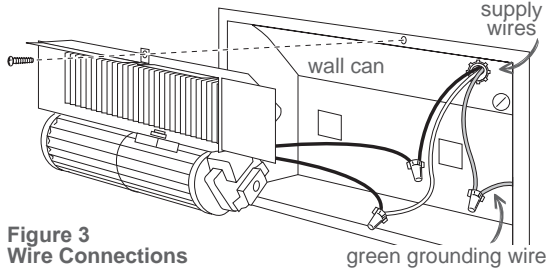


Figure 3  
Wire Connections

### STEP 5 Install grill

Attach grill with the screws provided.

tip: hand tighten both screws first before securing. The open part of the grill goes on the bottom.

Turn power on at the main disconnect panel. Proceed to OPERATING INSTRUCTIONS.

## HOW TO CHANGE THE WATTAGE

### Multi-watt models RM162, RM168 and RM151 only

Multi-watt RM models offer a variety of heat output options. They are factory set to maximum wattage (Figure 4). If you have a multi-watt model, you can change the heating element wire connections to a lower wattage on the right hand side of the heater assembly (See Figures 5 and 6).

Model	Maximum Wattage Figure 4	Medium Wattage Figure 5	Lowest Wattage Figure 6
RM162, RM168	1600	900	700
RM151	1500	1000	500

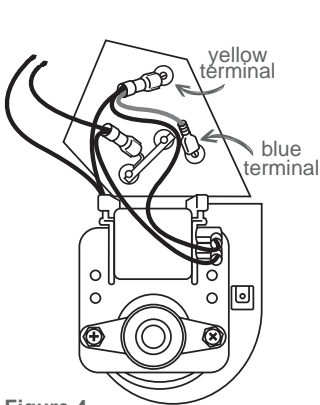


Figure 4  
tip: to remove terminals easier, pull and wiggle slightly back and forth at the same time

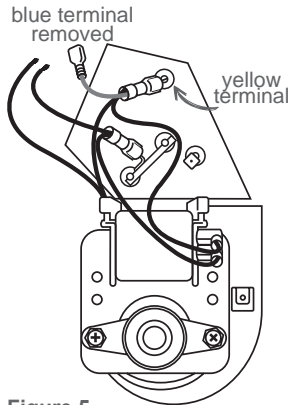


Figure 5  
remove blue terminal and wrap end with electrical tape; secure to other wires with zip tie.

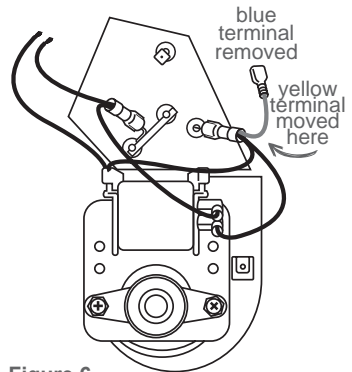


Figure 6  
remove blue terminal and wrap end with electrical tape; secure to other wires with zip tie. Move yellow terminal and attach it where blue terminal was removed.

If you change the wattage, mark the wiring diagram on the back of the heater with the wattage used for future reference. Proceed to STEP 4.

# INSTALLATION INSTRUCTIONS

## MULTIPLE HEATERS WITH ONE THERMOSTAT

More than one heater can be wired in parallel on the same circuit breaker (be sure to check national and local codes for safety requirements). Additional electrical supply wire and cable clamp connectors are required, and you'll need to use a wall thermostat. When wiring multiple heaters to one thermostat, the heaters must be in the same room and be spaced a minimum of three feet apart.

The maximum amperage load you can put on one circuit breaker is limited to either 80% of the circuit breaker capacity, or the maximum amperage rating of the thermostat, whichever is lower.

