



## "CHILLBUSTER"-2

### Dual Burner (C2) Gas Log Room Heater

Assembly, Installation, and Operation Instructions for  
Rasmussen DUAL BURNER Natural and Propane Gas Heater Models:

18" or 24" DUAL BURNER Manual Control	(K,W)(18,24)-C2A-M-(N,P)
18" or 24" DUAL BURNER Thermostat Control	(K,W)(18,24)-C2A-T-(N,P)
18" or 24" DUAL BURNER Switch Control	(K,W)(18,24)-C2A-S-(N,P)
18" or 24" DUAL BURNER Remote Control	(K,W)(18,24)-C2A-R-(N,P)
24" or 30" DUAL BURNER Manual Control	(K,W)(24,30)-C2B-M-(N,P)
24" or 30" DUAL BURNER Thermostat Control	(K,W)(24,30)-C2B-T-(N,P)
24" or 30" DUAL BURNER Switch Control	(K,W)(24,30)-C2B-S-(N,P)
24" or 30" DUAL BURNER Remote Control	(K,W)(24,30)-C2B-R-(N,P)

Read these instructions carefully and retain them for future use.

THESE GAS LOG HEATERS ARE CERTIFIED TO THE FOLLOWING STANDARDS:

#### Dual Burner Manual, Switch & Remote Control C2(A,B)-(M,S,R)-(N,P):

- UNVENTED ROOM HEATER ANS Z21.11.2b 1995
- VENTED DECORATIVE APPLIANCE ANS Z21.60

#### Dual Burner Thermostat Control C2(A,B)-T-(N,P):

- UNVENTED ROOM HEATER ANS Z21.11.2

All models are design certified for installation in a non combustibile fireplace. 24" models are certified for use with Martin Industries EVB36 and ZCB Fireboxes and Eventemp CB 100 Chillbuster Box (by AGA Labs), Martin Industries VF3D (by UL) and other approved enclosure only (contact Rasmussen Iron Works for current list of approved enclosures)

**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

#### WARNING:

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Read these instructions thoroughly before installation. For assistance or additional information, consult your gas log dealer, qualified installer, service agency or gas supplier.

#### 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 neighbors phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

**FOR YOUR SAFETY:** Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

**INSTALLATION AND SERVICE:** 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 Section "PROVISIONS FOR ADEQUATE COMBUSTION AND VENTILATION AIR" pages 4 and 5.

# ALL APPLICATIONS (VENTED and VENT FREE OPERATION)

## IMPORTANT NOTICE

- Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
- Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
- Young children should be carefully supervised when they are in the same room with the appliance.
- Do not place clothing or any other flammable material on or near the appliance.
- Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the heater.
- Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.

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

- Do not use this CHILLBUSTER in sleeping quarters, bathrooms or recreational vehicles.
- Keep burner and control compartment clean. See page 11 of these instructions.
- Any outside air ducts in the fireplace shall be permanently closed at time of installation.

- This appliance may be installed in an aftermarket\* manufactured (mobile) home, where not prohibited by state or local codes. \*Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.
- This appliance is for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

## IMPORTANT INFORMATION

1. This CHILLBUSTER is for installation only in a solid-fuel burning fireplace or approved ventless firebox enclosure.
2. Solid fuels shall not be burned in a fireplace where a CHILLBUSTER is installed.
3. The minimum size (in inches) of the fireplace in which this CHILLBUSTER is to be installed must be as follows:

SET SIZE	MODEL NUMBER	FRONT WIDTH	HEIGHT	DEPTH
18	(K,W)(18)-C2A-(M,T,S,R)-(N,P) 30,000 BTU/HR	24	17	14
24	(K,W)(24)-C2A-(M,T,S,R)-(N,P) 30,000 BTU/HR	30	17	14
24	(K,W)(24)-C2B-(M,T,S,R)-(N,P) 40,000 BTU/HR	30	17	14
30	(K,W)(30)-C2B-(M,T,S,R)-(N,P) 40,000 BTU/HR	36	17	14

4. When operated as a **VENT FREE** heater, the minimum clearances from the fireplace opening to combustible materials must be maintained as outlined in section "**CLEARANCES TO COMBUSTIBLES**" (page 5).
5. A fireplace screen must be in place when the CHILLBUSTER is in operation and, unless other provisions for combustion air are provided, the screen shall have opening(s) for introduction of combustion air. Glass doors are not certified with the CHILLBUSTER. However, if used, **Glass Doors must be wide open when the burner is on** to allow air for safe combustion, cooling of components and venting. Adequate clearances must be provided around fireplace opening for adequate combustion and proper operation.
6. The minimum inlet gas supply pressure for the purpose of input adjustment shall be 5 inches of water column on natural gas and 11 inches of water column on Propane gases.
7. The maximum inlet gas supply pressure shall be 7 inches of water column on natural gas and 14 inches of water column on Propane gases. The Propane source must be regulated. Never connect CHILLBUSTER directly to an unregulated Propane tank.
8. The installation and the provision for combustion and ventilation air must conform with the National Fuel Gas Code ANSI Z223.1 latest edition. See "**PROVISIONS FOR ADEQUATE COMBUSTION AND VENTILATION AIR**" (pages 4 and 5).
9. The CHILLBUSTER and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa). The CHILLBUSTER must be isolated from the gas supply piping system by closing its individual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).
10. The area around the CHILLBUSTER must be clear and free from combustible materials, gasoline and any other flammable vapors and liquids. Provide adequate clearances for servicing and proper operation.
11. 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.

