

User manual Wall Heater Unit

Benefits You Can Depend On

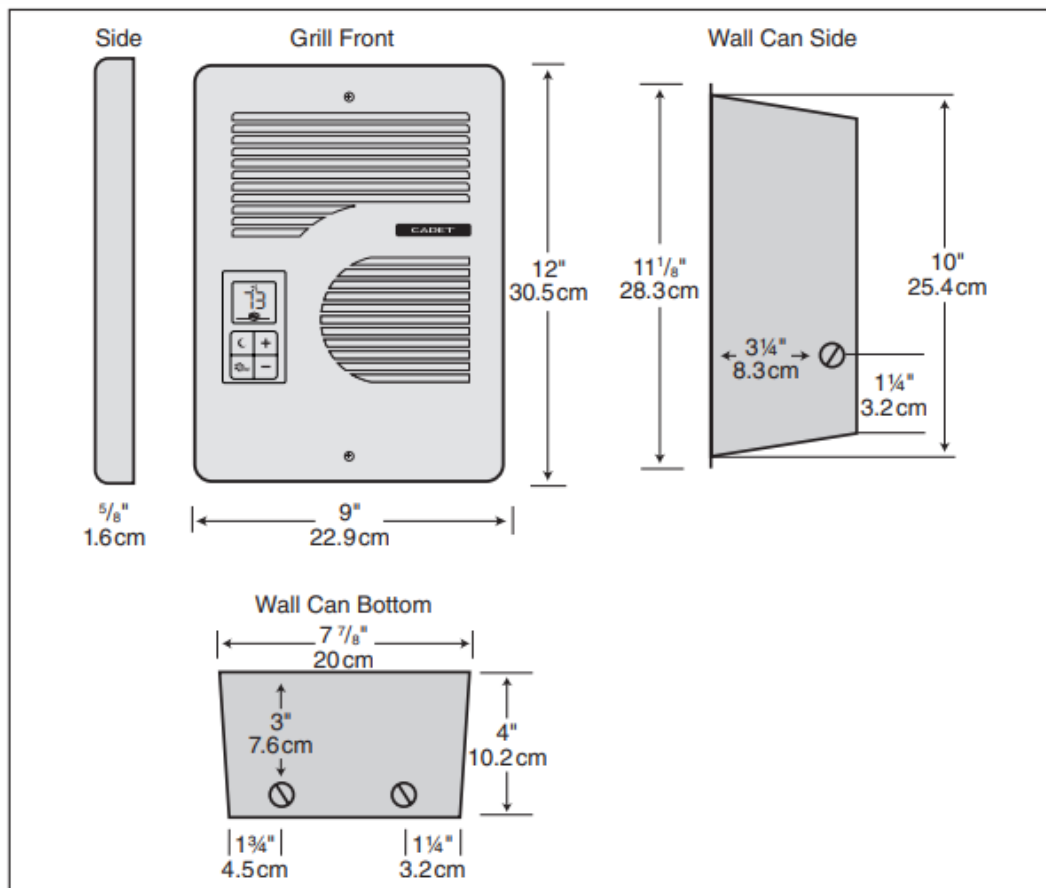
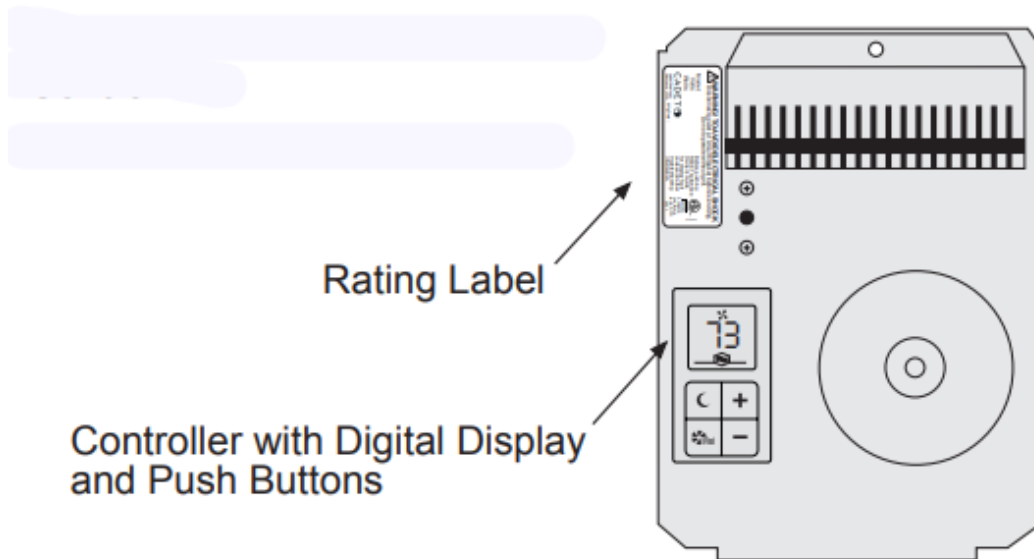
- Energy efficient: use up to 30% less energy
- Brings you only the heat you need, when you need it, and adjusts automatically to save you money
- You define your comfort—maintains your room temperature within one degree
- Our most thoughtful design features:
 - Large digital display shows your room temperature and heating mode
 - Easy, intuitive one-touch controls
 - Night/Away and Max/Min options for extra savings and safety
 - Improve air circulation and add comfort in off-season with three fan-only speeds
 - Easily replaces many Com-Pak Series heaters: C, CB, CM, CS or X
- Eliminate guesswork with smart power supply sensor that self adjusts to your voltage
- Automatic high temperature safety shutoff
- Your Energy Plus heater has been thoroughly tested and is guaranteed with a **limited 5-year warranty**

