

# Installation and Operating Instructions for Natural & LP Gas Unvented Gas Log Heater HM2-IPI-ECO and HM2-MIL 18", 24" and 30/33" BURNER UNITS.

ANSI Z21.11 2-2016 APPROVED / ANSI Z21.60-2017 CSA 2.26 2017

State and local codes may only allow operation of this appliance in a vented configuration. Check your local and state codes.

WARNING: FAILURE TO FOLLOW THESE INSTRUCTIONS CAREFULLY AND WITHOUT ERROR OR FAILURE TO HEED ANY AND ALL WARNINGS IN THESE INSTRUCTIONS CAN RESULT IN AN EXPLOSION, FIRE OR THE PRODUCTION OF CARBON MONOXIDE GAS WHICH CAN CAUSE PROPERTY DAMAGE, BODILY INJURY OR DEATH.

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 telephone in your building.
- Immediately call your gas supplier from a neighbor's telephone.
- 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.

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 page 4.

#### This appliance is intended for supplemental heating.

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.

**IMPORTANT:** READ INSTRUCTIONS CAREFULLY BEFORE BEGINNING INSTAL-LATION OF THIS ROOM HEATER.

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

- Any change to this heater or its controls can be dangerous and void any warranty.
  - Do not allow fans to blow directly into fireplace. Avoid drafts that alter burner flame patterns.
- Do not use a blower insert, heat exchanger insert or any other accessory not approved
  - for use with this heater.

**WARNING** 

• Improper installation or use of this heater can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.

Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.

- 1. Due to high temperatures, the heater should be located out of traffic and away from furniture and draperies.
- 2. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
- 3. Young children should be carefully supervised when they are in the same room as the heater.
- 4. Do not place clothing or other flammable material near the fireplace when the heater is in use.
- 5. Any safety screen or guard removed for servicing must be replaced prior to operating the heater.
- 6. Installation and repair should be done by a qualified service person.
- 7. To prevent malfunction and/or sooting, an unvented gas heater should be cleaned at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, etc. It is imperative that control compartments, burners and circulating air passageways be kept clean.
- 8. **CARBON MONOXIDE POISONING:** Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Have the heater serviced as it may not be operating properly.
- 9. The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA54./
- 10. This unit complies with ANSI Z21.11.2a-2008 Unvented heaters and also complies with ANSI Z21.60-2004 Decorative Vented appliances for Solid Fuel Burning fireplaces. State and local codes may only allow operation of this appliance in a vented configuration. Check your state or local codes. For vented operation, see "Vented Instructions" in this manual.
- 11. Do not install the heater in a bedroom or bathroom.
- 12. Correct installation of the logs, proper location of the heater and annual cleaning are necessary to avoid potential problems with sooting. Sooting, resulting from improper installation or operation, can settle on surfaces outside the fireplace. See log placement instructions for proper installation.
- 13. Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into the fireplace. Do not place a blower inside burn area of the firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.
- 14. 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 installation guidelines.
- 15. Keep appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.

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

This room heater is for installation in a solid fuel burning fireplace or listed unvented firebox enclosure only.

A fireplace screen must be in place when the appliance is operating and, unless other provisions for combustion air are provided, the screen shall have an opening (s) for introduction of combustion air.

Any glass door should be fully opened when the appliance is in operation.

This appliance is equipped for (natural or Propane) gas. Field conversion is not permitted. The appliance may be returned to the manufacture for conversion.

Solid fuels shall not be burned in a fireplace in which an unvented room heater is installed.

Any outside air ducts and/or ash dumps in the fireplace should be permanently closed at time of appliance installation.

Clearances around air openings of fireplace must be kept clear. Do not stack anything in front of air vents or fireplace openings.

WARNING

This appliance is for installation only in a solid fuel burning masonry or UL 127 Factory-built fireplace or in a listed unvented firebox enclosure. It has been design certified for these installations. Exception: DO NOT install this appliance in a factory-built fireplace that includes instructions stating it has not been tested or should not be used with unvented gas logs.

The installation of appliances designed for manufactured home or mobile home installation must conform with *Manufactured Home Construction and Safety Standard*, *Title 24 CFR*, *Part 3280*, in the United States, or when such standard is not applicable, ANSI/NCSBCS A225.1/NFPA 501A, *Manufactured Home Installations Standard*.

## PRODUCT SPECIFICATIONS MINIMUM SIZE FIREPLACE DIMENSIONS

Gas Log Size → Dimension ↓	18''	24''	30/33''
Height of Front Opening	15"	15"	15"
Width of Front Opening	21 1/2"	26 1/2"	35 1/2"
Depth	14"	14"	14"
Width of Rear Opening	16"	21"	25"

#### **BTU'S RATING**

BTU Ratings	18''	24''	30/33"	
LP	33,000	40,000	40,000	
NAT	34,000	40,000	40,000	

#### **General Instructions**

#### PROVISIONS FOR ADEQUATE COMBUSTION AND VENTILATION AIR

This heater shall not be installed in a confined space or unusually tight construction unless provisions are provided for adequate combustion and ventilation air.