## ALL APPLICATIONS (VENTED and VENT FREE OPERATION)

### IMPORTANT SAFEGUARDS

- This appliance is intended to be used only for supplemental heat. **Do not use it routinely as a primary heat source.**
- **WARNING:** During manufacturing, fabricating, and shipping, various components of CHILLBUSTER are treated with certain oils or films. These are not harmful but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance, possibly causing headaches or eye or lung irritation. This is a normal and temporary occurrence. The initial break-in operation should last 2-3 hours with the burner at the highest setting. Provide maximum ventilation by opening windows, doors, and the chimney flue to allow odors to dissipate. The only odor remaining after this initial break-in will be the normal odors associated with the combustion of Natural or Propane gas.
- This appliance is equipped with an ODS (OXYGEN DEPLETION SENSOR) pilot light safety system designed to shut itself off if not enough fresh air is available. Additional ventilation may be obtained by opening a window or a door to another room.
- Although your CHILLBUSTER is very realistic in appearance, it is not a real wood burning fireplace. Matches, paper, garbage, or any other material must not be thrown on top of the logs or into the flames.
- Avoid contact with the logs, grate, or any other part which may be hot.
- Always ensure that the fireplace screen is closed when the appliance is operating.
- State or local codes may only allow operation of this appliance in a vented configuration. Check your state or local codes. If not permitted, you may install and operate CHILLBUSTER as a vented appliance. (See **VENTED OPERATION** below.)

**WARNING: 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.**

**WARNING: Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into the fireplace.**

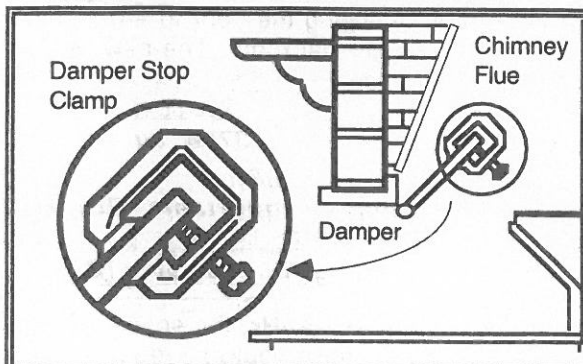
**WARNING: Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this heater.**

### PREPARATION OF FIREPLACE

1. Ensure firebox and chimney damper/flue are thoroughly cleaned (if previously used for either gas or wood burning.) **Failure to adequately clean firebox, damper and flue may cause fumes, sooting and/or fire.**
2. If local valve is not already installed install a gas valve on the supply line in or just outside the fireplace.
3. Any outside air ducts and/or ash dumps in the fireplace shall be permanently closed at time of installation of this CHILLBUSTER.
4. Use Propane Gas resistant compound on all pipe fittings (not on connections with flared fitting).
5. Test new piping for leaks using soap solution. **Do not use open flame.**

**All Soot Must Be Completely Removed From Firebox Prior To Installing!**

### VENTED OPERATION



#### Vented Application:

1. The minimum permanent free opening of the fireplace chimney or chimney damper must be at least 29 sq. inches based upon a minimum chimney height of at least 10 feet.
2. The chimney damper must be fixed in a manner to maintain permanent free opening as (outlined in item above) at all times. To accomplish this, install the damper clamp (provided) on the edge of the damper blade to prevent its closing, or drill holes in the damper.

# VENT FREE OPERATION

## 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.

### CONFINED OR UNCONFINED SPACE DETERMINATION:

The National Fuel Gas Code 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 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. 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.

### Calculations To Determine Confined Or Unconfined Space:

1. Determine number of rooms (including adjoining rooms with doorless passageways or ventilation grates.)

*Example:* Living room/dining room + Kitchen

2. Determine the **Total Volume of the Space** (width x length x height).

*Example:* Living room/dining room 14' x 20' x 8' = 2240 cu ft  
Kitchen 8' x 12' x 8' = 768 cu ft

**Total Volume of Space** 3008 cu ft

3. Divide the total space volume by 50 cuft to determine the **Maximum Supportable Btu/Hr.**

*Example:* 3008 cu ft ÷ 50 = 60.160 x 1000 = **60,160**

**Maximum Supportable Btu/Hr = 60,160 Btu/Hr.**

4. Add the rated (Btu/hr) of all fuel burning appliances in the "space" to determine **Actual Btu/Hr Used.**

*Example:* Vent free gas log heater 40,000 Btu/Hr  
Gas water heater 32,000 Btu/Hr

**Actual Btu/Hr Used** 72,000 Btu/Hr

Note: Do not include direct vent gas appliances.

5. Compare **Maximum Supportable Btu/Hr** against **Actual Btu/hr Used.**

• If **Actual Btu/Hr Used** is greater than **Maximum Supportable Btu/Hr** then space is **CONFINED.**

• If the **Actual Btu/Hr Used** is less than **Maximum Supportable Btu/Hr** then space is **UNCONFINED.**

60,160 Btu/Hr = Maximum Supportable Btu/Hr

- 72,000 Btu/Hr = Actual Btu/Hr Used

- 11,840 Btu/Hr = Excess Non-Supportable Btu/Hr

In the example, because the **Actual Btu/Hr Used** exceeds the **Maximum Supportable Btu/hr** the space would be considered a **Confined Space** requiring you to either increase the **Maximum Supportable Btu/Hr**, decrease the **Actual Btu/Hr Used** or operate as a **Vented Appliance** (see page 3).