Energy Plus Models			
Line Voltage	Models	Watts	Amps
120	CE163T	1000	8.3
208		1500	7.2
240		1600	6.7
240 only	CE162T	1600	6.7
208 only	CE168T	1600	7.7
120	CE083T	500	4.2
208		750	3.6
240		800	3.3

Energy Plus Model With Built-In Controller

Wall Thermostat Not Required





TOOLS REQUIRED:

- Phillips Screwdriver
- Straight Screwdriver
- Wire Strippers
- Utility Knife



- (4) 1½" Wood Screws
- (2) Insulated Wire Connectors
- (1) Strain Relief Connector

Before you begin, you should know...

...about the Cadet Energy Plus heater



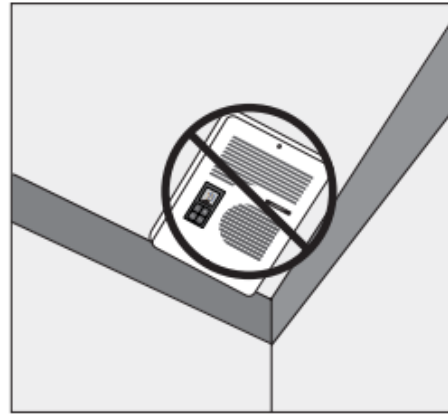
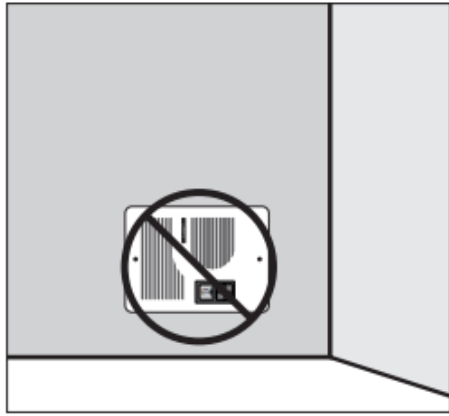
The Cadet Energy Plus Heater provides comfort to a room by using an efficient, variable speed fan to circulate the warm air, and an intelligent thermostat to deliver precise temperature control.

Your heater is designed to save energy and run at a low speed once the desired room temperature is reached. This is normal operation that reduces on/off cycles and improves overall performance and comfort.

Your heater also has a cool down feature that may run the fan for up to 10 minutes after switching to STOP HEATING/NO FAN mode. This is typical. The air coming out of the heater may feel cool, but it's actually residual heat moving into the room.