The National Fuel Gas Code ANSI Z223.1/NFPA54 defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 Btu per hour (4.8m<sup>3</sup> per kw) of the aggregate input rating of all appliances installed in that space and an unconfined space as a space whose volume is not less that 50 cubic feet per 1,000 Btu per hour (4.8m<sup>3</sup> per kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of the unconfined space. Unusually tight construction is defined as construction where:

- a) Walls and ceiling exposed to the outside atmosphere have a continuous water vapor retarder with a rating of 1 perm ( 6 x 10-11 kg per-pa-sec-m2) or less with openings gasketed or sealed, and
- b) Weather stripping has been added on openable windows and doors, and
- c) Caulking or sealant are applied to areas such as joints around windows and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.

If the area in which the heater may be operated is smaller than that defined as an unconfined space or if the building is of unusually tight construction, provide adequate combustion and ventilation air 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.

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.

Keep burner and control compartment clean. See Installation and Operating Instructions accompanying heater.

WARNING

#### **General Installation Information**

Counter Fireplace H

The following formula can be used to determine the maximum heater rating per the definition of confined space:

 $BTU/HR = (\underline{L}_{1+}\underline{L}_{2}) \text{ FT } X (\underline{W})\text{ FT } X (\underline{H})\text{ FT } X 1000$ 50 Example: Refer to Figure 1. Two (2) connecting rooms with and open area between , with the following dimensions.  $L_{1} = 15 \ 1/2$   $L_{2} = 12 \ '$   $W = 12 \ '$   $H = 8 \ '$   $(\underline{15 \ 1/2 + 12 \ ) x (\underline{12}) x (\underline{8})} x \ 1000 = 52800 \ btu./hr$ 50

**Figure 1**. Example of large room with 1/2 wall divider.

If there was a door between the two rooms the calculation would be based only on the room with the heater.

 $\frac{(15 \text{ }_{1/2}) \text{ x } (12) \text{ x } (8)}{50} \text{ x } 1000 = 27760 \text{ } btu./hr$ 



The dimensions shown in Figure 2 and defined in the fireplace manufacturer's instructions are minimum clearances to maintain in installing this heater. Left and right clearances are determined when facing the front of the heater.

When heater is installed into a unvented firebox, minimum clearances as specified by the unvented firebox manufacturer must be met.

Follow these instructions carefully to ensure safe installation. Failure to follow instructions exactly can create a fire hazard.

#### Sidewall and ceiling clearances

**WARNING** 

The sides of the fireplace opening must be at least 16" from any combustible wall. The ceiling must be at least 42" from the top of the fireplace opening.

# **CLEARANCE/ HEIGHT REQUIREMENTS**



the wall a minimum of 14" above the opening. The top side of the mantel may project a maximum of 6" at a minimum of 20-1/2" above the opening.





Example: A mantel may project from the wall a maximum of 2-1/2" at a minimum of 8" above the opening and a maximum of 6" at a minimum of 14-1/2" above the opening.

**Figure 5.** Minimum Mantel Clearance with No Hood.

Example: The bottom of the mantel may project from the wall a maximum of 10" at a minimum of 28" above the opening.

#### Figure 6.

Is an example of an unsafe mantel installation. This mantel projects 4" at 8" above the opening, exceeding the maximum acceptable distance of 2-1/2". The mantel also projects 7" at 14-1/2" above the opening, exceeding the maximum acceptable distance of 6".

If your mantel profile is unsafe, you may either: Raise the mantel to an acceptable height or, Remove the mantel.



## **CLEARANCE/ HEIGHT REQUIREMENTS cont**



Heat resistant material (minimum requirements) with wooden mantel or other combustible projection:

To install the heater with a wooden mantel, shelf or other combustible projection above, first measure the heat resistant material shown in Figure 7.

# **Figure 7.** Measuring heat resistant material for mantel.

Heat Resistant Material measurement	Requirements for safe installation with wooden mantel, shelf or other combustible projection.		
12" or more	Hood not required. Observe profiles (side elevations) shown in Figure 3.	Hood not required. Observe profiles (side elevations) shown in Figure 5.	
8" to less than 12"	Install hood and observe profiles shown in Figure 4. Or extend heat resistant material to at least 12" observe profiles shown in Figure 3.	Install hood and observe profiles shown in Figure 4. Or extend heat resistant material to at least 12" observe profiles shown in Figure 5.	
Less than 8"	Extend heat resistant material to at least 8". Install hood and observe profiles shown in Figure 4. Or extend heat resistant material to at least 12" and observe profiles shown in Figure 3.	Extend heat resistant material to at least 8". Install hood and observe profiles shown in Figure 4. Or extend heat resistant material to at least 12" and observe profiles shown in Figure 3.	

#### FLOOR CLEARANCE

This gas log heater must be installed at least 5" above any combustible flooring material, such as carpeting or tile, which is closer than 14" to the base of the fireplace. This minimum distance must be maintained from the top surface of carpeting, tile, etc. Refer to Figure 8.



Minimum clearance above combustible flooring.



Figure 9.

Minimum clearance above combustible flooring with non-combustible material installed at base of fireplace.

This gas log heater may be installed nearer to the floor if a minimum of 14" of noncombustible material such as slate or marble is installed between the base of the fireplace and the combustible flooring. Refer to Figure 9.

