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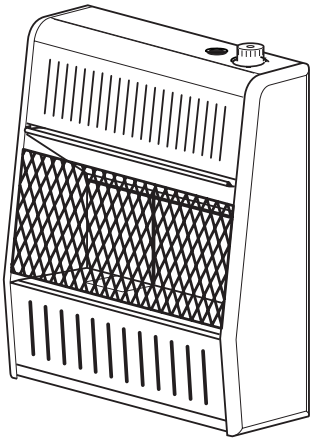

INFRARED
VENT-FREE GAS
SPACE HEATER
OWNER'S OPERATION AND
INSTALLATION MANUAL

THERMOSTAT CONTROL
MODELS
IFR10K-NG
IFR10K-LP

PFS® US

F11-003
CSA/ANS
Z21.11.2- 2019
UNVENTED ROOM
HEATERS

⚠ WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

— Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

— WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

— Installation and service must be performed by a qualified installer, service agency or the gas supplier.

INSTALLER: Leave this manual with the appliance.
CONSUMER: Retain this manual for future reference.

Questions, problems, missing parts? Before returning to your retailer,
Email Customer Service at info@buckstove.com

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SAVE THIS BOOK

This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to *Air For Combustion and Ventilation* section on page 6 of this manual.

⚠ WARNING: FIRE, EXPLOSION, AND ASPHYXIATION HAZARD

Improper adjustment, alternation, service, maintenance, or installation or this heater or its controls can cause death or serious injury. Read and follow instructions and precautions in User's Information Manual provided with this heater.

This appliance may be installed in an aftermarket,* permanently located, manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

*** Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.**

IMPORTANT: Read this owner's manual carefully and completely before trying to assemble, operate, or service this heater. Improper use of this heater can cause serious injury or death from burns, fire, explosion, electrical shock and carbon monoxide poisoning.

Only a qualified installer, service agent, or local gas supplier may install and service this product.

⚠ WARNING: Keep the appliance area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

This heater is equipped for either natural or propane gas. Field conversion is not permitted.

⚠ DANGER: Carbon monoxide poisoning may lead to death!

CARBON MONOXIDE POISONING: Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness or nausea. If you have these signs, the heater may not be working properly. Get fresh air at once! Have heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol and those at high altitudes.

NATURAL AND PROPANE GAS: Natural and propane gas are odorless. An odor-making agent is added to the gas. The odor helps you detect a gas leak. However, the odor added to the gas can fade. Gas may be present even though no odor exists.

⚠ WARNING: Do not use any accessories not approved for use with this heater.

⚠ WARNING: Carefully supervise young children when they are in the room with the heater.

⚠ The fire screen or guard designed for this unvented appliance must be installed prior to operation.

⚠ WARNING: Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

⚠ WARNING: Heater becomes very hot when running. Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns and clothing ignition. Heater will remain hot for a time after shutoff. Allow surfaces to cool before touching.

⚠ WARNING: Do not place clothing or other flammable material on or near the appliance. Never place any objects in the heater.

⚠ WARNING: Any change to this heater or its controls can be dangerous.

SAFETY

1. Do not place propane supply tank(s) inside any structure. Propane supply tank(s) must be placed outdoors.
2. Heaters with a maximum input over 6,000 Btu/Hr shall not be installed in a bathroom. Heaters with a maximum input over 10,000 Btu/Hr shall not be installed in a bedroom.
3. This heater needs fresh air ventilation to run properly. This heater has an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS shuts down the heater if not enough fresh air is available. See Air for *Combustion and Ventilation*, pages 6 and 7. If heater keeps shutting off, see *Troubleshooting*, page 19.
4. Keep all air openings in front and bottom of heater clear and free of debris. This will ensure enough air for proper combustion.
5. If heater shuts off, do not relight until you have provided fresh, outside air. If heater keeps shutting off, have it serviced.
6. Do not run heater:
   - Where flammable liquids or vapors are used or stored.
   - Under dusty conditions.
   - Outdoors.

7.. Before using furniture polish, wax, carpet cleaner, or similar products, turn heater off. If heated, the vapors from these products may create a white powder residue within burner box or on adjacent walls or furniture.

8 Do not use heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.

9. Turn off heater and let cool before servicing. Only a qualified service person should service and repair heater.
10. Operating heater above elevations of 4,500 feet could cause pilot outage.
11. To prevent performance problems, do not use propane fuel tank of less than 100 lbs. capacity.
12. This appliance is for indoor operation and should not be installed outdoors.

SPECIFICATIONS

MODEL	IFR10K-NG	IFR10K-LP
Ignition	Piezo	Piezo
Control Type	Thermostat	Thermostat
Gas Type	Natural Gas	Propane
BTU/Hr (available)	10,000	10,000
Pressure Regulator Setting	6" W.C.	10" W.C.
Inlet Gas Pressure* (inches of water)	Max 10.5"	Max 14"
	Min 7"	Min 11"
Heater Weight	14 lbs	14 lbs
Shipping Weight	16.7 lbs	16.7 lbs
Heater Dimensions (HxWxD) 21 3/16" × 15 13/16 " × 6 7/8"		
Carton Dimensions (HxWxD) 22 13/16" × 17 15/16" × 8 1/4"		

Note: Dimensions listed are outer most points on the heater (includes control knobs and grill).

* For purposes of input adjustment.

PRODUCT IDENTIFICATION

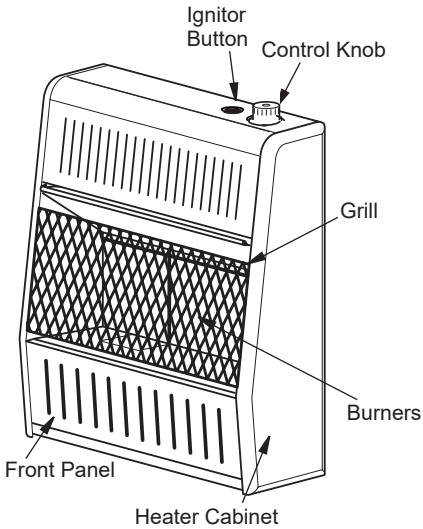


Figure 1 - Vent-Free Gas Heater

QUALIFIED INSTALLING AGENCY

Only a qualified agency should install and replace gas piping, gas utilization equipment or accessories. Repair and equipment servicing should allways be done by a qualified agency. The term “qualified agency” means any individual, firm, corporation, or company that either in person or through a representative is engaged in and is responsible for:

a) Installing, testing, or replacing gas piping or

b) Connecting, installing, testing, repairing, or servicing equipment; that is experienced in such work; that is familiar with all precautions required; and that has complied with all the requirement of the authority having jurisdiction.