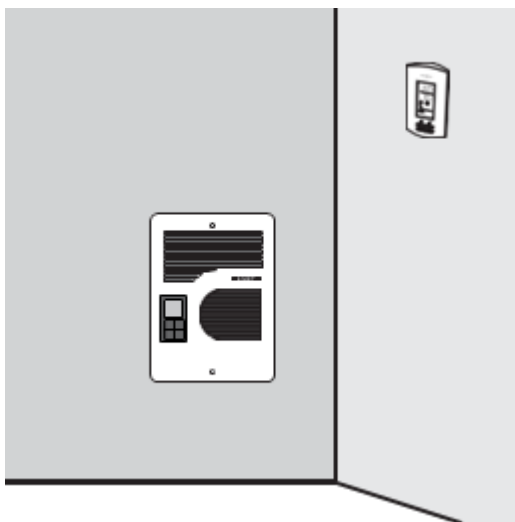
...some installation facts

- Install vertically only. The recommended height is 24 inches (61 cm) from the floor to the bottom of the wall can.
- The heater must not be installed in the floor or ceiling, even if you are replacing an existing heater that was installed in either of these locations.
- Installation on an inside wall is recommended.



...a wall thermostat may not be used

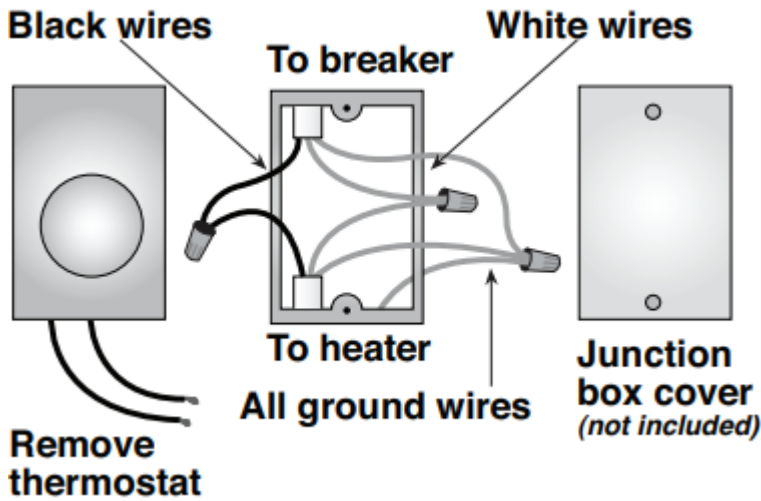
Your Energy Plus heater is equipped with a unique built-in thermostat that both regulates the heat output and provides precise temperature control. If replacing a heater controlled by an existing wall thermostat, remove wall thermostat from the heater circuit and cover the hole with a faceplate.



TO REMOVE AN EXISTING WALL THERMOSTAT FROM HEATER CIRCUIT

1. Make sure power is off at the main disconnect panel.
2. Remove wall thermostat mounting screws.
3. Pull the thermostat away from the wall and count the wires.
4. A. If you count 2 black supply wires and 2 white supply wires in the box, disconnect thermostat and connect the 2 black wires together with a wire connector (not included). Connect the 2 white wires together with another wire connector (not included). Connect all ground wires together.
- B. If you have 1 black supply wire and 1 white supply wire, disconnect thermostat and connect the black and white wires together with a wire connector (not included). Connect all ground wires together.

- C. If you have more than 2 black or 2 white wires, please consult a qualified electrician.
- 5.If you have a metal junction box, it must be grounded (use a grounding screw or clip).
- 6.Install a blank faceplate (not included) over the exposed junction box.



INSTALLATION INSTRUCTIONS

1. **WARNING**

Verify that the electrical supply wires are the same voltage as the heater.

2.If replacing an existing heater, check the label of the old heater for voltage and wattage information.

3.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.

4.If you need to install a new circuit or need additional wiring information, consult a qualified electrician.

5.Use copper conductors only.

6.**WARNING**

Risk of Electrical Shock. **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) clearance).

7.Heater must be installed in a wall can:

Model CE Wall Can CC

8. **WARNING**

Risk of Fire. **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.

9.WARNING

Fire or Explosion May Occur. 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.WARNING

Risk of Electrical Shock. Connect grounding lead to ground- ing screw provided. Keep all foreign objects out of heater.

11.WARNING

Risk of Fire. This heater is hot when in use. 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 6 inches (15.2 cm) above and on both sides.

Part One _

REPLACEMENT: If you are replacing an existing Com-Pak model, proceed to Part Two, page 5. Confirm that your existing wall can is mounted flush with outside of sheetrock. Adjust if necessary.