## FIREPLACE PREPARATION

Before fully installing the unit:

WARNING

- Turn OFF the gas supply to the fireplace or firebox.
- Seal any fresh air vents and/or ash clean-out doors located on the floor or wall of the fireplace. If left unsealed, drafting may cause pilot outage or sooting. Use a heat resistant sealant. Do not seal the chimney flue damper.

Before installing in a solid fuel burning fireplace, the chimney flue and firebox must be cleaned of soot, creosote, ashes and loose paint by a qualified chimney cleaner.

# **OPTIONAL VENTED APPLICATIONS**

Manual and Remote controlled gas logs may be installed as a vented decorative log set in compliance with ANSI Z21.60 and National Fuel Gas Code, Section 6.6. Since the gas logs are operated with the damper open, non-combustible material and minimum mantel requirements do not apply.

This appliance is for installation only in a solid fuel burning fireplace (masonry of manufactured fireplace) with a working flue and constructed of non-combustible material.

Before installing the appliance:

WARNING

- Turn OFF the gas supply to the fireplace or firebox.
- Have the fireplace floor and chimney professionally cleaned to remove ashes, soot, creosote or other obstructions. Have this cleaning performed annually after installation.
- Seal any fresh air vents and/or ash clean-out doors located on the floor or wall of the fireplace. If left unsealed, drafting may cause pilot outage or sooting. Use a heat resistant sealant. Do not seal the chimney flue damper.

Install and operate the appliance as directed in this manual.

Damper Stop Installation: Damper Stop sold separately.

A damper stop must be provided with the unit. Contact your dealer to obtain one. The damper stop must be installed as shown in Figure 10 to prevent full closure of the fireplace damper blade and provide a minimum 29 sq. in. flue opening.





## MAINTENANCE OF THE SYSTEM

Under normal use this appliance will require only limited cleaning. Constant airflow through this appliance will cause dust to collect on the burners, base and logs. An excessive build up of dust can cause the pilot and burners to operate incorrectly and produce high levels of carbon monoxide, a poisonous gas.

To clean the burner and base, turn the control to OFF and allow the system to cool down. Remove top logs and front log very carefully. Vacuum or brush away all dust and lint from the system. Do not use any cleaning fluids to clean the logs or any other part of the appliance.

Replace the logs in their proper positions and relight the pilot. At least once a year, the log set and all gas piping should be inspected by a qualified service person.

# WARNING

When used without fresh air, appliance may give off carbon monoxide, an odorless, poisonous gas.

OPEN WINDOW AN INCH OR TWO FOR FRESH AIR WHEN USING APPLIANCE.

This appliance has a <u>Pilot Light Safety System</u> that turns the appliance off if enough fresh air is not available.

DO NOT TAMPER WITH PILOT LIGHT SAFETY SYSTEM.

If appliance shuts off, do not re-light until you provide fresh air. If the appliance continues to shut off, have it serviced by a qualified technician. Keep burner and control compartment clean.

CARBON MONOXIDE POISONING MAY LEAD TO DEATH.

Early signs of carbon monoxide poisoning resemble the flu, with headache, dizziness and/or nausea.. If you experience any of these symptoms, the appliance may not be working property. <u>Get fresh air at once!</u> Have appliance serviced by a qualified service technician.

Some individuals, pregnant women, persons with heart or lung disorders, anemia, those under the influence of alcohol or at locations of high altitudes are more likely to be affected by carbon monoxide than others.

Due to high temperatures, this appliance must be located out of traffic and away from furniture and draperies.

Adults and specially young children should be alerted to the hazard of high surface temperatures and should be kept away to avoid burns or clothing ignition.

Young children should be carefully supervised when in the same room as the appliance.

Any safety screen or guard removed for servicing the appliance must be replaced prior to operating the appliance.

Do not place clothing or other flammable material on or near the appliance.

Installation and repair should only be done by a qualified service technician.

The appliance should be inspected before use and at least once a year by a qualified service technician.

More frequent cleaning may be required due to excessive lint from carpeting, bedding or other materials. It is imperative that control compartments, burners and circulating air passageways of this appliance be kept clean.

WARNING: DO NOT allow fans to blow directly into fireplace. Avoid any drafts that alter burner flame patterns.

WARNING: DO NOT use a blower insert, heat exchanger insert or other accessories not approved for use with this heater.