PRODUCT FEATURES

SAFETY PILOT

This heater has a pilot with an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS/pilot shuts off the heater if there is not enough fresh air.

PIEZO IGNITION SYSTEM

This heater is equipped with a piezo ignitor. this system requires no matches, batteries, or other sources to light heater.

THERMOSTATIC CONTROL

These heaters have a control valve with a thermostat sensing bulb. It is able to react to changes in room temperature by switching the burner on or off.This results in the greatest heater comfort and may result in lower gas bills.

LOCAL CODES

Install and use heater with care. Follow all local codes. In the absence of local codes, use the latest edition of *The National Fuel Gas Code, ANSI Z223.1/NFPA 54**.

*Available from:

American National Standards Institute, Inc.
25 West 43rd Street
New York, NY 10036

National Fire Protection Association, Inc.
1 Batterymarch Park
Quincy, MA 02269-9101

State of Massachusetts: The installation must be made by a licensed plumber or gas fitter in the Commonwealth of Massachusetts.

Sellers of unvented propane or natural gas-fired supplemental room heaters shall provide to each purchaser a copy of 527 CMR 30 upon sale of the unit.

In the State of Massachusetts the gas cock must be a T-handle type. The State of Massachusetts requires that a flexible appliance connector cannot exceed three feet in length.

UNPACKING

1. Remove heater from carton.
2. Remove all protective packaging applied to heater for shipping.
3. Check heater for any shipping damage. If heater is damaged, promptly inform dealer where you bought heater.

WATER VAPOR: A BY-PRODUCT OF UNVENTED ROOM HEATERS

Water vapor is a by-product of gas combustion. An unvented room heater produces approximately one (1) ounce (30 mL) of water for every 1,000 BTUs (0.3 KWs) of gas input per hour. Unvented room heaters are recommended as supplemental heat (a room) rather than a primary heat source (an entire house). In most supplemental heat applications, the water vapor does not create a problem. In most applications, the water vapor enhances the low humidity atmosphere experienced during cold weather.

The following steps will help ensure that water vapor does not become a problem:

1. Be sure the heater is sized properly for the application, including ample combustion air and circulation air.
2. If high humidity is experienced, a dehumidifier may be used to help lower the water vapor content of the air.
3. Do not use an unvented room heater as the primary heat source.

AIR FOR COMBUSTION AND VENTILATION

⚠ WARNING: This heater shall not be installed in a confined space or unusually tight construction unless provisions are provided for adequate combustion and ventilation air. Read the following instructions to insure proper fresh air for this and other fuel-burning appliances in your home.

Today's homes are built more energy efficient than ever. New materials, increased insulation and new construction methods help reduce heat loss in homes. Homeowners weather strip and caulk around windows and doors to keep the cold air out and the warm air in. During heating months, homeowners want their homes as airtight as possible.

While it is good to make your home energy efficient, your home needs to breathe. Fresh air must enter your home. All fuel-burning appliances need fresh air for proper combustion and ventilation.

AIR FOR COMBUSTION AND VENTILATION

Exhaust fans, fireplaces, clothes dryers and fuel burning appliances draw air from the house to operate. You must provide adequate fresh air for these appliances. This will ensure proper venting of vented fuel-burning appliances.

⚠ WARNING: This heater shall not be installed in a room or space unless the required volume of indoor combustion air is provided by the method described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54,* the *International Fuel Gas Code,* or applicable local codes.

⚠ WARNING: If the area in which the heater may be operated does not meet the required volume for indoor combustion air, combustion and ventilation air shall be provided by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54,* the *International Fuel Gas Code,* or applicable local codes.

VENTILATION AIR

Ventilation Air From Inside Building

This fresh air would come from an adjoining unconfined space. When ventilating to an adjoining unconfined space, you must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor on the wall connecting the two spaces (see options 1 and 2, Figure 2). You can also remove door into adjoining room (see option 3, Figure 2). Follow the *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

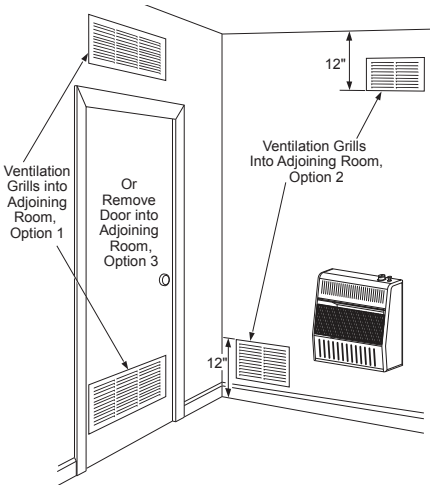


Figure 2 - Ventilation Air from Inside Building

Ventilation Air From Outdoors

Provide extra fresh air by using ventilation grills or ducts. You must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor. Connect these items directly to the outdoors or spaces open to the outdoors. These spaces include attics and crawl spaces. Follow the *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

IMPORTANT: Do not provide openings for inlet or outlet air into attic if attic has a thermostat-controlled power vent. Heated air entering the attic will activate the power vent. Rework worksheet, adding the space of the adjoining unconfined space. The combined spaces must have enough fresh air to supply all appliances in both spaces.

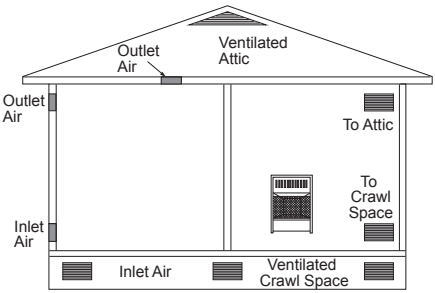


Figure 3 - Ventilation Air from Outdoors

NOTICE: This heater is intended for use as supplemental heat. Use this heater along with your primary heating system. Do not install this heater as your primary heat source. If you have a central heating system, you may run the system's circulating blower while using heater. This will help circulate the heat throughout the house. In the event of a power outage, you can use this heater as your primary heat source.