PLACEMENT: Install vertically. Heater is not approved for horizontal or ceiling mount applications. ADA requirements are met if the heater is installed between 12½ inches (31.8 cm) and 42 inches (1.1 m) from the floor. The recommended height is 24 inches (61 cm) from the floor to the bottom of the wall can (See Figure 4).

CONTROLS: A built-in digital thermostat is included. May not be used with a wall thermostat.

How do I install for new construction?

STEP 1 Mount The Wall Can

REQUIRED MINIMUM distance of ¾ inches (1.9 cm) from adja- cent surfaces, such as walls, and 4½ inches (11.4 cm) from the floor (See Figure 4). Cadet recommends 24 inches (61 cm) from floor for optimum performance. Heaters must be spaced at least 3 feet (0.9 m) apart.

Secure the wall can to the stud with 2 screws (not included). (See Figures 1 and 2). As an option, the rubber shim provided may be attached to side of wall can to square the wall can to the stud.

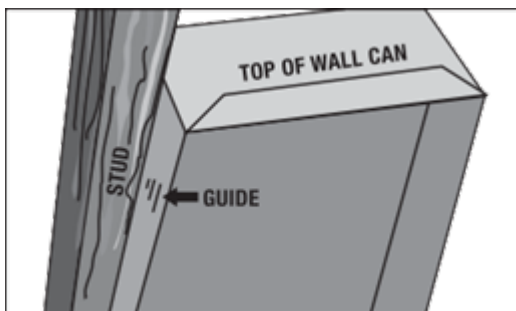


Figure 1

Face of wall can must extend $\frac{1}{2}$ inch (1.3 cm) or $\frac{5}{8}$ inch (1.6 cm) from face of stud to allow for thickness of sheetrock.

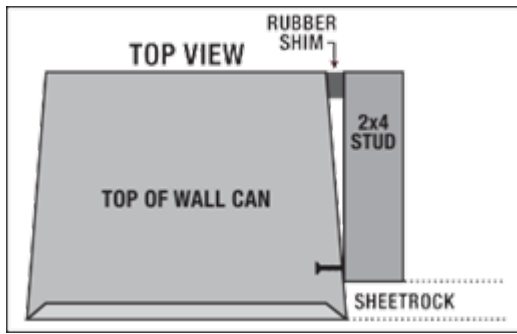


Figure 2

Attach wall can to stud with screws (not included) through holes provided in wall can. **IMPORTANT:** wall can should be mounted flush with outside of sheetrock.

STEP 2 Route Supply Wires

Route supply wire from the circuit breaker to the heater. Remove a knockout from the wall can and attach the supply wire with a strain relief connector (not included) leaving a minimum of 6 inches (15.2 cm) wire lead. Connect supply ground wire to grounding screw in wall can (See Figure 3).

Proceed to Part Two.

How do I install in an existing wall?

STEP 1 Cut A Hole In The Wall

REQUIRED MINIMUM distance of $\frac{3}{4}$ inches (1.9 cm) from adjacent surfaces, such as walls, and $4\frac{1}{2}$ inches (11.4 cm) from the floor (See Figure 4). Cadet recommends 24 inches (61 cm) from floor for optimum performance. Heaters must be spaced at least 3 feet (0.9 m) apart.

Cut a hole 8 inches (20.3 cm) wide by $10\frac{1}{4}$ inches (26 cm) high next to a wall stud.

STEP 2 Route Supply Wires

Route supply wire from the circuit breaker to the heater. Remove a knockout from the wall can and attach the supply wire with a strain relief connector (not included) leaving a minimum of 6 inches (15.2 cm) wire lead. Connect supply ground wire to grounding screw in wall can (See Figure 3).