### Adequate Combustion And Ventilation Air Options:

- Increase the **Maximum Supportable Btu/Hr** by adding to the number of rooms which comprise the "Space". To do this you must either completely remove the door to an adjoining room or provide two permanent ventilation grills; one within 12" of the ceiling and another within 12" of the floor.
- Increase the **Maximum Supportable Btu/Hr** by providing extra fresh air using ventilation grills and ducts to the outdoors. You must provide two permanent openings, one within 12" of the ceiling and another within 12" of the floor. Connect these directly to the outdoors or spaces open to the outdoors, e.g., attics or crawl spaces.
- Follow the *National Fuel Gas Code NFPA 54/ANSI Z223.1, Section 5.3, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.
- Lower the **Actual Btu/Hr Used** by relocating other gas burning appliances outside the "space" or installing a lower Btu/Hr heater. In the example, the maximum Btu/Hr of the heater could be no more than 28,160 Btu/Hr.

For our example, we have chosen to add to our **Total Volume of the Space** by removing the door to an adjoining study and increasing our **Maximum Supportable Btu/Hr** by the volume of the additional room. The new "space" calculations, including the additional adjoining room are:

Living room/dining room & Kitchen 3008 cu ft  
Study (9' x 10' x 8') 720 cu ft  
**Total volume of space** 3728 cu ft

The new **Maximum Supportable Btu/Hr** = (3728 cu ft ÷ 50 cu ft) x 1000 = **74,560 Btu/Hr**

74,560 Btu/Hr = Maximum Supportable Btu/Hr

- 72,000 Btu/Hr = Actual Btu/Hr Used

2,560 Btu/Hr = Remaining Supportable Btu/Hr

Because the **Actual Btu/Hr** used is now less than the **Maximum Supportable Btu/Hr**, the space is considered an **Unconfined Space**. No additional fresh combustion and ventilation air would be required.

# VENT FREE OPERATION COMBUSTION AIR CALCULATIONS WORKSHEET

1.	Room	Width	Length	Height	W x L x H=Vol. (ft <sup>3</sup> )
1a.					
1b.					
1c.					
1d.					
2.	<b>Total Volume (ft<sup>3</sup>)</b> sum of Volume (ft <sup>3</sup> ) of all rooms (sum lines 1a. thru 1d.)				2.
3.	<b>Max Supportable BTu/Hr</b> =Total Volume (ft <sup>3</sup> ) ÷ 50 x 1000 (line 2 ÷ 50 x1000)				3.
4.	4a.	4b.	4c.	4d.	
	Actual Btu/hr used = Sum Btu/hr of all fuel burning appliances inside the space identified as rooms 1a. thru 1.b (sum line 4a thru 4d.)				4.
5.	<b>(Maximum Supportable BTu/Hr) minus (Actual BTu/hr Used)</b> (Line 3 - line 4)				5. *

- \* If Line 5 is greater than zero, the **Actual BTu/Hr Used** is less than the **Maximum Supportable BTu/Hr** and the space is considered **UNCONFINED**. No additional fresh combustion and ventilation is required.
- \* If Line 5 is zero or less, the **Actual BTu/Hr Used** is greater than **Maximum Supportable BTu/Hr** and the space is **CONFINED**. You must either **increase** the **Maximum Supportable BTu/Hr**, **decrease** the **Actual BTu/Hr Used** or **operate as a Vented Appliance** (see page 3).

**WARNING:** 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, 1992, Section 5.3 or applicable local codes.

**Unusually tight construction is construction where:**

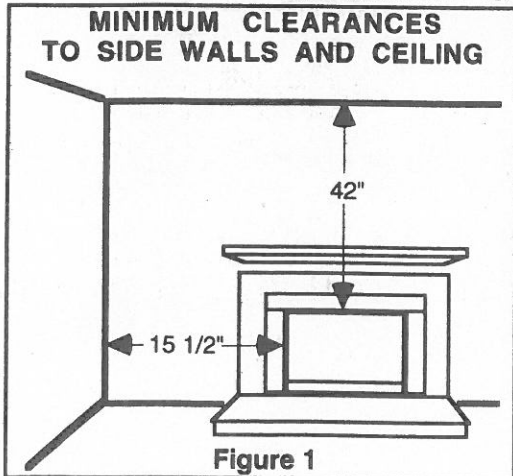
- a) Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of 1 perm or less with openings gasketed or sealed, and
- b) Weather stripping has been added on openable windows and doors, and
- c) Caulking or sealants are applied to areas such as joints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

## WARNING: CARBON MONOXIDE POISONING MAY LEAD TO DEATH

When used without fresh air, gas log sets may give off carbon monoxide, an odorless, colorless, poisonous gas. Some people, pregnant women, persons with heart or lung disease, anemia, or under the influence of alcohol and persons at high altitudes are more affected by carbon monoxide than others. Early signs of carbon monoxide poisoning resemble the flu: Headache, dizziness, and/or nausea. If you have these signs, the gas log may not be installed or working properly, or the chimney flue may be blocked. **GET FRESH AIR AT ONCE!** Have gas log set and chimney flue serviced before using again.

