

OPERATING INSTRUCTIONS AND OWNER'S MANUAL

MR. HEATER

READ INSTRUCTIONS CAREFULLY: Read and follow all instructions. Place instructions in a safe place for future reference. Do not allow anyone who has not read these instructions to assemble, light, adjust or operate the heater.

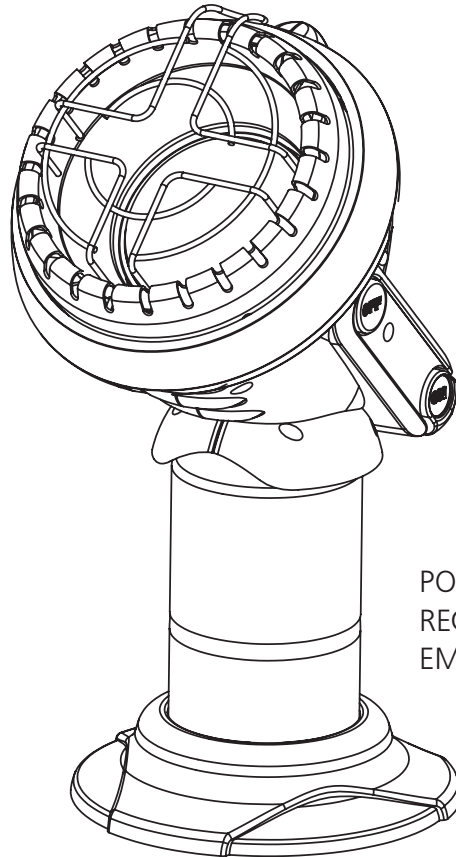
BASECAMP

MODEL

MH4B

MODEL

MH4BC



PORTABLE PROPANE HEATER FOR
RECREATIONAL, COMMERCIAL AND
EMERGENCY INDOOR USE

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.
- An LP cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
 - Do not try to light appliance.
 - Extinguish any open flame.
 - Shut off gas to appliance.
- Service must be performed by a qualified service agency.

This is an unvented gas-fired portable heater. It uses air (oxygen) from the area in which it is used. Adequate combustion and ventilation air must be provided. Refer to page 3.

WARNING:

⚠ Every time tank is connected to unit, connection must be checked for leaks in one or more ways: Apply soapy water to connection, look for bubbles, listen for hiss of escaping gas, feel for extreme cold, smell for rotten egg odor. Do not use if leaking!

WARNING:

⚠ Any changes to this heater or its controls can be dangerous.

WARNING:

⚠ Early signs of carbon monoxide poisoning resemble the flu, with headache, dizziness and/or nausea. If you have these signs, heater may not be working properly. Get fresh air at once! Have heater serviced.

WARNING:

⚠ If the recreational or commercial enclosure does not have a window or roof vent, DO NOT USE THIS HEATER INSIDE.

THE STATE OF CALIFORNIA REQUIRES THE FOLLOWING WARNING:

WARNING:

Combustion by-products produced when using this product contain carbon monoxide, a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm).

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SPECIFICATIONS

MODEL NO.	MH4B/MH4BC
GAS TYPE.....	PROPANE
INPUT BTU/HR.....	3,800

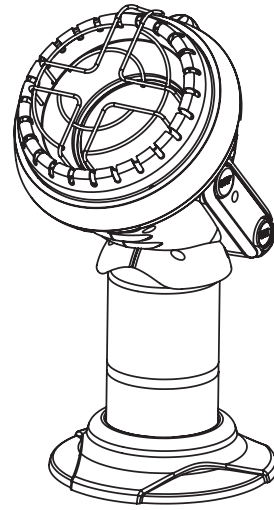
CLEARANCE TO COMBUSTIBLES

TOP	30"
FRONT.....	24"
SIDES	6"
REAR.....	0"