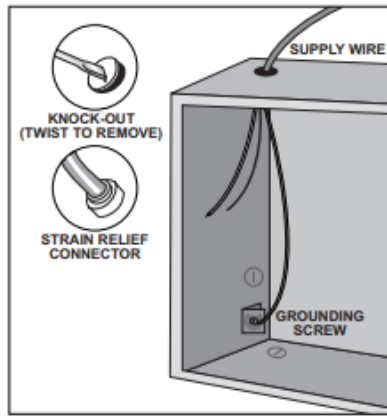


Figure 3

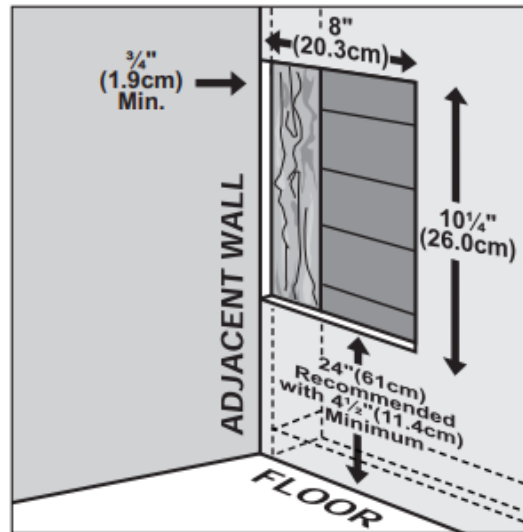


Figure 4

STEP 3 Mount The Wall Can

Insert wall can into opening; keeping wall can flush with wall surface. Secure can to wall stud with 2 screws (not included) through holes provided in can. **IMPORTANT:** wall can should be mounted flush with outside of sheetrock.

Proceed to Part Two.

Part Two

How do I insert the heater assembly into the wall can?

STEP 1 Install Heater Assembly

Turn heater assembly so that the front is facing the floor (element down with motor facing up). You can then rest the bottom edge of the heater assembly on the bottom of the wall can while supporting the edge closest to you.

Connect the supply wires to the heater wires with wire connectors (not included). (See Figure 5 or Figure 6). Now rotate heater assembly into wall can so that the bottom edge drops into the half round slots in bottom lip of wall can (See Figure 7).

IMPORTANT: Push wires into bottom and left side of wall can during insertion. Be sure supply wires are not caught between motor and wall can.

After confirming that the bottom edge of heater is positioned in the slots in bottom lip of wall can, attach assembly at top with screw provided.

STEP 2 Install Grill

Align digital display with grill cutout before tightening with grill screws provided. Do not overtighten (See Figure 8).

STEP 3 Installation

Turn electrical power back on at the main disconnect panel. WAIT 10-15 seconds for heater to power-up before pushing any buttons.

The CE163T and CE083T Energy Plus heaters are equipped with a smart sensor that will auto-adjust to your voltage supply. No need to worry about whether you have 120 or 240 volts.

If the heater has been properly installed: Display will read "88" for a moment; then flash the temperature set point if in HEAT mode; or 0, 1, 2, or 3 if in FAN ONLY mode.

After approximately 10 seconds, room temperature will be displayed. Proceed to OPERATING INSTRUCTIONS.

If the CE162T or CE168T is installed to the incorrect voltage, a Fault Code will display (See Fault Codes, page 7).

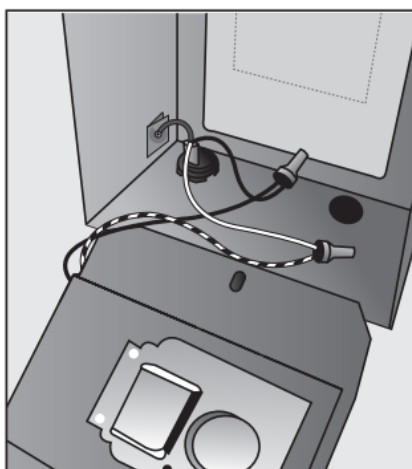


Figure 5
(Single Heater 120/208/240V)

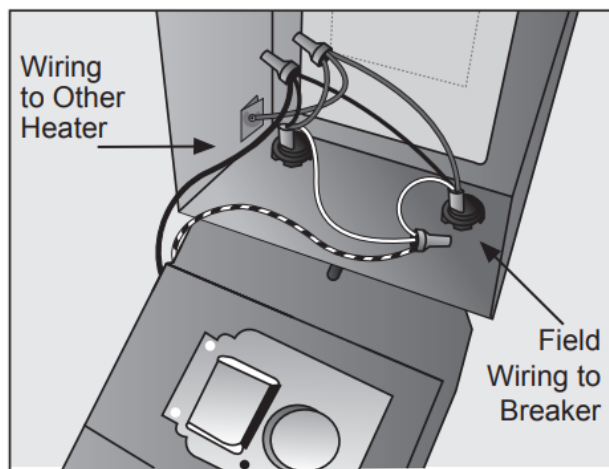


Figure 6
(Multiple Heaters on a branch circuit, 208 or 240V ONLY)