⚠ CAUTION: When installing heater in a home garage:
- **Heater pilot and burner must be at least 18" above floor.**
- **Locate heater where moving vehicle will not hit it.**

⚠ WARNING: A qualified service person must install heater. Follow all local codes.

⚠ WARNING: Never install the heater:
- **In high traffic areas.**
- **In windy or drafty areas.**
- **In a recreational vehicle.**
- **Where curtains, furniture, clothing, or other flammable objects are less than 36" from the front, top, or sides of the heater.**
- **Outdoors.**

Do not install heaters over 10,000 Btu/Hr in a bedroom.
Do not install heaters over 6,000 Btu/Hr in a bathroom.

⚠ CAUTION: This heater creates warm air currents. These currents move heat to wall surfaces next to heater. Installing heater next to vinyl or cloth wall coverings or operating heater where impurities (such as tobacco smoke, aromatic candles, cleaning fluids, oil or kerosene lamps, etc.) in the air exist, may cause walls to discolor.

IMPORTANT: Vent-free heaters add moisture to the air. Although this is beneficial, installing heater in rooms without enough ventilation air may cause mildew to form if there is too much moisture present. See *Air for Combustion and Ventilation*, pages 6 and 7.

CHECK GAS TYPE

Be sure your gas supply is right for your heater. Otherwise, call dealer where you bought the heater for proper type heater.

CLEARANCES TO COMBUSTIBLES

⚠ WARNING: Maintain the minimum clearances shown in Figure 4. If you can, provide greater clearances from floor, ceiling, and joining wall.

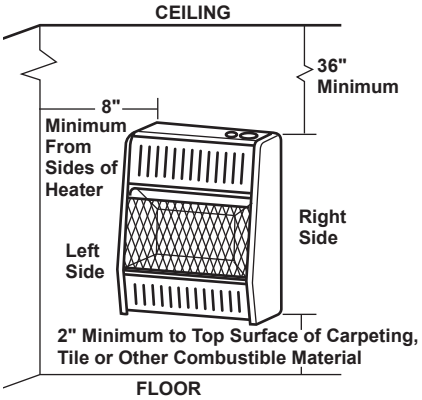


Figure 4 - Mounting Clearances as Viewed From Front of Heater

LOCATING HEATER

This heater is designed to be mounted on a wall. You can locate heater on the floor, away from a wall. An optional floor mounting stand is needed. See *Installation of Base Stand,* page 11.

For convenience and efficiency, install heater:

1. Where there is easy access for operation, inspection, and service.
2. In the coldest part of room.

When installing the appliance directly on carpeting, tile or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extended the full width and depth of the appliance.

REMOVING FRONT PANEL OF HEATER

1. Remove two screws near bottom corners of lower front panel.
2. Pull bottom of lower front panel forward, then down (see Figure 5).

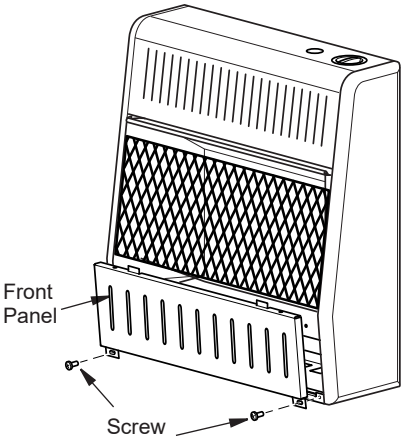


Figure 5 - Removing Front Panel Of Heater

FASTENING HEATER TO WALL

Mounting Bracket

The mounting bracket is located on back panel of heater. It has been taped there for shipping. Remove mounting bracket from back panel.

Methods For Attaching Mounting Bracket To Wall

Use only the last hole on each end of mounting bracket to attach bracket to wall. Attach mounting bracket to a wall only in one of two ways:

1. ***Attaching to wall stud:*** This method provides the strongest hold. Insert mounting screws through mounting bracket and into wall studs.
2. ***Attaching to wall anchor:*** This method allows you to attach mounting bracket to hollow walls (wall areas between studs) or to solid walls (concrete or masonry).

Decide which method better suits your needs. Either method will provide a secure hold for the mounting bracket.

Marking Screw Locations

1. Tape mounting bracket to wall where heater will be located. Make sure mounting bracket is level.

⚠ WARNING: Maintain minimum clearances shown in Figure 4, page 8. If you can, provide greater clearances from floor and joining wall.

2. Mark screw locations on wall (see Figure 6). *Note: Mark only last hole on each end of mounting bracket. Insert mounting screws through these holes only.*
3. Remove tape and mounting bracket from wall.

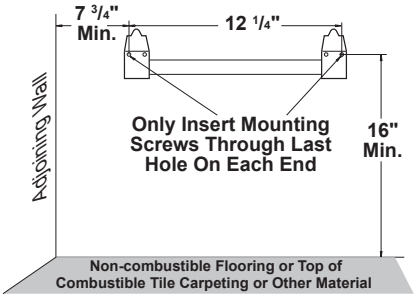


Figure 6 - Mounting Bracket Clearances

Attaching Mounting Bracket To Wall

Note: Wall anchors, mounting screws, and spacers are in hardware package. The hardware package is provided with heater.

Attaching to Wall Stud Method

For attaching mounting bracket to wall studs:

1. Drill holes at marked locations using 9/64" drill bit.
2. Place mounting bracket onto wall. Line up last hole on each end of bracket with holes drilled in wall.
3. Insert mounting screws through bracket and into wall studs.
4. Tighten screws until mounting bracket is firmly fastened to wall studs.

Attaching to Wall Anchor Method

For attaching mounting bracket to hollow walls (wall areas between studs) or solid walls (concrete or masonry):

1. Drill holes at marked locations using 5/16" drill bit. For solid walls (concrete or masonry), drill at least 1" deep.
2. Fold wall anchor as shown in Figure 7.
3. Insert wall anchor (wings first) into hole. Tap anchor flush to wall.
4. For thin walls (1/2" or less), insert red key into wall anchor. Push red key to “pop” open anchor wings (see Figure 8).

IMPORTANT: Do not hammer anchor key! For thick walls (over 1/2" thick) or solid walls, do not pop open wings.

5. Place mounting bracket onto wall. Line up last hole on each end of bracket with wall anchors.
6. Insert mounting screws through bracket and into wall anchors.
7. Tighten screws until mounting bracket is firmly fastened to wall.