**OPEN A WINDOW AN INCH OR TWO FOR ADEQUATE COMBUSTION AND VENTILATION AIR WHEN USING YOUR VENT FREE GAS LOG ROOM HEATER**

## MINIMUM CLEARANCES TO COMBUSTIBLES



- Clearances to Combustible Construction:
- Side wall: 15 1/2" from side of fireplace opening. **Figure 1**
  - Ceiling: 42" from top of fireplace opening. **Figure 1**
  - Mantel: See Charts and Diagrams shown at **Figures 2 and 3**

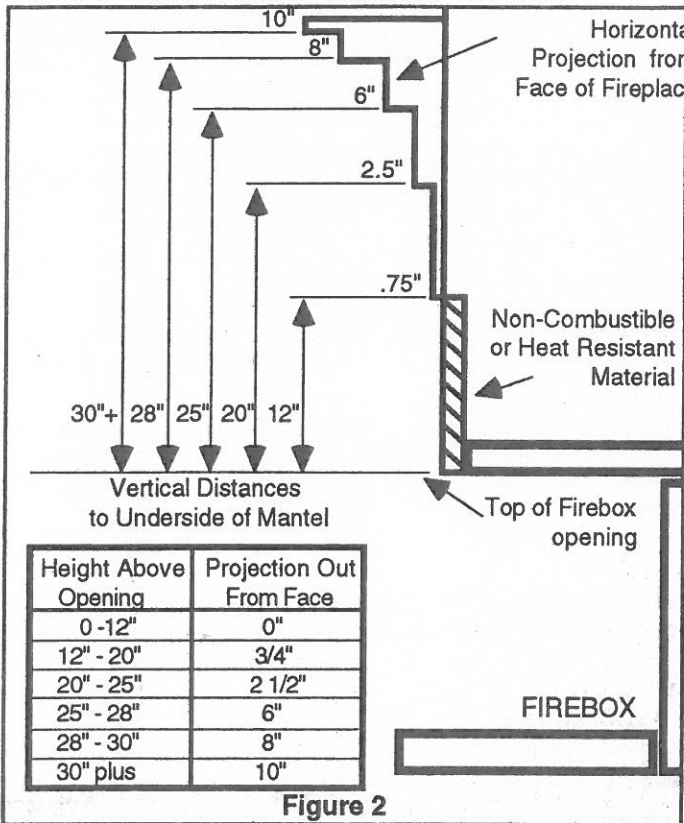
**NOTE:** "Clearances to Combustible Construction" are those distances required to ensure that a fireplace mantel or facing will not catch fire. In most cases they should also be adequate to prevent any discoloration or warping due to heat. However, each and every Gas Log Installation (CHILLBUSTER included) presents a different and completely unique set of circumstances involving many variables beyond the control of the Gas Log Manufacturer. These include paint or finish composition, previous exposure to heat, methods and quality of construction, air flow patterns, glass doors, fans or blowers, etc.. Because of these variables, we cannot guarantee that heat warping or discoloration will never occur. The potential for heat warping or discoloration may exist whether you are burning a CHILLBUSTER, some other manufacturer's Gas Log or even wood.

# VENT FREE OPERATION

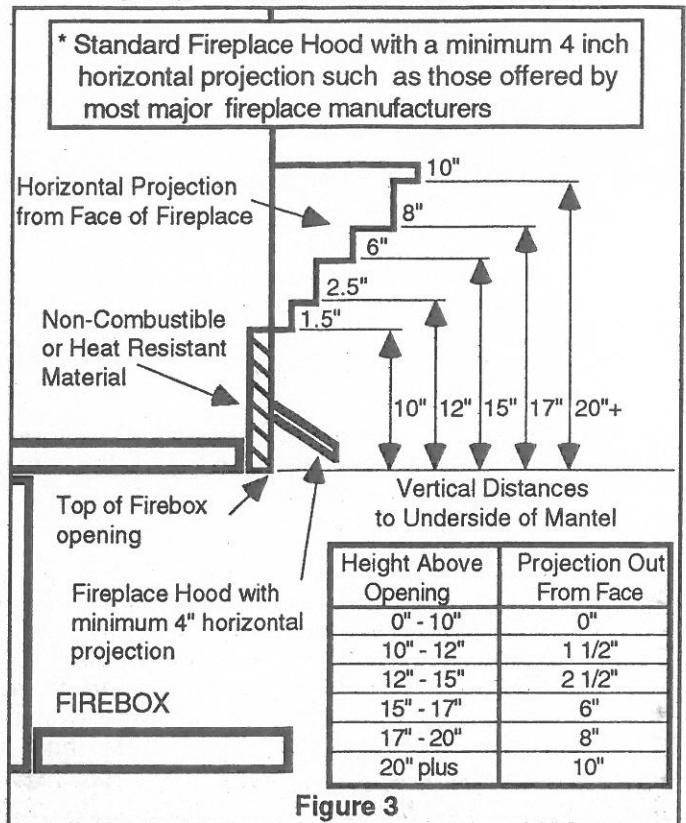
## FIREPLACE HOODS

A fireplace hood deflects heat away from the fireplace face and mantel, reducing the potential for heat related warping or discoloration. **The use of a fireplace hood is highly recommended.** Fireplace Hoods are offered by many leading fireplace manufacturers.