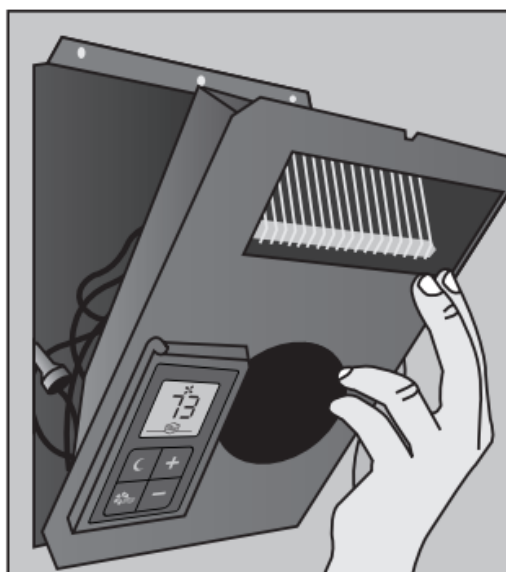


Figure 7

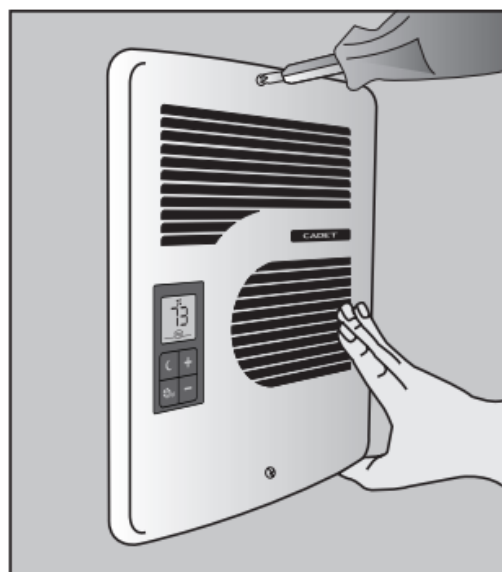


Figure 8

OPERATING INSTRUCTIONS

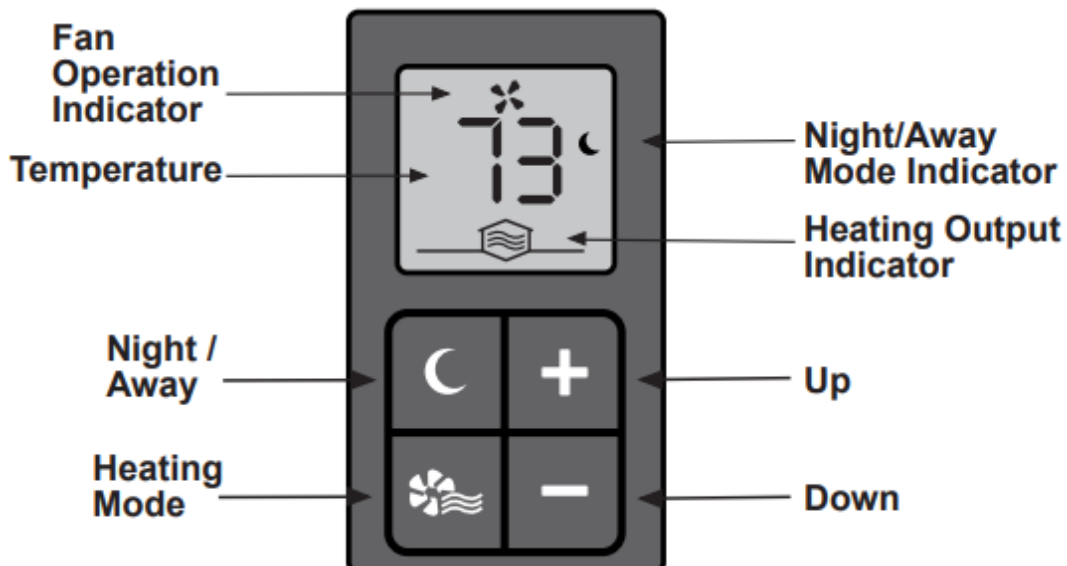
WARNING Risk of Electrical Shock and Fire.

The heater must be properly installed before it is used.