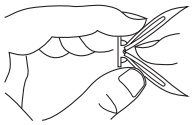


Figure 7 - Folding Anchor

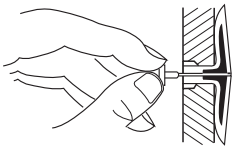


Figure 8 - Popping Open Anchor Wings For Thin Walls

Placing Heater On Mounting Bracket

1. Locate two horizontal slots on back panel of heater (see Figure 9).
2. Place heater onto mounting bracket. Slide horizontal slots onto stand-out tabs on mounting bracket.

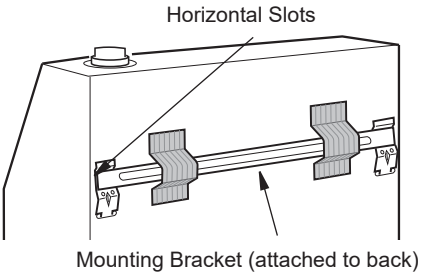


Figure 9 - Mounting Heater Onto Mounting Bracket

Installing Wall Spacers

1. Place heater on wall mounting bracket.
2. Mark screw locations on wall.
3. Remove heater from mounting bracket.
4. If installing bottom mounting screws into hollow or solid wall, install wall anchors.

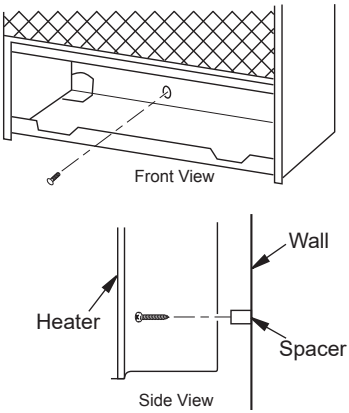


Figure 10 - Installing Bottom Mounting Screws

Follow steps 1 through 4 under *Attaching To Wall Anchor Method,* page 10. If installing bottom mounting screw into wall stud, drill holes at marked locations using 9/64" drill bit.

5. Replace heater onto mounting bracket.
6. Place spacers between bottom mounting holes and wall anchor or drilled hole.
7. Hold spacer in place with one hand. With other hand, insert mounting screw through bottom mounting hole and spacer. Place tip of screw in opening of wall anchor or drilled hole.
8. Tighten both screws until heater is firmly secured to wall. Do not overtighten.

Note: Do not replace front panel at this time. Replace front panel after making gas connections and checking for leaks.

INSTALLATION OF BASE STAND
(If Used)

Before installing heater to base, please make sure you have a hardware packet that contains the following items:

Base Feet - 2 qty

Sheet Metal Screws - 4 qty

Directions:

1. Carefully lay heater on its back on a table with the bottom of the heater extending outside the table edge.
2. Attach base feet to heater using sheet metal screws.

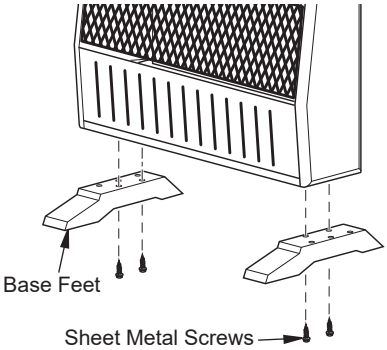


Figure 11 - Installing Base Feet

CONNECTING TO GAS SUPPLY

⚠ WARNING: A qualified service technician must connect heater to gas supply. Follow all local codes.

⚠ WARNING: This appliance requires a 3/8" NPT (National Pipe Thread) inlet connection to the pressure regulator.

⚠ WARNING: For natural gas, never connect heater to private (non-utility) gas wells. This gas is commonly known as wellhead gas.

⚠ WARNING: Do not overtighten gas connections.

⚠ CAUTION: Use only new, black iron or steel pipe. Internally tinned copper tubing may be used in certain areas. Check your local codes. Use pipe of 1/2" diameter or greater to allow proper gas volume to heater. If pipe is too small, undue loss of pressure will occur.

⚠ CAUTION: For natural gas, check your gas line pressure before connecting heater to gas line. Gas line pressure must be no greater than 10.5" of water. If gas line pressure is higher, heater regulator damage could occur.

⚠ CAUTION: For propane gas, never connect heater directly to the gas supply. This heater requires an external regulator (not supplied). Install the external regulator between the heater and gas supply. Gas supplier provides external regulator for natural gas. The installer provides the external regulator for propane gas.

⚠ CAUTION: Avoid damage to regulator. Hold gas regulator with wrench when connecting into gas piping and/or fittings.

⚠ CAUTION: Use pipe joint sealant that is resistant to gas (Propane or Natural Gas).

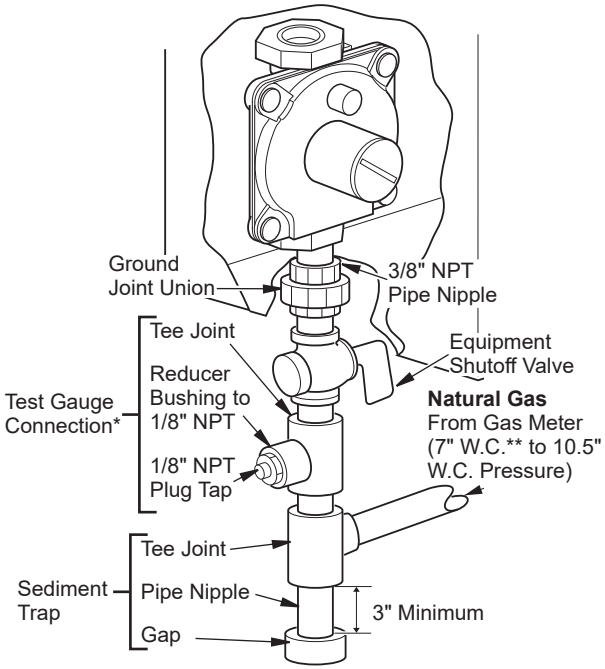


Figure 12 - Gas Connection

* Purchase the optional CSA design-certified equipment shutoff valve from your dealer.