GENERAL SAFETY INSTRUCTIONS

THIS IS A HEATING APPLIANCE. DO NOT OPERATE THIS APPLIANCE WITHOUT THE FRONT WIRE GUARD INSTALLED

- Due to high temperatures, the appliance should be located out of traffic and away from combustible materials.
- Children and adults should be alerted to the hazard of high surface temperatures and should stay away to avoid burns or clothing ignition.
- Young children should be carefully supervised when they are near the appliance.
- Do not place clothing or other flammable material on or near the appliance.
- Do not operate heater in any moving vehicle.
- This heater can only be used in a recreational or commercial enclosure with a window or roof vent. It may also be used outdoors.
- This heater requires a vent area of 4 square inches (example 2" x 2" opening) minimum for adequate ventilation during operation. Do not use other fuel burning appliances inside.
- GAS PRESSURE AT HEATER IS REGULATED AND FIXED AT 11" W.C.
- REGULATOR IN HEATER MUST ALWAYS BE IN PLACE DURING OPERATION.
- Any safety screen or guard removed for servicing the appliance must be replaced prior to operating the heater.
- The appliance should be inspected before each use. Frequent cleaning may be required. The control compartments, burner and circulating air passageways of the appliance must be kept clean, see MAINTENANCE.
- DO NOT use this heater if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control, which has been under water.
- When used without adequate combustion and ventilation air, this heater may give off excessive CARBON MONOXIDE, an odorless, poisonous gas.
- Some people - pregnant women, persons with heart or lung disease, anemia, those under the influence of alcohol, those at high altitudes - are more affected by carbon monoxide than others.
- When heater is placed on the ground, make sure the ground is level and keep any objects at least 24 inches from the front of the heater. THIS HEATER IS EQUIPPED WITH A TIP OVER SWITCH THAT WILL SHUT THE HEATER OFF IF THE HEATER TIPS OVER HOWEVER, DO NOT LEAVE HEATER UNATTENDED OR WHERE CHILDREN MAY CAUSE THE HEATER TO TIP OVER. NEVER OPERATE THE HEATER WHILE SLEEPING!



GENERAL INFORMATION:

- This heater is safe for indoor use in small recreational enclosures, having means for providing combustion air and ventilation, such as enclosed porches, cabins, fishing huts, trailers, tent trailers, tents, truck caps and vans. It may be used for emergency indoor heating and in commercial enclosures, having means for providing combustion air and ventilation, such as construction trailers or temporary work enclosures.

Note: The heater can be used outdoors, but may experience nuisance shutoffs due to certain wind conditions.

- When the heater is cold or at room temperature, it will take a few minutes for the burner tile to turn bright orange. This is normal and the heater is working properly. If burner tile is visibly flaming, turn heater off and call a qualified service technician.
- When the unit is lit, there should be about a quarter inch (1/4") border around the tile that will not turn bright orange. This is normal.
- When operating the heater for the first time, the top area of the reflector may discolor. This is also normal and is no reason for concern.
- When operating the heater at altitudes over 7,000 FT. above sea level, the unit may not burn as bright as in lower altitudes. This is normal. At higher altitudes, the heater may shut-off. If this happens, provide fresh air, wait 5 minutes and re-light. Due to local atmospheric conditions heater may not re-light.
- Operating time will be approximately 5 1/2 hours on a one 1lb. cylinder.
- When moving heater when lit or bumping heater setting it down, tip over switch may shut off heater. If this happens, re-light.
- Due to natural operation of small tanks, condensation may build up on tank and drip on surface under heater.

LIGHTING / OPERATING INSTRUCTIONS

WARNING: Always inspect propane cylinder and heater propane connections for damage, dirt, and debris before attaching propane cylinder. Do not use if head of cylinder is damaged, punctured or deteriorated.

ALWAYS ATTACH OR DETACH CYLINDER OUTDOORS AWAY FROM FLAMES, OTHER IGNITION SOURCES, AND ONLY WHEN HEATER IS COOL TO TOUCH. NEVER SMOKE WHEN ATTACHING OR REMOVING PROPANE CYLINDER!

- Use only LP-gas cylinders marked in accordance with the U.S. Dept. of Transportation (DOT).
- Use only 16.4 oz. (1 lb.) disposable cylinders that mate with No. 600 valve connection.
- Heater and attached cylinder must be in an upright position during operation.
- Screw 1 lb. disposable LP-gas supply cylinder clockwise (from bottom) into portable heater until hand-tight and fit cylinder into stand.
- Check cylinder connection for leaks with soapy water at the threaded connection under the domed plastic cover where the cylinder screws into the regulator. SEE WARNING! ON PLASTIC COVER.
- Depress "ON" button to light pilot flame (repeat until pilot lights) and continue to hold for 30-60 seconds.
- After lighting pilot, release "ON" button to light heater.
- To shut off heater, press the "OFF" button.
- **CAUTION:** After turning heater off, wire guard will remain hot. Allow to thoroughly cool before storing.
- Do not operate, store or remove cylinder near flammable items or ignition sources.
- LP-GAS CYLINDERS MUST BE DISCONNECTED FROM HEATER WHEN NOT IN USE!

MAINTENANCE:

Always keep the heater area clear and free from combustible materials, gasoline and other flammable vapors and liquids.