1. Do not operate without grill.
2. Keep electrical cords, drapery, furnishings and other combustibles at least 3 feet (0.9 m) away from the front of the heater and 6 inches (15.2 cm) away from the sides.
3. Do not tamper with the over temperature limit control.
4. If the heater over temperature limit trips more than once per day, the heater must be replaced.
5. Clean heater at least every six months.
6. After allowing the heater to cool, turn power off at circuit breaker panel before removing grill.
7. Use a hair dryer or vacuum on blow cycle to blow debris through the top element (do not touch element).
8. Install the grill before turning on power.

WARNING: Any other service not detailed in this Owner's Guide should be performed by an authorized service representative.

Digital Display and Control Buttons



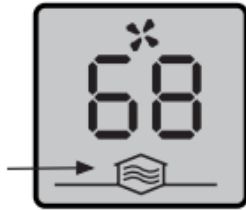
HEATER MODES

Use the mode  button to alternate between HEAT (display shows room temperature), STOP HEATING/NO FAN (display shows 0), and FAN ONLY (display shows 1, 2 or 3).

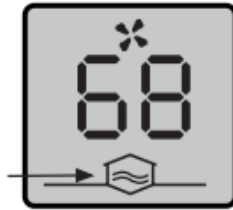
HEAT MODE

Your Energy Plus heater has a unique variable speed blower that auto adjusts heat output based on the room's requirements. Once you set your desired temperature, the heater will vary the wattage output for maximum efficiency.

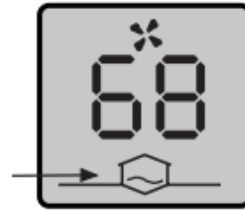
The digital display will show the level of heat being output to maintain the room's temperature



Heating Full Power






Heating Mid Power



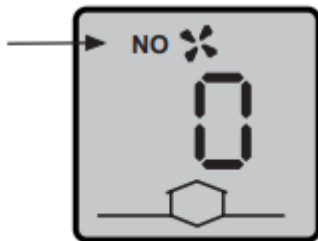
Heating Low Power

START HEATING/SET TEMPERATURE


- Press mode  button. Display shows room temperature.
- Press the up  or  down button to set your desired temperature.

Temperature Setpoint Range: 40°F - 86°F (4.4°C - 30°C)

STOP HEATING/NO FAN




Stop Heating / No Fan

Press mode  button until display shows '0'. NOTE: Fan will run until heater cools down. This phase could last for five minutes or more.

FAN ONLY MODE



Fan Only / High Speed







The FAN ONLY mode can circulate air but will not supply heat. Press  until display shows '0'. Push to choose 1 for low speed, 2 for medium speed, or 3 for high speed.

PROGRAMMING NIGHT/AWAY SET POINT









Night/Away Mode

Preset a night or away temperature set point, for quick and easy “one-touch” energy savings.

- Press mode  button until display shows room temperature.
- Press night  button. The moon icon will show in display screen. The “night/away” set point temperature will briefly flash.
- Press up  or down  to adjust night/away set point.
- To exit the night/away mode when you awake or return, press the night  again. The moon icon will no longer be in display screen.
- To return to your previous night/away set point, simply press the night  button.

MAX/MIN TEMPERATURE LOCK


Preset a maximum and/or minimum set point as a child safety or tamperproof option. To preset a maximum setpoint:


- Press mode  button until display shows ' '.
- Press and hold both night  and down  buttons at the same time, for at least 5 seconds, until the 'HL' (high limit) temperature is displayed.
- Release buttons: temperature setpoint will alternate with 'HL' on the display.
- Using the up  or down  button, set maximum set point.
- To preset a minimum setpoint, press mode  button, 'LL' will flash, set low temperature setting.
- Wait a minimum of 15 seconds for display to return to ' ', and your settings will be saved.

- To remove the lock, follow same instructions, and set to maximum of 86°F (30°C), or minimum of 40°F (4.4°C).


- Press  to return to HEAT mode.

CHANGE DISPLAY TO CELSIUS


- Press mode  button until display shows ' '.

- Press and hold both night  and down  buttons at the same time, for at least 5 seconds, until the 'HL' (high limit) temperature is displayed.

- Press mode  twice, until display alternates between oF and Un .

- Press  to convert to Celsius.

- Wait a minimum of 15 seconds until display stops flashing.

- Press  to return to HEAT mode.