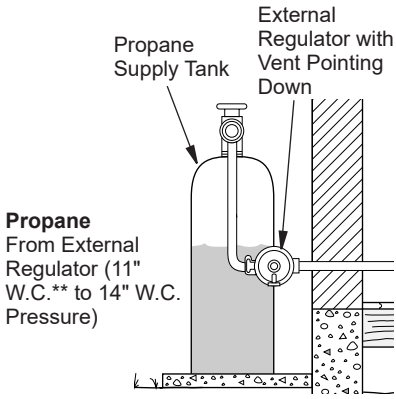


Figure 13- External Regulator with Vent Pointing Down

CHECKING GAS CONNECTIONS

⚠ WARNING: Test all gas piping and connections for leaks after installing or servicing. Correct all leaks at once.

⚠ WARNING: Never use an open flame to check for a leak. Apply a noncorrosive leak detection fluid to all joints. If bubbles form, there is a leak. Correct all leaks at once.

PRESSURE TESTING GAS SUPPLY PIPING SYSTEM

Test Pressures In Excess Of 1/2 PSIG (3.5 kPa)

1. Disconnect heater with its appliance main gas valve (control valve) and equipment shutoff valve from gas supply piping system. Pressures in excess of 1/2 PSIG will damage heater regulator.
2. Cap off open end of gas pipe where equipment shutoff valve was connected.
3. Pressurize supply piping system by either opening propane supply tank valve for propane gas or opening main gas valve located on or near gas meter for natural gas or using compressed air.
4. Check all joints of gas supply piping system. Apply a noncorrosive leak detection fluid to all joints. If bubbles form, there may be a leak.
5. Correct all leaks at once.
6. Reconnect heater and equipment shutoff valve to gas supply. Check reconnected fittings for leaks.

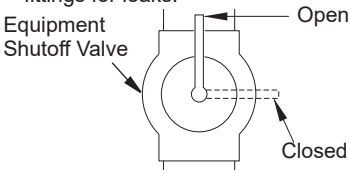


Figure 13 - Equipment Shutoff Valve

Test Pressures Equal To or Less Than 1/2 PSIG (3.5 kPa)

1. Close equipment shutoff valve (see Figure 13).
2. Pressurize supply piping system by either opening propane supply tank valve for propane gas or opening main gas valve located on or near gas meter for natural gas or using compressed air.
3. Check all joints from gas meter to equipment shutoff valve for natural gas or propane supply to equipment shutoff valve for propane (see Figure 14 or 15). Apply a noncorrosive leak detection fluid to all joints. Bubbles forming show a leak.
4. Correct all leaks at once.

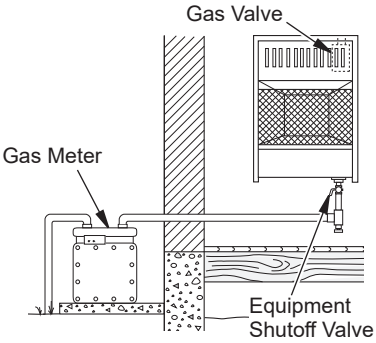


Figure 14 - Natural Gas Supply

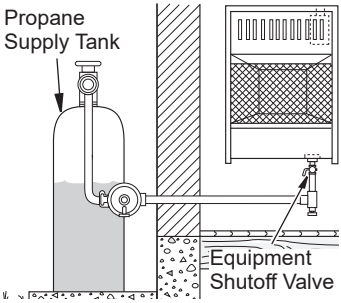


Figure 15 - Propane Gas Supply

PRESSURE TESTING HEATER GAS CONNECTIONS

1. Open equipment shutoff valve (see Figure 13).
2. Open gas supply tank valve.
3. Make sure control knob of heater is in the OFF position.
4. Check all joints from equipment shutoff valve to control valve (see Figure 14 or 15). Apply a noncorrosive leak detection fluid to all joints. Bubbles forming show a leak.
5. Correct all leaks at once.
6. Light heater (see *Lighting Instructions*, page 15 or 16). Check all other internal joints for leaks.
7. Turn off heater (see *To Turn Off Gas Appliance*, page 16).
8. Replace front panel.

FOR YOUR SAFETY READ BEFORE LIGHTING

⚠ WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.

B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS:
- **Do not try to light any appliance.**
- **Do not touch any electric switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

THERMOSTAT MODEL LIGHTING INSTRUCTIONS

1. STOP! Read the safety information on page 15.
2. Make sure equipment shutoff valve is fully open.
3. Turn control knob clockwise to the OFF position.
4. Wait five (5) minutes to clear out any air. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information, page 16. If you do not smell gas, go to the next step.
5. Turn control knob counterclockwise to the PILOT position. Press in control knob for five (5) seconds (see Figure 16).
   Note: The first time that the heater is operated after connecting the gas supply,the control knob should be pressed for about thirty (30) seconds. This will allow air to bleed from the gas system. If pilot does not stay lit, refer to Troubleshooting, pages 19 through 21. Also contact a qualified service technician or gas supplier for repairs. Until repairs are made, light pilot with match.
6. With control knob pressed in, push down and release ignitor button. This will light pilot. The pilot is attached to the front of burner. If needed, keep pressing ignitor button until pilot lights. *Note: If pilot does not stay lit, refer to Troubleshooting, pages 19 through 21. Also contact a qualified service technician or gas supplier for repairs. Until repairs are made, light pilot with match. To light pilot with match, see Manual Lighting Procedure.*
7. Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob. If control knob does not pop up when released, contact a qualified service technician or gas supplier for repairs.

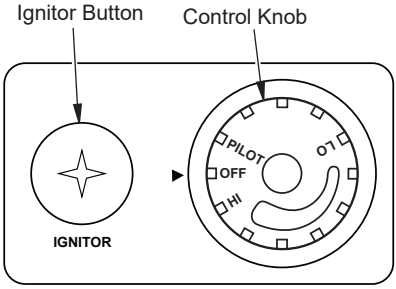


Figure 16 - Control Knob in the OFF Position

Note: If pilot goes out, repeat steps 3 through 7. This heater has a safety interlock system. Wait one (1) minute before lighting pilot again.

8. Turn control knob counterclockwise to desired heating level. The main burner should light. Set control knob to any heat level between HI and LO.

⚠ CAUTION: Do not try to adjust heating levels by using the equipment shutoff valve.