# TROUBLESHOOT- HM2 MILLIVOLT

**WARNING** Turn appliance OFF and allow to cool before servicing. Only a qualified service person should service and/or repair the heater.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY		
(Millivolt unit only) When igniter is pushed there is no spark at the ODS/pilot.	<ol> <li>Igniter electrode positioned wrong.</li> <li>Igniter electrode is broken.</li> <li>Igniter electrode not connected to igniter cable.</li> <li>Igniter cable pinched or wet.</li> <li>Broken igniter cable.</li> <li>Bad piezo igniter.</li> </ol>	<ol> <li>Replace igniter.</li> <li>Replace igniter.</li> <li>Reconnect igniter cable.</li> <li>Free igniter cable if pinched by any metal or tubing.</li> <li>Replace igniter cable.</li> <li>Replace piezo igniter.</li> </ol>		
Appliance produces unwanted odors.	<ol> <li>Appliance burning vapors from paint, hair spray, glues, etc.</li> <li>Gas leak.</li> </ol>	<ol> <li>Ventilate room. Stop using odor causing products while heater is in use.</li> <li>Call gas company.</li> </ol>		
Appliance shuts off during use	<ol> <li>Not enough fresh air is available for ODS/pilot to operate.</li> <li>Low gas line pressure.</li> <li>ODS/pilot is partially clogged.</li> <li>Defective thermocouple. (Millivolt only)</li> </ol>	<ol> <li>Open window and/or door for ventilation.</li> <li>Contact local gas company.</li> <li>Clean ODS/pilot.</li> <li>Have thermocouple checked by qualified person.</li> </ol>		
Gas odor even when control knob is in the OFF position.	<ol> <li>Gas leak.</li> <li>Control valve defective</li> </ol>	<ol> <li>Call gas company.</li> <li>Replace control valve.</li> </ol>		
(Millivolt unit only) When igniter is pushed there is a spark at the ODS/pilot, but no ignition.	<ol> <li>Gas supply turned off or shutoff valve closed.</li> <li>Control knob not in pilot position.</li> <li>Control knob not pressed in while in PILOT position.</li> <li>Air in gas lines when installed.</li> <li>ODS/pilot is clogged.</li> </ol>	<ol> <li>Turn on gas supply or open shutoff valve.</li> <li>Turn control knob to PILOT position.</li> <li>Press in control knob while turning to PILOT position.</li> <li>Continue holding down control knob. Repeat igniting operation until air is removed.</li> <li>Replace ODS/pilot assembly or get it serviced.</li> </ol>		

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

#### OBSERVED PROBLEM

# TROUBLESHOOTING HM2 MILLIVOLT Cont'

#### OBSERVED PROBLEM

POSSIBLE CAUSE

REMEDY

(Millivolt unit only) ODS/pilot lights, but flame goes out when control knob is released.	<ol> <li>Control knob not fully pushed in.</li> <li>Control knob not pressed in long enough.</li> <li>Manual shut off valve not fully open.</li> <li>Thermocouple connection loose at the control valve.</li> <li>Pilot flame not touching thermocouple, which allow the thermocouple to cool, causing pilot flame to go out. This problem could be caused by either low gas pressure or a dirty or partially clogged ODS pilot.</li> <li>Thermocouple damaged.</li> <li>Control valve damaged.</li> </ol>	<ol> <li>Press in control knob fully.</li> <li>After ODS/pilot lights, keep control knob pressed in for 30 seconds.</li> <li>Fully open manual shutoff valve.</li> <li>Hand tighten until snug, then tight- en 1/4 turn more.</li> <li>Contact your local gas company or clean the pilot.</li> <li>Replace thermocouple.</li> <li>Replace control valve.</li> </ol>
Burner will not light after ODS/pilot is lit.	<ol> <li>Burner ports are clogged.</li> <li>Inlet gas pressure too low.</li> <li>Control knob not in the "on" position.</li> <li>Bad thermopile</li> <li>Pilot clogged.</li> </ol>	<ol> <li>Clean burner ports.</li> <li>Contact qualified service person.</li> <li>Turn control knob to "on" position.</li> <li>Replace thermopile.</li> <li>Clean pilot.</li> </ol>
Burner backfires during combustion.	<ol> <li>Manifold pressure is too low.</li> <li>Burner clogged.</li> </ol>	<ol> <li>Contact local gas company.</li> <li>Clean burner tube.</li> </ol>
Odor during initial operation.	1. New logs .	1. Allow to burn several hours.
Heater produces a whistling noise when burner is lit.	<ol> <li>Turn control knob (Millivolt) to high position or remote to high position (IPI) when burner is cold.</li> <li>Air in the gas line.</li> <li>Dirty or partially clogged burner orifice.</li> <li>Bad burner orifice.</li> </ol>	<ol> <li>Turn control knob (Millivolt) to low position or remote to low position (IPI) and let warm up for a minute.</li> <li>Operate burner until air is removed from the gas line. Have gas line checked by local gas company.</li> <li>Clean burner or replace burner orifice.</li> <li>Replace burner orifice.</li> </ol>
No gas to pilot.	<ol> <li>LP regulator shut down due to inlet pressure being too high.</li> <li>Gas is cut off.</li> <li>Air in pilot gas line.</li> </ol>	<ol> <li>Verify LP tank regulator is installed and set at 10" to 11" W.C.</li> <li>Verify gas is on.</li> <li>Refer to lighting instructions.</li> </ol>