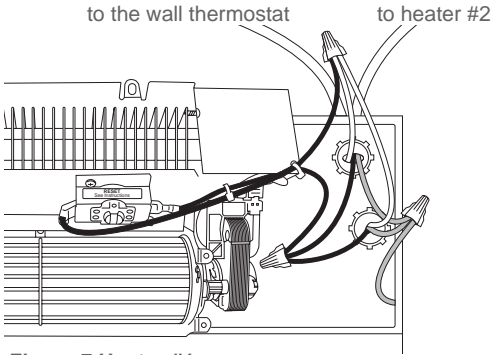


Figure 7 Heater #1

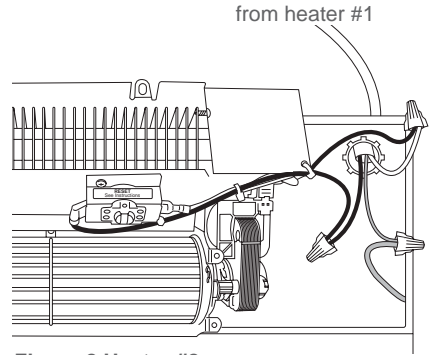


Figure 8 Heater #2

1. Route the electrical supply wire from the circuit breaker to the wall thermostat. At the wall can of heater #1, remove two knockouts and attach two sets of electrical supply wires with two cable clamp connectors (not included) leaving a minimum of 6 inches wire lead. One set of electrical supply wire goes to the wall thermostat and the other set goes to heater #2 (See Figure 8).
2. There are two supply ground wires in the wall can of heater #1 (See Figure 7). Connect the green ground wire in the wall can of heater #1 to each of the ground wires from each set of the supply wires (See Figure 7).
3. For heater #1, connect each heater wire to one of the supply wires going to the thermostat, and one of the supply wires going to the heater #2. Each of the wires from heater #1 must have a 3-wire connection.
4. For heater #2, make the connections in the wall can as shown in Figure 8 above.
5. Turn power back on at the main disconnect panel.
6. Proceed to OPERATING INSTRUCTIONS.

## WARRANTY

For more effective and safer operation and to prolong the life of the heater, read the Owner's Guide and follow the instructions. Failure to properly maintain the heater will void any warranty and may cause the heater to function improperly.

**LIMITED FIVE YEAR WARRANTY:** Cadet will repair or replace any Cadet Register (RM) heater found to be defective within five years after the date of purchase.

### These warranties do not apply:

1. Damage occurs to the product through improper installation or incorrect supply voltage;
2. Damage occurs to the product through improper maintenance, misuse, abuse, accident, or alteration;
3. The use of unauthorized accessories or unauthorized components constitutes an alteration and voids all warranties. Refer to Cadet website or call customer service at 855.CADET.US for list of authorized accessories and components.

4. CADET'S WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT.

5. IN THE EVENT CADET ELECTS TO REPLACE ANY PART OF YOUR CADET PRODUCT, THE REPLACEMENT PARTS ARE SUBJECT TO THE SAME WARRANTIES AS THE PRODUCT. THE INSTALLATION OF REPLACEMENT PARTS DOES NOT MODIFY OR EXTEND THE UNDERLYING WARRANTIES. REPLACEMENT OR REPAIR OF ANY CADET PRODUCT OR PART DOES NOT CREATE ANY NEW WARRANTIES.

If you believe your Cadet product is defective, please contact Cadet during the warranty period, for instructions on how to have the repair or replacement processed.

### Parts and Service

Visit [cadetheat.com/parts-service](http://cadetheat.com/parts-service) for information on where to obtain parts and service.

To register your product, visit [cadetheat.com/product-registration](http://cadetheat.com/product-registration)

# OPERATING INSTRUCTIONS

1. The heater must be properly installed before it is used.
2. Do not operate without grill.
3. Do not tamper with the high-temperature safety shutoff.

## How to operate your heater

The room temperature is controlled by a thermostat located either on the wall, or on the heater. Once installation is complete and power has been restored, follow the steps below for your thermostat.

If you have a wall or built-in thermostat:

1. Turn the thermostat knob all the way to the right.
2. When the room reaches your comfort level, turn the knob to the left, just until it clicks and the heater turns off. The heater will automatically keep the room temperature around this setting.
3. To reduce the room temperature, turn the knob to the left. To increase the room temperature, turn the knob to the right.

If you have an electronic wall thermostat, follow the instructions in the programming and operating guide included with your thermostat.

**PLEASE NOTE:** On initial start-up, the heater may cause an odor due to the manufacturing process. It typically goes away within several hours.

More frequently asked questions on our website here: [cadetheat.com/support/FAQ](http://cadetheat.com/support/FAQ)

# MAINTAINING YOUR HEATER

Clean heater at least every 6 months or as required. Do not lubricate motor.

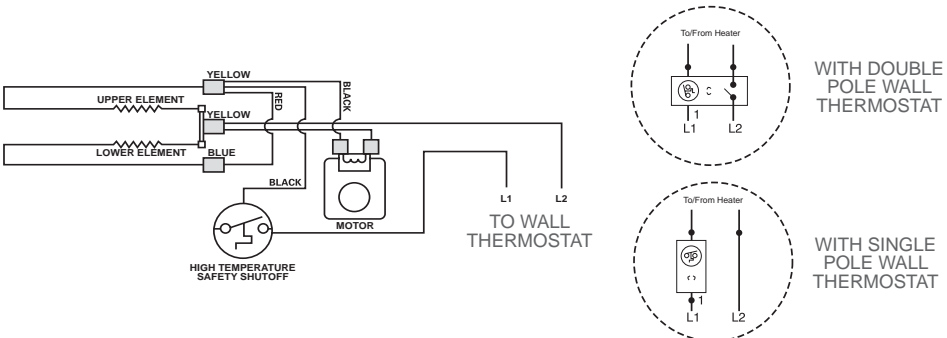
1. Turn off power at the main disconnect panel.
2. Wait for the element to cool.
3. Remove thermostat knob (if any) and grill.
4. Wash grill with hot soapy water and dry.
5. Blow air through the heating element with a hair dryer or shop vacuum on blow cycle.
6. Clean the fan with a vacuum cleaner.
7. Replace cover and thermostat knob (if any).
8. Turn power back on at the main disconnect panel.