### Mantel Clearance Without Hood:



### Mantel Clearance With Hood\*:



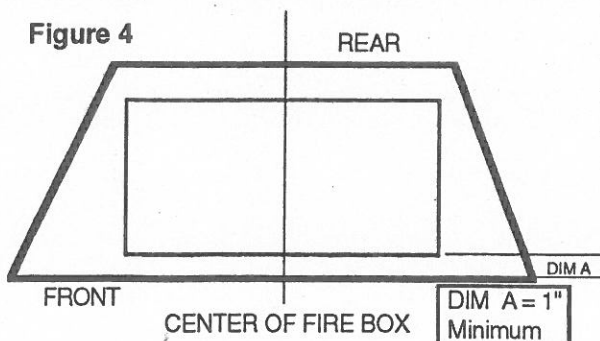
**IF YOU CANNOT MEET THESE MINIMUM CLEARANCES YOU MUST OPERATE HEATER WITH CHIMNEY FLUE DAMPER OPEN (Operate as a VENTED Heater - See Page Three).**

## ALL APPLICATIONS (VENTED and VENT FREE OPERATION) ASSEMBLY AND INSTALLATION

### Attaching Ember Tray:

1. Attach ember tray to the front two legs of the grate with the nuts and bolts provided on grate. See Figure 6.

### Installing Chillbuster Burner Unit Into Fireplace:



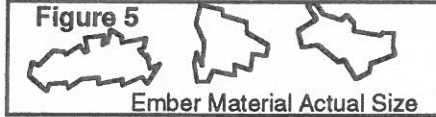
1. Place grate/control assembly inside firebox or approved enclosure. Center grate left to right with the front portion of the grate assembly no less than 1" from the opening of the firebox. See figure 4.
2. Connect CHILLBUSTER to gas supply line with supplied semi rigid aluminum connector, or other flexible connector. Use a pipe joint compound which is resistant to the action of Propane gases on all pipe threaded joints except on the flared connector fittings.
3. Turn on the gas valve at the supply line in the fireplace. Check connections for gas leaks by using a soapy solution. Do not use open flame.

# ALL APPLICATIONS (VENTED and VENT FREE OPERATION)

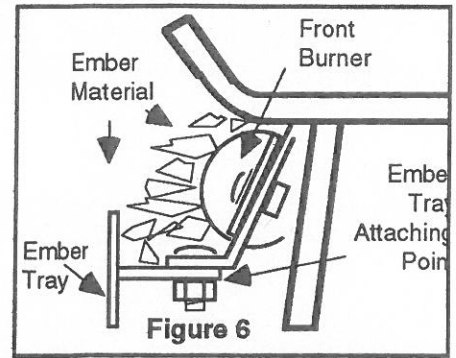
## Ember Material Preparation And Placement:

1. Prepare the ember material by pulling apart into loose pieces (not tight clumps) the size of a dime. See **Figure 5**.

2. Place the loose pieces in the ember tray, building a ramp which completely covers the **Front Burner**. The loose clumps should be no more than one to two pieces of ember material in depth. The looser the pieces, the better the glowing



ember effect! See **Figure 6**.  
3. Excess embers may be placed on each side of the **Front Burner** to hide the burner/grate attachment points.  
**Ember material is only for use with the Front Burner.**



**WARNING:** Excessive amounts of Ember Material or Ember Material which is too tightly packed can result in decreased combustion performance and elevated levels of carbon monoxide. Looser pieces of Ember Material produce more efficient combustion performance and enhance the overall glowing ember effect.

**Volcanic Ash Placement:** Sprinkle VOLCANIC ASH on the firebox floor. Volcanic ash can be ramped to within 1/4" of the top of the ember tray. **DO NOT PLACE VOLCANIC ASH ON TOP OF THE BURNER.**

## Log Placement:

1. Place the largest log (**FRONT LOG**) on the front of the grate and the second largest log (**REAR LOG**) on the rear of the grate behind the **LOCATOR PINS**. Fig. 7 and 8.  
2. Place both Right and Left **LARGE TOP LOGS** across the **FRONT** and **REAR** logs with the **LOCATOR PINS**

inserted into the drilled holes located on the bottom of both **LARGE TOP LOGS**. **Figures 7 and 8**.  
3. Place **R and L SMALL TOP LOGS** across the **FRONT LOG** and **LARGE TOP LOGS** with the **LOCATOR PINS** inserted into the drilled holes. **Figures 7 and 8**.

To ensure optimum performance, logs must be placed on burner as depicted.