# TROUBLESHOOTING HM2 IPI ECO

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Either the remote or switch are pressed to start the burner ignition sequence and there is no function or response.	<ol> <li>Missing or weak batteries at power supply box or remote.</li> <li>Box is unplugged.</li> <li>The switch cable is not plugged into the module.</li> <li>Control valve wiring harness not plugged in or not in proper position.</li> <li>Remote not communicating with the control module.</li> <li>Igniter cable is not connected.</li> <li>Broken igniter cable</li> <li>Igniter electrode positioned wrong.</li> <li>Igniter electrode is broken.</li> </ol>	<ol> <li>Check batteries and replace if need- ed. Set the multimeter to DC volt- age, initiate the ignition sequence and observe the voltage while the system is lighting (under load). The system will not function under 3.8 volts and batteries should be re- placed if the voltage is under 40 volts.</li> <li>Plug battery box into module.</li> <li>Plug switch cable into module.</li> <li>Check to see that the control valve wiring harness (blue connector) is plugged into the module correctly.</li> <li>Remote may need to go through the "Learn" process with the module.</li> <li>Check the igniter connection at both the control module and the ODS pilot.</li> <li>Replace ODS pilot assembly.</li> <li>Replace ODS pilot assembly.</li> </ol>
Burner will not light after ODS/pilot is lit.	1. Inlet gas pressure too low.	1. Call for service.
ODS pilot lights but pilot flame goes out before burner lights.	<ol> <li>Gas shutoff valve not fully open.</li> <li>Missing or weak batteries at power supply box or remote.</li> <li>Thermocouple circuit between the ODS pilot and control module is loose or damaged.</li> <li>Pilot flame is not touching thermocouple.</li> <li>Thermocouple damaged.</li> <li>Control valve damaged.</li> </ol>	<ol> <li>Fully open gas shutoff valve.</li> <li>Replace batteries.</li> <li>Check thermocouple terminal connection at the control module.</li> <li>Clean ODS pilot with canned air or call service technician.</li> <li>Replace ODS pilot assembly.</li> <li>Replace control valve.</li> </ol>
Burner system lights from the remote but not from the switch.	1. Switch cable disconnected or broken.	2. Connect or replace the switch or cable.
Produces unwanted odors	<ol> <li>Heater burning vapors from paint, hair spray, glues, cleaners, chemicals, new carpet, etc.</li> <li>Low fuel supply (LP only).</li> <li>Gas Leak (see warning on front page).</li> </ol>	<ol> <li>Open window to ventilate room. Stop using odor causing products while gas logs are running.</li> <li>Call LP gas company.</li> <li>Turn off gas. (see warning on front page).</li> </ol>
Log set cycles to pilot, but room tem- perature drops to a lower than ideal level before log set comes back on.	<ol> <li>Thermostat remote control is too close to heater.</li> <li>Air in the gas line.</li> <li>Dirty or partially clogged burner orifice.</li> <li>Bad burner orifice.</li> </ol>	<ol> <li>Move hand-held remote control farther away from heater.</li> <li>Operate burner until air is removed from the gas line. Have gas line checked by local gas company.</li> <li>Clean burner or replace burner orifice.</li> <li>Replace burner orifice.</li> </ol>
Delayed ignition of burner.	1. Manifold pressure is too low or pilot and or burner need cleaning.	1. Contact service technician.

# TROUBLESHOOTING HM2 IPI ECO Cont'

# OBSERVED PROBLEMPOSSIBLE CAUSEREMEDYWhen igniter button is pressed on the<br/>remote or switch pad, the pilot sparks1.Gas supply turned off or equipment<br/>shutoff valve is closed.1.Turn on the gas supply or open<br/>equipment shutoff valve.but them is no ignition2.Airin and Jing2.Continue turning the human and

but there is no ignition.	2. 3. 4. 5. 6. 7. 8.	Air in gas lines. Thermocouple circuit between the con- trol valve and the control module is open. No gas to the ODS pilot. Depleted LP gas supply. Valve cable is disconnected or broken. ODS pilot is clogged. Gas appliance regulator is not correct.	<ol> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> </ol>	Continue turning the burner system ON and OFF. Repeat igniting opera- tion until air is removed. This may take several attempts. Check the thermocouple at the con- trol valve and also at the control mod- ule. The thermocouple connection at the control valve should be hand tight plus 1/4 to 1/2 turn. Check the ther- mocouple terminal connection at the control module. If no flow is present at the gas valve, check to see if all shut off valves are open. Verify proper pressure is sup- plied to the valve. Excessive pressure can lock out the appliance's regulator. Contact you LP gas supplier. Connect valve cable correctly. Clean ODS pilot with canned air or replace the pilot. Replace the regulator.
Low battery power in remote.	1.	Batteries are weak.	1.	Replace batteries in remote.
Slight smoke or odor during initial operation.	1.	Residues from manufacturing processes and logs curing.	1.	Problem will stop after a few hours.
Moisture/condensation noticed on windows.	1.	Not enough combustion/ventilation air.	1.	Refer to Air for Combustion and Ventilation requirements (page 4).
Module audible alert beeps once per second.	1.	Pilot does not light within trial period	1.	Cycle on/off switch or Remote to off. Reset to On.
Module audible alert beeps twice per second.	1.	Pilot is proven then lost up to 3 times without being reset.	1.	Module will beep for 5 minutes. Place switch in off position once beeping has stopped. Reset to on.
Module audible alert beeps constantly.	1.	System cycled off and back on within 30 seconds. Ground wire loose.	2.	Cycle system to off and wait 30 sec- onds to relight. Check that the ground wire is tight.
Module audible alert beeps 4 times every 2 seconds.	1.	Module internal temperature has exceeded 170 degrees.	1.C	Cycle system to off and allow module to cool below 160 degrees.

#### 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 is equipped with an electronic ignition pilot. This pilot lights itself with either the manual on/off button or with the remote control transmitter that is provided.
- B. 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 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.
- C. Use only your hand to push in the switch buttons. Never use tools. If the buttons will not push in by hand, do not try to repair it. Call a qualified service technician. Force or attempted repair may result in fire or explosion.
- D. Do not use room 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.

#### LIGHTING INSTRUCTIONS

1) STOP! Read safety information previously listed above.