Any service other than cleaning should be performed by an authorized service representative.

## High-temperature safety shutoff

All Register heaters come with a built-in high-temperature safety shutoff that stops electricity flowing to the heater if it gets too hot inside. See TROUBLESHOOTING on Page 8 if you're experiencing problems with your heater.

## INTERNAL HEATER WIRING DIAGRAMS



## TROUBLESHOOTING

Symptom	Problem	Solution
Heater doesn't work at all.	<ol style="list-style-type: none"> <li>1. Supply connections are loose.</li> <li>2. Heater has tripped its built-in high-temperature safety shutoff and electricity has stopped flowing to the heater.</li> <li>3. Circuit breaker is faulty.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn off power at main disconnect panel. Inspect and/or tighten all the wire connectors inside the heater and at any connection points inside junction boxes or at the wall thermostat.</li> <li>2. TO RESET: Turn power off at main disconnect panel. Allow 10 minutes to cool. Make sure heater is not blocked and is clean. Push reset button. Restore power. If the high-temperature safety shutoff trips more than once a day, replace the heater.</li> <li>3. Call a licensed electrician.</li> </ol>
Breaker trips immediately after installing heater.	<ol style="list-style-type: none"> <li>1. A short circuit exists in the electrical supply wires or heater wiring.</li> <li>2. Circuit breaker and heater are not the same voltage.</li> <li>3. Circuit is overloaded.</li> <li>4. Circuit breaker is faulty.</li> </ol>	<ol style="list-style-type: none"> <li>1. An incorrect connection in the heater or electrical supply wires may cause sparking or arcing. Inspect all heater and electrical supply wiring insulation for damage or call an electrician.</li> <li>2. Double check the voltage of the heater to make sure it matches the voltage of the circuit. Replace heater with a model that is 240 volts.</li> <li>3. Use a lower wattage heater, or reduce the number of heaters on the circuit.</li> <li>4. Call a licensed electrician.</li> </ol>
Heater blows cold air or doesn't get hot.	<ol style="list-style-type: none"> <li>1. Circuit breaker is 120 volts and heater is 240 volts.</li> <li>2. Element has failed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Double check the voltage of the heater to make sure it matches the voltage of the circuit. Replace heater with a model that is 120 volts.</li> <li>2. Replace heater.</li> </ol>
Heater smells after installation or not being used.	<ol style="list-style-type: none"> <li>1. Odor from element manufacturing process.</li> <li>2. Dust or lint inside the heater.</li> <li>3. Supply connections are loose.</li> </ol>	<ol style="list-style-type: none"> <li>1. On initial start-up, the heater may cause an odor due to the manufacturing process. It typically goes away within several hours.</li> <li>2. Clean heater (see "MAINTAINING YOUR HEATER" on page 7 for instructions).</li> <li>3. Turn off power at main disconnect panel. Inspect and/or tighten all the wire connectors inside the heater and at any connection points inside junction boxes or at the wall thermostat.</li> </ol>
Fan/motor doesn't spin or spins slow.	<ol style="list-style-type: none"> <li>1. Circuit breaker is 120 volts and heater is 240 volts.</li> <li>2. Defective motor or motor out of alignment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Double check the voltage of the heater to make sure it matches the voltage of the circuit. Replace heater with a model that is 120 volts.</li> <li>2. Replace motor blower.</li> </ol>
Heater doesn't turn off.	<ol style="list-style-type: none"> <li>1. Thermostat is defective.</li> <li>2. No thermostat hooked up to control heater.</li> <li>3. Incorrect heater wattage for room size.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace thermostat.</li> <li>2. A thermostat is required for all Register heaters. Purchase a built-in or wall thermostat for your heater.</li> <li>3. Install higher wattage model or additional heaters if circuit allows.</li> </ol>

**If you are uncomfortable working with electricity, running electrical supply wire or installing a circuit breaker, please consult a licensed electrician.**



#### Reduce-Reuse-Recycle

This product is made primarily of recyclable materials. You can reduce your carbon footprint by recycling this product at the end of its useful life. Contact your local recycling support center for further recycling instructions.