Fault Codes

No Display	No power, internal control faulty	Check that power is being supplied to heater. If operating power, confirm generator setting; if display still doesn't tu is faulty. Replace heater assembly.
F1	Grill is interfering with display buttons	Turn power off at main disconnect panel, realign grill. Tu on at main disconnect panel.
F4	<ol style="list-style-type: none"> 1.Line voltage is too low 2.Loose wire connections 3.Connected to wrong voltage 	<ol style="list-style-type: none"> 1.Clears automatically when line voltage returns to normal 2.Check wire connections 3.Connect heater to correct voltage (CE162T or CE16
F6	Line voltage is too high	Clears automatically when line voltage returns to normal
F7	Thermal limit tripped	<p>Inspect heater for blockage, obstruction, and/or proper c</p> <ol style="list-style-type: none"> 1. Push mode button to no heat position and wait for heat <p>Push manual reset limit control button per Reset instruct</p>
F8	Internal control fault	Disconnect power, reconnect power. If F8 code returns, Replace heater assembly.
FF	Temperature is below 0 degrees F (-17.8 degrees C), too low to display	Clears automatically when temperature is 0 degrees F (- C) or above.

About the Manual Reset Temperature Limit Control

The heater is protected by a temperature-limiting control. The manual reset temperature limit control is designed to open the heater circuit and stop the electrical current flow when excessive operating temperatures are detected. The problem must be assessed (typically the heater is blocked or needs cleaning) and the limit must be reset to resume operation.

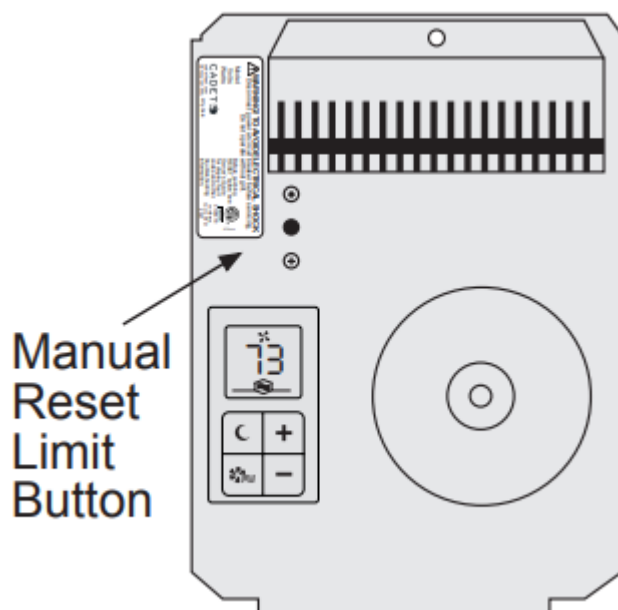
Resetting the Manual Reset Limit Control

Resetting the Manual Reset Temperature Limit Control

If the manual reset limit control has opened the heater circuit due to excessive operating temperatures, the heater will not work until the manual reset limit button is pressed.

The “manual reset limit button” is the red button located on the upper left side of your heater, behind the grill louvers located just above the digital temperature display.

After allowing the unit to cool for at least 10 minutes and resolving the problem causing the limit to trip (typically the heater is blocked or needs cleaning); use a narrow object such as a ball-point pen to access the manual reset button through the upper-left center section of the heater grill. Press FIRMLY and be sure to listen and feel for a click, indicating it has been reset.



MAINTAINING YOUR HEATER

Maintenance As Needed, or every six months minimum.



WARNING! Before removing grill, turn the electrical power off at the main disconnect panel (circuit breaker or fuse box). Lock or tag the main disconnect panel door to prevent someone from accidentally turning the power on while you are working on the heater. Failure to do so could result in serious electrical shock, burns, or possible death.

WARNING: Any other service not detailed in this Owner’s Guide should be performed by an authorized service representative.

Troubleshooting Chart

***CONSULT LOCAL ELECTRICAL CODES TO DETERMINE WHAT WORK MUST BE PERFORMED BY QUALIFIED ELECTRICAL SERVICE PERSONNEL.**



Symptom

Heater is work- ing, but room does not reach desired tempera- ture.

Breaker trips immediately upon energizing heater.

Heater fan op- erates, but does not discharge warm air.



Heater will not shut off.

Heater discharges smoke or emits a burnt odor.

Element heats for a moment without the fan turning, then immediately stops heating.

Heater does not run.



Heater continually trips the manual reset temperature limit control.

Warning

This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.