(2) Insure main gas supply is turner on to the appliance.

(3) Wait 5 minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP!

Follow "B" in the safety information above. If you do not smell gas, go on to the next step.

(4) To start pilot ignition manually, move ON/OFF switch to on. After a few seconds pilot will spark and ignite pilot and burner flame to high flame position.

(5) For low flame move HI/LO switch to on and flame will move to low position. To return to high flame move HI/LO switch back to HI and flame will go back to high position.

(6) To turn burner off move ON/OFF switch to off position.

(7) Remote will operate system manually or thermostatically. To light manually press ON button once. Press H/L button to cycle between Hi, Med, and Low settings. Press OFF button to cut system off.

(8) To operate system thermostatically, press MODE button and the word Room will appear on the screen. Press Set button to achieve desired operational temperature.

(9) If you start system remotely with ON button while in thermostat mode, remote reverts back to manual function and you will have to reset mode button to return to thermostatic function.

(10) Pressing the Continuous Pilot button with unit off will light pilot only and pilot will continue to burn until system gets command for main burner operation. Pressing Continuous Pilot button again will cut pilot off and return system back to pilot spark ignition function. Note: Wait 5 minutes before trying to relight pilot with spark ignitor or remove battery power for 30 seconds.

#### TO TURN OFF GAS TO APPLIANCE

1. Press the off button on the remote control. If not using a remote control press the on/off rocker switch.

2. Close the appliance shutoff valve.



# **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 is equipped with a push button piezo ignition device, which can be used to light the pilot. If the piezo fails to ignite the pilot, then follow the instructions for lighting pilot with match.
- 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 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.
- 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, do not try to repair it. Call a qualified service technician. Force or attempted repair may result in fire or explosion.
- D. Do not use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and replace any part of the control system and any gas control that has been under water.

# LIGHTING INSTRUCTIONS

#### 1.STOP! Read the safety information previously listed above.

- 2. Turn main gas control knob (FIG. 7) clockwise  $U \square$  to the "OFF" position.
- 3. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
- 4. Locate pilot mounted on the inside of the right hand bracket that holds the burner in place, just behind the front part of the burner. (FIG. 6)
- 5. Depress main control knob (FIG. 7) and turn counterclockwise U □ to the "PILOT" position. With main control knob (FIG. 7) at "PILOT", depress until it stops and press on the igniter push-button several times. (FIG. 7) This will cause a spark at the pilot burner, which will ignite the pilot flame. Continue to hold the main control knob (FIG. 7) in for about (1) minute after the pilot is lit. Release knob and it will pop back out. Pilot should remain lit. If it goes out, repeat steps 1 through 5.
- If the knob does not pop out when released, stop and immediately call your service technician or gas supplier.
- LIGHTING PILOT WITH MATCH: Turn main control knob (FIG. 7) to the "PILOT" position. Place a lit match at the pilot burner, then push the main control knob in. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back out. Pilot should remain lit. If it goes out, repeat the above step.
- If the pilot will not stay lit after several tries, turn the gas control knob (FIG. 7) to "OFF" and call your service technician or gas supplier.
- 6. Depress main control knob (FIG. 7) and turn counterclockwise  $\bigcirc$   $\Box$  to the "ON" position. Adjust heat output to the desired level by turning the HI/LOW control knob.

# TURN OFF GAS TO APPLIANCE

Turn main gas control knob (FIG. 7) clockwise  $\circlearrowright$   $\Box$  to the "OFF" position. Do not force.



## UNIT PLACEMENT

Place the entire unit system in the center of the fireplace to allow proper air flow on all sides of the unit.

## GAS PIPING AND GAS PRESSURE REQUIREMENTS

Check the type of gas that is supplied to your fireplace. Use only the gas type indicated on the heater's rating plate. If the gas listed on the plate is not your type of gas supply, DO NOT INSTALL THE SYSTEM. Contact your dealer.

All gas piping must be installed to comply with local and National Fuel Gas codes. Do not use flexible hose unless it is allowed by local codes. Compounds used on threaded joints of gas piping must be resistant to the action of LP gas.

The gas supply line to the fireplace should not be less than 1/2" inside dimension.

<u>GAS PRESSURE</u>: <u>Minimum inlet gas supply pressure</u> must be 7.0" WC for natural gas or 11" WC for LP gas for the purpose of input adjustment. <u>Maximum inlet gas supply pressure</u> must not exceed 10.5" WC for natural gas, or 13" WC for LP gas. The gas line supplying the appliance must be of sufficient size to furnish the appropriate supply pressure to the appliance when being operated on the high setting. Manifold pressure for natural gas is 4" WC and 10" WC for LP gas.

Include a manual shutoff valve and union in the line so the appliance may be disconnected for servicing. Provide a 1/8" NPT plugged tapping for pressure gauge connection between shutoff valve and the appliance. Test for leaks using a soap and water solution after completing the connection. DO NOT USE AN OPEN FLAME!

The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of  $\frac{1}{2}$  psig (3.5kPa). The appliance must be isolated from the gas supply piping system by closing its equipment shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than  $\frac{1}{2}$  psig (3.5kPa).

#### FLAME APPEARANCE

Periodically check the pilot and burner flame:

The pilot flame must always be present when the heater is in operation. It should just touch the top of the thermocouple tip.