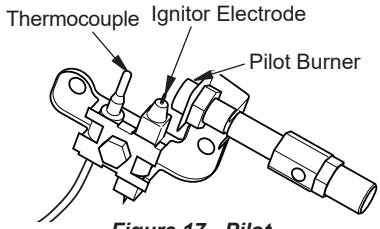


Figure 17 - Pilot

THERMOSTAT CONTROL OPERATION

The thermostatic control used on this model differs from standard thermostats. You set standard thermostats to a specific temperature such as 72° F. The control of this heater establishes a "comfort level". In order for the thermostat to operate effectively, the heater should be the main source of heat in the room. Follow the instructions for lighting the heater on page 15. When the room reaches the desired comfort level, rotate the control knob clockwise slowly until the main burner turns off and the pilot remains on (this position on the knob will change depending on room temperature).

Turn the knob counter-clockwise slowly until the main burner reignites. Note the position of the control knob by the numbers printed on the knob. Leave the knob in this position.

As the room temperature increases, the main burner will turn off and the pilot will remain on. When the room temperature cools, the heater's main burner will come back on. If left at this set point the thermostat will turn the main burner on or off as needed to maintain the room temperature at the desired comfort level.

Note: The thermostat sensing bulb reacts to the temperature depending on house's construction.

TO TURN OFF GAS TO APPLIANCE

Shutting Off Heater

Turn control knob clockwise to the OFF position.

Shutting Off Burner Only (pilot stays lit)

Turn control knob clockwise to the PILOT position.

MANUAL LIGHTING PROCEDURE

1. Remove front panel.
2. Follow steps 1 through 5 under *Lighting Instructions*, page 15 or 16.
3. With control knob pressed in, strike match. Hold match to pilot until pilot lights.
4. Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob. Follow step 8 under *Lighting Instructions*, page 15 or 16.
5. Replace front panel.

INSPECTING BURNERS

IMPORTANT: Owners should check pilot flame pattern and burner flame pattern often. Incorrect flame patterns indicate the need for cleaning (see Care and Maintenance, page 18) or service.

⚠ WARNING: Only a qualified service person should service and repair heater. This includes maintenance requiring replacement or alteration of components.

PILOT FLAME PATTERN

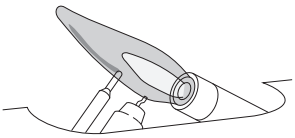


Figure 18 - Correct Pilot Flame Pattern

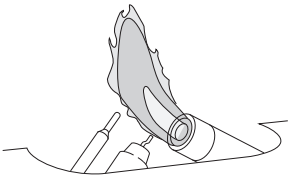


Figure 19 - Incorrect Pilot Flame Pattern

Figure 18 shows a correct pilot flame pattern. Figure 19 shows an incorrect pilot flame pattern. The incorrect pilot flame is not touching the thermocouple. This will cause the thermocouple to cool, which shuts the heater off.

If pilot flame pattern is incorrect, as shown in Figure 19:

- turn heater off (see *To Turn Off Gas to Appliance*, page 16).
- see *Troubleshooting* pages 19 through 21.

BURNER FLAME PATTERN

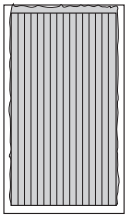


Figure 20 - Correct Burner Flame Pattern

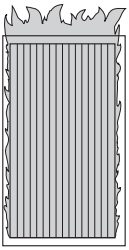


Figure 21 - Incorrect Burner Flame Pattern

Figure 20 shows a correct burner flame pattern. Figure 21 shows an incorrect burner flame pattern. The incorrect burner flame pattern shows yellow tipping of the flame. It also shows the flame higher than 1/2 the heat shield height.

If burner flame pattern is incorrect, as shown in Figure 21:

- turn heater off (see *To Turn Off Gas to Appliance*, page 16).
- see *Troubleshooting* pages 19 through 21.

⚠ WARNING: If yellow tipping occurs, your heater could produce increased levels of carbon monoxide. If the burner flame pattern shows yellow tipping, follow instructions below.

Notice: *Do not mistake orange flames with yellow tipping. Dirt or other fine particles enter the heater and burn causing brief patches of orange flame.*

⚠ WARNING: Turn off heater and let cool before servicing.

⚠ CAUTION: You must keep control areas, burner, and circulating air passageways of heater clean. Inspect these areas of heater before each use. Have heater inspected yearly by a qualified service technician. Heater may need more frequent cleaning due to excessive lint from carpeting, bedding material, pet hair, etc.

⚠ WARNING: Failure to keep the primary air opening(s) of the burner(s) clean may result in sooting and property damage.

MAIN BURNER

Periodically inspect all burner flame holes with the heater running. All slotted burner flame holes should be open with yellow flame present. All round burner flame holes should be open with a small blue flame present. Some burner flame holes may become blocked by debris or rust, with no flame present. If so, turn off the heater and let it cool, and remove blockage or replace burner. Blocked burner flame holes will create soot.

BURNER INJECTOR HOLDER AND PILOT AIR INLET HOLE

We recommend that you clean the unit every 2,500 hours of operation or every three months. We also recommend that you keep the burner tube and pilot assembly clean and free of dust and dirt. To clean these parts we recommend using compressed air no greater than 30 PSI. Your local computer store, hardware store, or home center may carry compressed air in a can. You can use a vacuum cleaner in the blow position. If using compressed air in a can, please follow the directions on the can. If you don't follow directions on the can, you could damage the pilot assembly.

1. Shut off the unit, including the pilot. Allow the unit to cool for at least thirty minutes.
2. Remove four screws securing front panel.
3. Pull front panel forward.
4. Inspect burner and pilot for dust and dirt.
5. Blow air through the ports/slots and holes in the burner.
6. Replace front panel using screws removed in step 2.

ODS/PILOT

Use a vacuum cleaner, pressurized air, or a small, soft bristled brush to clean.

A yellow tip on the pilot flame indicates dust and dirt in the pilot assembly. There is a small pilot air inlet hole about 2" from where the pilot flame comes out of the pilot assembly (see Figure 22). With the unit off, lightly blow air through the air inlet hole. You may blow through a drinking straw if compressed air is not available.

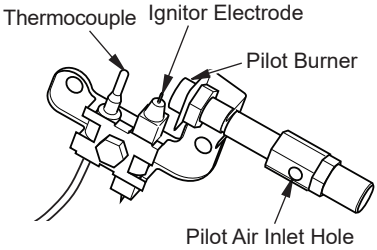


Figure 22 - Pilot Inlet Air Hole

CABINET

Air Passageways

Use a vacuum cleaner or pressurized air to clean.

Exterior

- Use a soft cloth dampened with a mild soap and water mixture.
- Wipe the cabinet to remove dust.