Keep the vent areas (slots in the bottom and top of the heater) clear at all times.

Visually inspect the pilot flame and burner periodically during use. The pilot flame should be blue in color (not yellow) and will extend to the thermocouple. The flame will surround the thermocouple just below the tip, see Figure 2.

A slight yellow flame may occur where the pilot flame and main burner flame meet. The burner should be bright orange (with a slight blue color around the border, a red-orange haze that is visible on the ceramic tile is acceptable) and without a noticeable flame.

A blue flame that rolls out at the top of the ceramic tile indicates an accumulation of dust, lint or spider webs

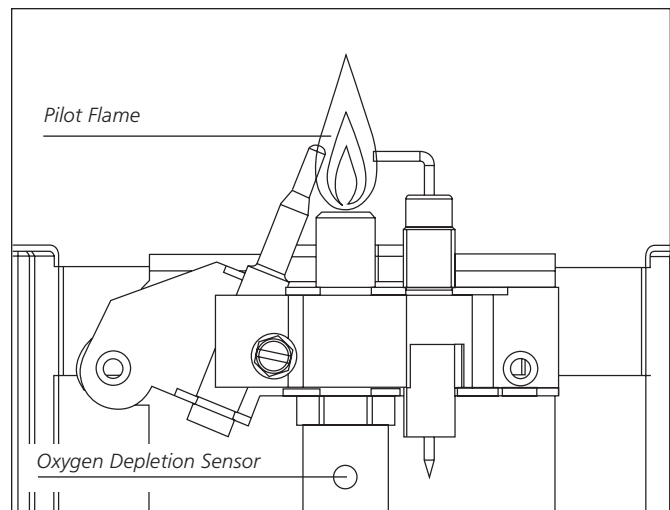


Figure 2

inside the housing assembly and main burner assembly. If the pilot is yellow or the burner has a noticeable flame, cleaning may be required. Use the following procedure to inspect the casing assembly and main burner assembly. It is necessary to periodically check the burner orifice and burner venturi to make sure that they are clear of insects/nests or spider webs that may accumulate over time. A clogged tube can lead to a fire.

CLEANING INSTRUCTIONS:

1. Allow heater to thoroughly cool before performing any maintenance.
 2. Remove disposable 1 lb. propane cylinder from heater.
 3. Remove right side plastic service panel (ref.5) by removing the six screws holding it in place.
 4. Inspect the interior of casing for accumulation of dust, lint or spider webs. If necessary, clean the interior of the casing assembly with a vacuum cleaner or compressed air (max 30 psi). Do not damage any components within the casing assembly when you are cleaning.
 5. Inspect and clean main burner (ref. 13) and orifice (ref. 3) by using a vacuum or compressed air (max 30 psi).
 6. Inspect and clean pilot tube (ref. 14). Insert a doubled over pipe cleaner into the pilot tube until it bottoms against the pilot orifice (approximately 2"). Rotate the pipe cleaner a couple of times and remove. Blow out the remaining debris using compressed air.
- WARNING:** Never use needles, wires or similar cylindrical objects to clean the pilot to avoid damaging the calibrated ruby that controls the gas flow through the pilot orifice.
7. Apply compressed air (max 30 psi) into the ceramic tile of burner assembly and venturi tube (ref. 13) to remove dust, lint and spider webs.
 8. Reinstall the right side plastic service panel.

TROUBLESHOOTING INFORMATION:

If Spark electrode does not produce spark.

CHECK

- Spark electrode broken – replace.
- Igniter wire may not be attached to spark electrode.
- Igniter wire damaged – replace.
- Piezo igniter defective – replace regulator valve assembly.

If Spark electrode produces spark but pilot does not light.

CHECK

- No gas to heater – re-install or replace gas cylinder.
- Pilot is blocked from spider web or dirt – clean pilot, see MAINTENANCE.

If Pilot flame does not stay lit when button is released.

CHECK

- “Pilot/Ignition” button not held long enough to purge air from line.
- Pilot flame not surrounding thermocouple – clean pilot, see MAINTENANCE.
- Pilot Assembly defective – replace.
- Tip switch wires disconnected – connect tip switch (check off switch and off switch wiring).

If Main burner does not ignite.

CHECK

- Main burner orifice is blocked – clean burner, see MAINTENANCE.

If Heater keeps shutting “OFF” during normal operation.

CHECK

- Pilot is blocked – clean pilot, see MAINTENANCE.
- Provide minimum fresh air opening of 4 square inches (example 2” x 2” opening).
- Tip over switch activated from bumping heater.
Re-light

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