Flames from the pilot should be visually checked as soon as the heater is installed. Periodically check the flames visually during operation. See Figure 18.

If the pilot flame does not touch the thermocouple, then the main burner cannot function reliably. Refer to Figure 19 for incorrect shape of the pilot flame.

Figure 18.	
Correct appearance of pilot flame.	

**VARNING** 





INSTALLER: Please be sure the homeowner understands these key points.

Periodically clean loose particles, dust and lint from pilot and front and rear burner ports. Clean burner air intake holes. Failure to do so may result in sooting and poor combustion.

Logs and volcanic rock must be positioned correctly. Failure to do so may result in sooting and poor combustion.

"All previously applied loose material must be removed prior to reapplication".

Do not operate ceiling fans while using this heater. Drafts from fans may alter flame pattern, which could result in sooting and poor combustion.

If unit is installed in an existing fireplace, do not operate heater with glass doors closed. This will result in sooting and poor combustion.

### PLACEMENT OF LAVA GRANULES

Pour the lava granules on the floor of the fireplace in front of the bottom burner.

NOTE: These granules are for use only to cover the fireplace floor and are not to be used in or on the burner itself.

Do not place lava rock on or near the burner. Place in front and around sides of the burner, not on it. CONTACT WITH BURNER CAN CAUSE CARBON MONOXIDE. Regular Oak 18" Log Part Numbers:



429

430





<u>WARNING:</u> It is imperative that the flame does not come into contact with the logs. Some adjustment with the logs in the notches may be required in order to ensure that there is no impingement. It is the <u>installers'</u> responsibility to ensure proper log placement and adjustment.

WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance will result in property damage or personal injury.

Regular Oak 33" Log Part Numbers:



<u>WARNING:</u> It is imperative that the flame does not come into contact with the logs. Some adjustment with the logs in the notches may be required in order to ensure that there is no impingement. It is the <u>installers'</u> responsibility to ensure proper log placement and adjustment.

WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance will result in property damage or personal injury.

#### Split Oak 18" Log Part Numbers:



439

440

#### Split Oak 24" Log Part Numbers:



<u>WARNING:</u> It is imperative that the flame does not come into contact with the logs. Some adjustment with the logs in the notches may be required in order to ensure that there is no impingement. It is the <u>installers'</u> responsibility to ensure proper log placement and adjustment.

WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance will result in property damage or personal injury.

#### Split Oak 33" Log Part Numbers:



<u>WARNING:</u> It is imperative that the flame does not come into contact with the logs. Some adjustment with the logs in the notches may be required in order to ensure that there is no impingement. It is the <u>installers'</u> responsibility to ensure proper log placement and adjustment.

WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance will result in property damage or personal injury.

## Cape Fear Oak Log Placement

The bottom of the front & back logs are notched so they can lay on the grate properly. The top of the front & back logs are also notched. These notches are to ensure no flame impingement.



<u>WARNING:</u> It is imperative that the flame does not come into contact with the logs. Some adjustment with the logs in the notches may be required in order to ensure that there is no impingement. It is the <u>installers'</u> responsibility to ensure proper log placement and adjustment.

Page 22

WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance will result in property damage or personal injury.

## **GUIDELINES FOR APPLICATION/MAINTENANCE OF ODS PILOTS**

Technical Application:

- 1. For accurate and consistent ODS intervention (cutoff) performance, the applied ODS must always be connected to a control valve having a preferred dropout rating of 80mA and not less than 65mA.
- 2. Proper connection of thermocouple to gas safety valve is made by tightening the connection nut by hand and then turning it 1/4 turn using the proper sized wrench. Do not over tighten as damage to safety valve may result.
- 3. Recommended connection of the pilot tubing to the ODS is made by using two proper sized wrenches: one to tighten and one to hold the device. While tightening the connections do not stress the pilot. Do not use thread sealant, tape or rubber gaskets.
- 4. Misplacement of the gas logs could effect the temperature of the thermocouple and cause the pilot not to perform as intended.
- 5. The location of the ODS must allow complete burner ignition in the time allowed by applicable standard at the extremes of the manufacturing tolerances.
- 6. CAUTION: Never use a wire, needle or similar object to clean ODS/Pilot. This can damage the ODS/Pilot unit.

\*The ODS pilots comply with current safety standards. Nevertheless, their installations on appliances must be verified in accordance with the specific standard for each appliance. Do not tamper with sealed components or remove marking.

Annual inspection and cleaning by your dealer or qualified technician is recommended to prevent malfunction and/or sooting.

#### WARNING If the gas quality is bad, your pilot light may not stay lit, the burners may produce soot and the heater may backfire when lit. If the gas quality or pressure is low, contact you local gas

#### Periodic Cleaning- Refer to Parts Diagram for location of items discussed below.

Do not use cleaning fluid to clean logs or any part of the heater.

Logs- Brush with soft bristle brush or vacuum with brush attachment.

Vacuum loose particles and dust from the front and rear burner, control and piezo covers and grate weldment.

Inspect and clean rear and front burner air intake holes. Remove lint or particles with vacuum or brush.

WARNING: Failure to keep air intake holes clean will result in sooting and property damage. External case should be dusted and wiped with a clean cloth.