TROUBLESHOOTING

⚠ WARNING: If you smell gas:
- **Shut off gas supply.**
- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

⚠ WARNING: Only a qualified service technician should service and repair heater. Make sure that power is turned off before proceeding. Turn off and let cool before servicing.

⚠ CAUTION: Never use a wire, needle, or similar object to clean ODS/pilot. This can damage ODS/pilot unit.

IMPORTANT: Operating heater where impurities in air exist may create odors. Cleaning supplies, paint, paint remover, cigarette smoke, cements and glues, new carpet or textiles, etc., create fumes. These fumes may mix with combustion air and create odors.

Note: All troubleshooting items are listed in order of operation.

Problem	Possible Cause	Corrective Action
When ignitor button is pressed in, there is no spark at ODS/pilot.	1. Ignitor electrode is positioned wrong. Ignitor electrode is broken. 2. Ignitor electrode is not connected to ignitor cable. 3. Ignitor cable is pinched or wet. 4 Broken ignitor cable. 5. Bad piezo ignitor.	1. Replace pilot assembly. 2. Replace ignitor cable. 3. Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry. 4. Replace ignitor cable. 5. Replace piezo ignitor.
When ignitor button is pressed in there is a spark at ODS/pilot but no ignition.	1. Gas supply is turned off or equipment shutoff valve is closed. 2. Control knob not fully pressed in while pressing ignitor button. 3. Air in gas lines when installed. 4. ODS / pilot is clogged. 5. Incorrect inlet gas pressure or inlet regulator is damaged. 6. Control knob not in PILOT position. 7. Depleted gas supply (propane).	1. Turn on gas supply or open equipment shutoff valve. 2. Fully press in control knob while pressing ignitor button. 3. Continue holding down control knob. Repeat igniting operation until air is removed. 4. Clean ODS/pilot (see *Care and Maintenance*, page 18) or replace ODS/pilot assembly. 5. Check inlet gas pressure or replace inlet gas regulator. 6. Turn control knob to PILOT position. 7. Contact local propane gas company.

TROUBLESHOOTING

Problem	Possible Cause	Corrective Action
ODS/pilot lights but flame goes out when control knob is released.	1. Control knob is not fully pressed in. 2. Control knob is not pressed in long enough. 3. Equipment shutoff valve is not fully open. 4. Thermocouple connection is loose at control valve. 5. Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by one or both of the following: A) Low gas pressure B) Dirty or partially clogged ODS/pilot 6. Thermocouple damaged. 7. Control valve damaged.	1. Press in control knob fully. 2. After ODS/pilot lights, keep control knob pressed in 30 seconds. 3. Fully open equipment shutoff valve. 4. Hand tighten until snug, and then tighten 1/4 turn more. 5. A) Contact local natural or propane gas company B) Clean ODS/pilot (see *Care and Maintenance*, page 18) or replace ODS/pilot assembly 6. Replace thermocouple. 7. Replace control valve.
Burner(s) does not light after ODS/pilot is lit.	1. Burner orifice is clogged. 2. Burner orifice diameter is too small. 3. Inlet gas pressure is too low.	1. Clean burner orifice (see *Care and Maintenance*, page 18) or replace burner orifice. 2. Replace burner orifice. 3. Contact local gas supplier.
Delayed ignition of burner(s).	1. Manifold pressure is too low. 2. Burner orifice is clogged.	1. Contact local gas supplier. 2. Clean burner (see *Care and Maintenance*, page 18) or replace burner orifice.
Burner backfiring during combustion.	1. Burner orifice is clogged or damaged. 2. Burner is damaged. 3. Gas regulator is damaged.	1. Clean burner orifice (see *Care and Maintenance*, page 18) or replace burner orifice. 2. Replace burner. 3. Replace gas regulator.
Burner plaque(s) does not glow.	1. Plaque is damaged. 2. Inlet gas pressure is too low. 3. Control knob set between locked positions.	1. Replace burner. 2. Contact local gas company. 3. Turn control knob until it locks at desired setting.
High yellow flame during burner combustion.	1. Not enough air. 2. Gas regulator is defective. 3. Inlet gas pressure is too low.	1. Check burner for dirt and debris. If found, clean burner (see *Care and Maintenance*, page 18). 2. Replace gas regulator. 3. Contact local gas supplier.