**Do not Allow Small Top Logs to Cross Flame Path.**

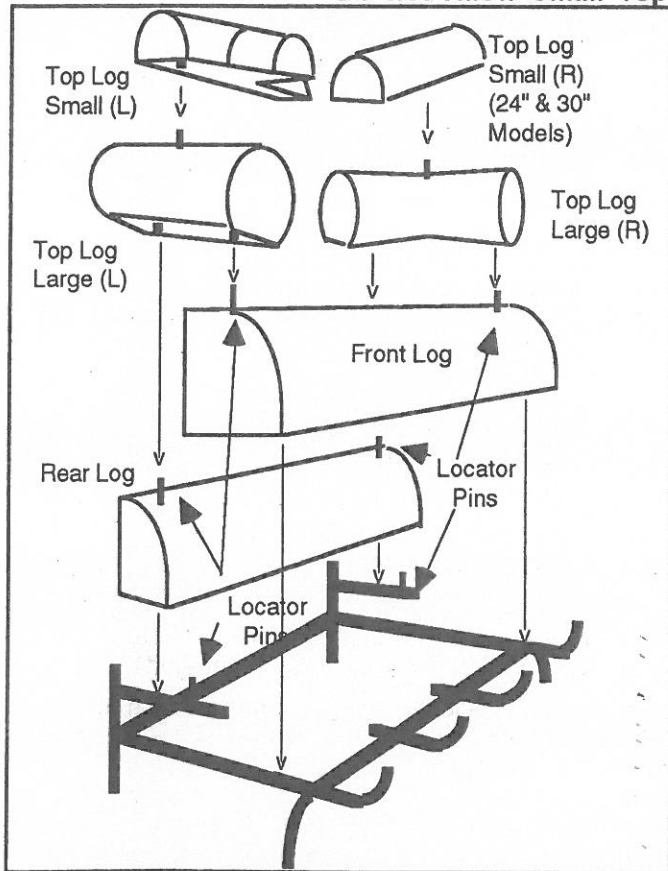


Figure 7

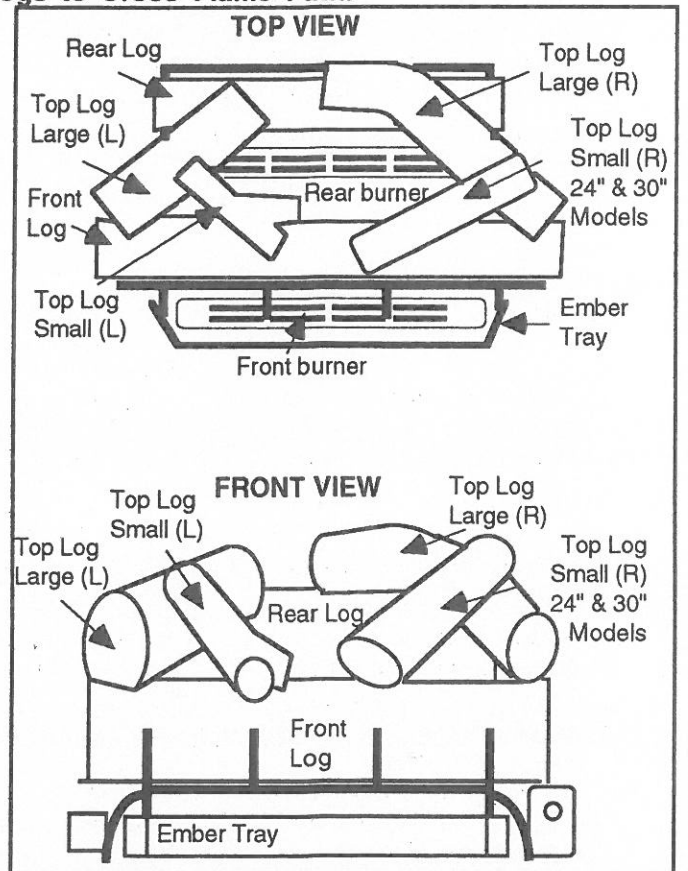


Figure 8

Note: 18" Log Sets consist of 5 logs only. Top Log Small(R) on 24" and 30" sets only.

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

# ALL APPLICATIONS (VENTED and VENT FREE OPERATION)

## C2A-M and C2B-M (MANUAL CONTROL) OPERATION

Piezo Ignitor Button



Figure 9

### Pilot Lighting, Operation, and Shutting Down:

1. Slightly push knob and turn to "SEASON OFF". Figure 10
2. Wait five minutes before lighting.
3. Slightly push knob and turn to "PILOT/OFF". Figure 10
4. Depress valve knob until air is bled and gas flows to pilot. Press Piezo IGNITOR Button (Figure 9) to light pilot. Continue to hold valve knob in until Pilot remains lit when knob is released.
5. Slowly turn knob to "ON". The rear burner will light from the pilot. The front burner will light from the carry-over tube.
6. Repeat steps 1 through 5 if the appliance fails to light or if pilot goes out.
7. For complete shutdown, slightly push control knob in and turn to "SEASON/OFF".

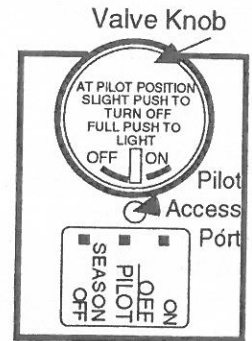


Figure 10

## C2A-T and C2B-T (THERMOSTATIC CONTROL) OPERATION

### Pilot Lighting, Operation, and Shutting Down:

1. Turn KNOB "A" clockwise to "OFF" position.
2. Turn KNOB "B" (Thermostat) to lowest number setting "1".
3. Wait five (5) minutes before lighting.
4. Turn KNOB "A" slightly counter-clockwise towards the "IGN" position until reaching stop. Press down and hold until air is bled and gas flows to the pilot.
5. Continue pressing down and turn further counter clockwise to activate piezo. Continue to hold down for ten seconds after pilot is been lit. If pilot does not light, repeat steps 4 and 5.
6. Once pilot has been lit, release knob and turn further counter clockwise to the "ON" position. The Pilot Flame, Front Burner and Carry Over Tube should be lit. Turn KNOB "B" counter clockwise to the desired setting. The Rear Burner will cycle ON - OFF in response to the selected setting.
8. For complete shut down, refer to steps 1 and 2 above.