#### Annual Cleaning/Inspection- Refer to Parts Diagram for location of items discussed below.

Inspect and clean rear burner air intake holes. Remove lint or particles with vacuum or brush. Failure to keep air intake holes clean will result in sooting and poor combustion. Inspect and clean all burner ports.

Inspect ODS/pilot for operation and accumulation of lint at air intake holes.

Verify flame pattern and log placement for proper operation.



-					
Key Let- ter	Part Number	Description	Key Letter	Part Number	Description
А	11-1181B	18"Burner	Ι	01-1075	HI/Low Switch
А	11-1182B	24" Burner	J	01-1074	Learn Switch
А	11-1183B	33" Burner	К	16-1070	Battery Pack
В	07-1034	LP Regulated Valve w/ Harness	L	Н-0586-В	EcoFlow Battery Holder Log
В	07-1034	Natural Regulated Valve w/ Harness	М	09-0996	Remote Transmitter
С	07-1039	ODS Pilot Assembly (LP Gas)	Ν	11-1294	Cover Plate
С	07-1021	ODS Pilot Assembly (NG Gas)	0	16-1312	Main Wire Harness, 24" 8 Pin
D	16-1060	Module	Р	L-Lava 5	Lava Rock (5 lb Bag)
Е	16-1132	Spark Wire			
F	16-1131	V Wire			
G	08-1030	LP Regulator			
G	08-1031	Natural Regulator			
Н	01-1070	On/Off Switch			

For parts, call your local dealer or Heatmaster, LLC 3625 Benson Rd Angier, NC 27501 919-331-0078 or 919-331-0079



P- Lava Rock

#### HM2 MILLIVOLT PARTS LIST





Millivolt Valve



Natural Only





PART	18"	24"	33"
Burner	11-1181B	11-1182B	11-1183B
Grate	11-1265B	11-1270B	11-1275B
Cover Plate	11-1294	11-1294	11-1294
Pilot Brkt Millivolt Not shown	16-1100	16-1100	16-1100
Valve Brkt Millivolt Not shown	16-1121	16-1121	16-1121
Millivolt LP Valve	16-1030	16-1030	16-1030
Millivolt NG Valve	16-1035	16-1035	16-1035
Millivolt ODS LP Pilot	16-1040	16-1040	16-1040
Millivolt ODS NG Pilot	16-1045	16-1045	16-1045
ON/OFF Switch	01-1070	01-1070	01-1070
Peizo	11-1166	11-1166	11-1166
Peizo Wire	16-1130	16-1130	16-1130

When ordering, please include complete part number, part name and description. Parts may be ordered directly from:

HEATMASTER, LLC. 3625 Benson Road Angier, NC 27501 (919) 639-4568

#### HEATMASTER, LLC LIMITED WARRANTY

All refractory cement logs manufactured by Heatmaster LLC have a lifetime warranty against breakage due to heat to the original owner in the original installation.

All other logs supplied from Heatmaster LLC have a 2 year warranty against breakage due to heat to the original owner in the original installation.

All metal parts, including burners and grate assemblies, are warranted for 5 years.

All other mechanical parts are warranted for 1 year.

#### LIMITATIONS

- 1. Heatmaster, LLC's obligations to the purchaser under this warranty are limited to the repair or replacement of defective part.
- Repairs or replacement will be performed by Heatmaster, LLC following delivery of the product by the purchaser to Heatmaster, LLC's facility in Angier, North Carolina. The cost of mailing or other delivery to Heatmaster, LLC shall be borne by the purchaser. The mailing address is: Heatmaster, LLC, 3625 Benson Rd., Angier, NC 27501.
- 3. Along with the product, the purchaser shall include a written explanation of the approximate date the product was purchased, the dealer or person from whom the product was purchased, the date the defect was first noticed, a description of the nature of the defect, and what the purchaser did, if anything, to repair or correct the defect.
- 4. To the extent allowed by law, any **implied warranty of merchantability** of **fitness** applicable to this product is limited to the duration of this warranty. Heatmaster, LLC shall not be liable for loss of use of this product, loss of time, inconvenience, commercial loss or consequential damages. The remedy of repair or replacement of a defective part during the warranty period herein specified shall be the purchasers exclusive remedy.
- 5. Heatmaster, LLC is not responsible for any loss or damages caused by purchaser's failure to follow operating & maintenance instructions provided in owners manual.

Dear Purchaser:

We are pleased that you have selected our product and take this opportunity to assure you that qualified service is available if required.

Who gets the warranty?The warranty is limited to the consumer who originally purchased the product.What is covered?This limited warranty covers all imperfections in workmanship and material.What is not covered?This limited warranty does not cover damage resulting from accident, misuse or abuse, lack of proper maintenance, affixing of<br/>any attachments not provided with the products, or loss of parts. IN NO EVENT SHALL HEATMASTER, LLC BE<br/>LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM MISUSE OR<br/>MODIFICATION OF THIS PRODUCT.

DEFECTIVE PARTS OR BROKEN LOGS FOR REPLACEMENT MUST BE RETURNED TO THE FACTORY PREPAID ALONG WITH **PROOF OF PURCHASE**. FACTORY WILL REPAIR OR REPLACE AT FACTORY OPTION AND RETURN TO PURCHASER FREIGHT PREPAID.