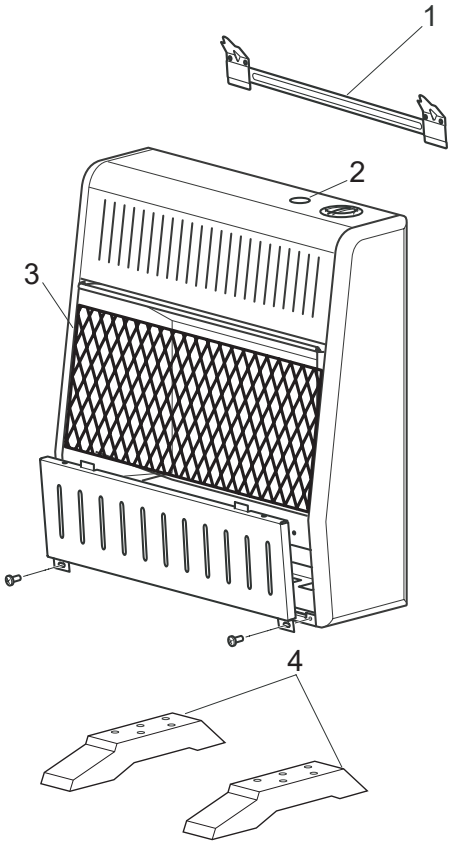
TROUBLESHOOTING

Problem	Possible Cause	Corrective Action
Gas odor during combustion.	1. Foreign matter between control valve and burner. 2. Gas leak. (See *Warning Statement* at top of page 19).	1. Take apart gas tubing and remove foreign matter. 2. Locate and correct all leaks (see *Checking Gas Connections*, page 14).
Slight smoke or odor during initial operation.	1. Residues from manufacturing process.	1. Problem will stop after a few hours of operation.
Heater produces a whistling noise when burner is lit.	1. Turning control knob to high (5) position when burner is cold. 2. Air in gas line. 3. Air passageways on heater are blocked. 4. Dirty or partially clogged burner orifice.	1. Turn control knob to low (1) position and let warm up for a minute. 2. Operate burner until air is removed from line. Have gas line checked by local gas supplier. 3 Observe minimum installation clearances (Figure 4, page 8). 4 Clean burner (see *Care and Maintenance*, page 18) or replace burner orifice.
Heater produces a clicking/ticking noise just after burner is lit or shut off.	1. Metal is expanding while heating or contracting while cooling.	1. This is common with most heaters. If noise is excessive, contact qualified service technician.
White powder residue forming within burner box or on adjacent walls or furniture.	1. When heated, the vapors from furniture polish, wax, carpet cleaners, etc., turn into white powder residue.	1. Turn heater off when using furniture polish, wax, carpet cleaner or similar products.
Heater produces unwanted odors.	1. Heater is burning vapors from paint, hair spray, glues, etc. See IMPORTANT statement, page 19. 2. Gas leak. See *Warning Statement* at the top of page 19. 3. Low fuel supply (propane gas only).	1. Ventilate room. Stop using odor causing products while heater is running. 2. Locate and correct all leaks (see *Checking Gas Connections*, page 14). 3. Refill supply tank (Propane models).
Heater shuts off in use (ODS operates).	1. Not enough fresh air is available. 2. Low line pressure. 3. ODS/pilot is partially clogged.	1. Open window and/or door for ventilation. 2. Contact local gas supplier. 3. Clean ODS/pilot (see *Care and Maintenance*, page 18).
Gas odor exists even when control knob is in OFF position.	1. Gas leak. See *Warning Statement* at top of page 19. 2. Control valve is defective.	1. Locate and correct all leaks (see *Checking Gas Connections*, page 14). 2. Replace control valve.
Moisture/condensation noticed on windows.	1. Not enough combustion/ventilation air.	1. Refer to *Air for Combustion and Ventilation* requirements, page 6.

PARTS

This list contains replaceable parts for your heater. When ordering replacement parts, follow the instructions listed under *Replacement Parts* on page 23 of this manual.

MODELS IFR10K-NG & IFR10K-LP



ITEM	PART #	DESCRIPTION	QTY
1	161132-01	Mounting Bracket	1
2	ML083-03	Piezo Ignitor	1
3	MB29003	Grill Guard	1
4	PF0910B-RW	Base Assembly	1
PART AVAILABLE - NOT SHOWN			
	MB28001	Hardware Package	1

REPLACEMENT PARTS

Note: Use only original replacement parts. This will protect your warranty coverage for parts replaced under warranty.

PARTS UNDER WARRANTY

Contact authorized dealers of this product. If they can't supply original replacement parts, call Customer Care at 828-765-6144 for referral information.

When contacting Customer Service or your dealer, please provide:

- Your name
- Your address
- Model and serial number of your heater
- How heater was malfunctioning
- Type of gas used (Propane or Natural gas)
- Purchase date

Usually, we will ask you to return the defective part to the factory.

PARTS NOT UNDER WARRANTY

Contact authorized dealers of this product. If they can't supply original replacement parts, call **Customer Care at 828-765-6144** for referral information.

When contacting Customer Service please provide:

- Model number of your heater
- The replacement part number

SERVICE HINTS

When Gas Pressure Is Too Low

- pilot will not stay lit
- burners will have delayed ignition
- fireplace will not produce specified heat
- propane gas supply might be low (propane units only)

You may feel your gas pressure is too low. If so, contact your local gas supplier.

TECHNICAL SERVICE

You may have further questions about installation, operation, or troubleshooting. If so, contact Customer Care at 828-765-6144. When calling, please have your model and serial numbers of your heater ready.

WARRANTY

KEEP THIS WARRANTY

VENT-FREE INFRARED HEATERS

Always specify model and serial numbers when communicating with customer service.

New Buck Corporation warrants this product to be free from defects in materials and components for two (2) year from the date of first purchase provided that the product has been properly installed, operated and maintained in accordance with all applicable instructions. To make a claim under this warranty the Bill of Sale or Cancelled check must be presented.

This warranty is extended only to the original retail purchaser. This warranty covers the cost of part(s) required to restore this heater to proper operating condition and an allowance for labor when provided by a New Buck Corp. dealer. Warranty part (s) MUST be obtained through authorized dealers of this product and / or New Buck Corp. who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty. The heater MUST be installed by a qualified installer in accordance with all local codes and instructions furnished with the unit.

This warranty does not apply to parts that are not in original condition because of normal wear and tear, or parts that fail or become damaged as a result of misuse, accidents, lack of proper maintenance or defects caused by improper installation. Travel diagnostic cost, labor, transportation and any and all such other costs related to repairing a defective heater will be the responsibility of the owner.

For a period of one (1) year from the date of purchase, New Buck Corp. will replace or repair at its option: electrical motor, wiring, switches and optional accessories.

TO THE FULL EXTENT ALLOWED BY LAW OF THE JURISDICTION THAT GOVERNS THE SALE OF THE PRODUCT: THIS EXPRESS WARRANTY EXCLUDES ANY AND ALL OTHER EXPRESSED WARRANTIES AND LIMITS THE DURATION OF ANY AND ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE TO TWO (2) YEARS ON ALL COMPONENTS FROM THE DATE OF PURCHASE: AND NEW BUCK CORPORATION LIABILITY IS HEREBY LIMITED TO THE PURCHASE PRICE OF THE PRODUCT AND NEW BUCK CORPORATION SHALL NOT BE LIABLE FOR ANY OTHER DAMAGES WHATSOEVER INCLUDING INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow a limitation on how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation on implied warranties or exclusion or limitation on damages may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

For information about this warranty write: NEW BUCK CORPORATION P.O. BOX 69 SPRUCE PINE, NC 28777

The attached owner registration card must be completed in its entirety and mailed within 30 days from date of installation in order for warranty coverage to begin to:

PLEASE NOTE: Owner Registration Card must contain Authorized Buck Stove Dealer Number and Certified Installer's number (if applicable) for warranty coverage to begin.

NAME: _____

ADDRESS: _____

CITY: _____

STATE: _____ ZIP: _____

CUSTOMER EMAIL: _____

MODEL#: _____

SERIAL#: _____

DATE OF PURCHASE: _____

DATE OF INSTALLATION: _____

INSTALLER'S NAME: _____

PURCHASED FROM: _____

BUCKSTOVE
Unmatched American Quality

New Buck Corporation
200 Ethan Allen Drive
Spruce Pine, NC 28777
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