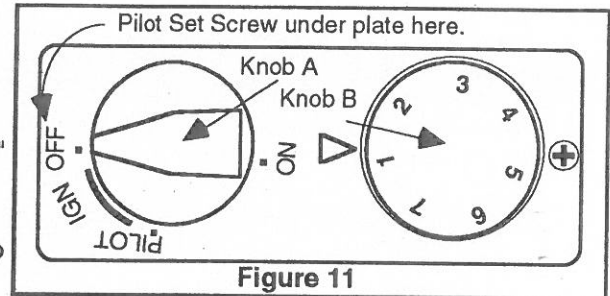


Figure 11

### Thermostat Operation:

1. **Operation:** The height of the Main Burner flame is dependent upon the relationship between the KNOB B setting and the room air temperature as sensed by the THERMOSTAT SENSOR BULB. If the temperature of the room air being sensed by the SENSOR BULB is significantly cooler than the desired heat setting selected on KNOB B (a 6 or 7 setting) more heat (higher flame height) will be produced. Conversely, if the temperature of the room air being sensed by the SENSOR BULB is the same (or warmer) than the desired heat setting on KNOB B, less heat (lower flame height or no main burner flame) will be produced.
2. **Burner Cycling:** With Knob A in the "ON" position, the REAR BURNER flame will modulate up and down to meet the selected setting on Knob B. The FRONT BURNER flame does not modulate.
3. **Pilot Only:** Turning Knob A to the "PILOT" position will keep the pilot flame lit but turns off both the FRONT and REAR BURNERS.
4. **Complete Shutdown:** To shut down completely (both FRONT and REAR BURNER and PILOT flame) turn Knob A clockwise to "OFF" and turn Knob B (Thermostat) clockwise to lowest number setting (1).
5. **Ignition Interlock:** The Ignition Interlock device prevents the re-establishment of gas flow following a loss of pilot flame until the thermocouple has cooled. (Approximately five minutes)

### Thermostat Sensor Bulb Placement:

1. The THERMOSTAT SENSOR BULB should be placed where it can best sense average air temperature of the room in which the appliance is installed.
2. Proper operation of the thermostat can be checked by placing the THERMOSTAT SENSOR BULB in a glass of cold water (max flame height) or into a glass of hot tap water (low flame height).

**NEVER EXPOSE THE THERMOSTAT SENSOR BULB TO DIRECT HEAT OR FLAME.**



# ALL APPLICATIONS (VENTED and VENT FREE OPERATION)

## C2A-S and C2B-S (SWITCH CONTROL) OPERATION

### Pilot Lighting, Operation, and Shutting Down:

1. Slightly push Valve Knob. Turn clockwise to "OFF".
2. Wait five minutes before lighting.
3. Slightly push Valve Knob and turn counterclockwise to "PILOT".
4. Depress Valve Knob and light pilot by depressing Piezo Ignitor attached to left side of grate. Continue to depress Valve Knob until pilot remains lit when knob is released.
5. Turn Valve Knob counterclockwise to "ON".
6. Flip switch up to ON.
7. Repeat 1 through 5 if the appliance fails to light or if pilot goes out.
8. To turn burner off but keep pilot lit, flip switch to "OFF".
9. For complete shutdown (including Pilot flame), slightly push Valve Knob and turn clockwise to "OFF".

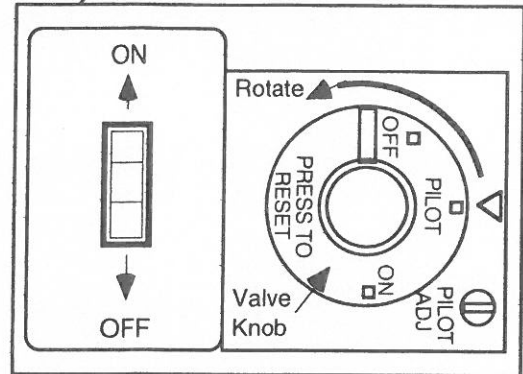


Figure 12

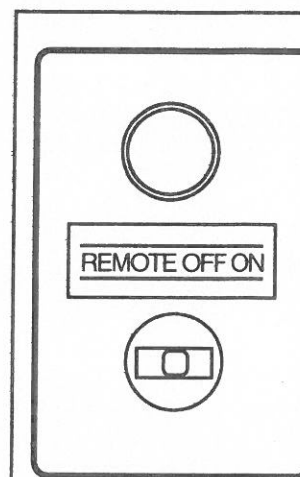
## C2A-R and C2B-R (REMOTE CONTROL) OPERATION

### Before you start:

- Both the transmitter and receiver require 9 volt batteries to operate in remote control.
- The blue and black receiver wire leads are for the optional sound producing device.

### Operation Tips:

- This is a sound operated remote (unlike TV remotes which are Infrared and operate instantly) and requires you to **aim and hold** the transmitter for **1 to 3 seconds** to operate.
- Manual operation (Receiver switch position ON or OFF) does not require batteries.
- Remote operation requires good batteries.
- If you turn the gas log on using the remote control and then turn the set off by sliding the receiver switch from REMOTE to OFF, when you replace the switch to REMOTE it will remain in the last selected remote position (in this case ON) and turn the gas log on.



Manual: Switch from OFF to ON; ON to OFF

Remote: Switch to REMOTE. Aim, press button and hold transmitter at receiver.

When switching from REMOTE to OFF, first turn set off using the transmitter.

### Pilot Lighting/Shutting Down:

1. Slightly push Valve Knob. Turn clockwise to "OFF". Turn Slide receiver switch to "OFF". **Figure 15.**
2. Wait five minutes before lighting.
3. Slightly push Valve Knob and turn counter clockwise to "PILOT". **Figure 15.**
4. Depress Valve Knob and light pilot by depressing Piezo Ignitor attached to left side of grate. Continue to depress Valve Knob until pilot remains lit when knob is released.
5. Turn Valve Knob Counterclockwise to "ON". Hold button on transmitter for two to five seconds. **Figure 15.**
6. Repeat steps 1 through 5 above if the appliance fails to light or if pilot goes out.
7. For complete shutdown, slightly push Valve Knob and turn clockwise to "OFF". **Figure 15.**

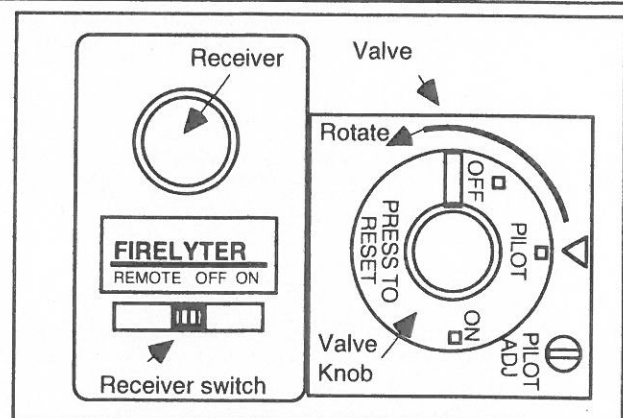


Figure 15

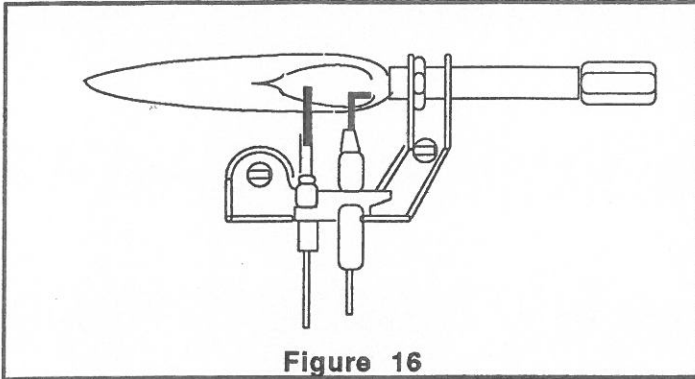
### Remote and Manual Operation:

- 1a. **(REMOTE)** Slide receiver switch to "REMOTE". Aim remote transmitter toward the CHILLBUSTER and press white button on transmitter for two to five seconds (red light on transmitter should be lit). Aim transmitter and press white button to turn off.

**To shutdown overnight or for any prolonged period, slide receiver switch to "OFF".**

- 1b. **(MANUAL)** Slide receiver switch to "ON". To turn off, slide receiver switch to "OFF".
2. **(COMPLETE SHUTDOWN)** Slide receiver switch to "OFF" and slightly push and turn blue Valve knob and to "OFF". **Figure 15.**

## ALL APPLICATIONS (VENTED and VENT FREE OPERATION)



### Pilot Flame Adjustment:

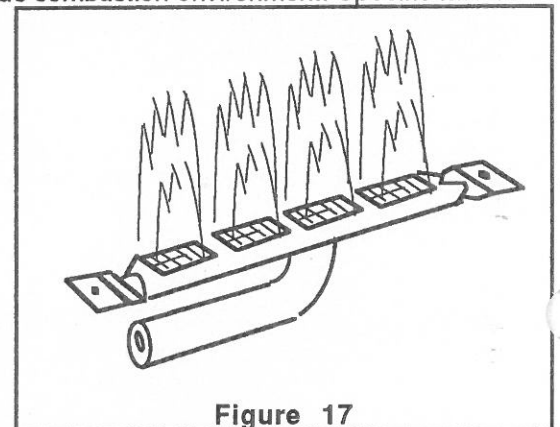
1. **PILOT FLAME:** Pilot flame should be steady and soft blue surrounding 1/8 inch of the thermocouple tip as shown in **Figure 16**.
2. If adjustment is necessary, use a narrow long stem screw driver to turn pilot adjustment screw. See **Pilot Lighting instructions for each specific model's pilot adjustment screw location**
3. Turn clockwise for less pilot flame.
4. Turn counterclockwise for more pilot flame.

## NORMAL OPERATING CHARACTERISTICS

Each and every CHILLBUSTER that leaves the factory is quality checked to ensure compliance with our American Gas Association certification. This check includes an operational test to ensure both satisfactory combustion and proper operation.

Each installation site for any vent free heater presents its own unique combustion environment. Specific factors such as weather tightness of the home, size of the room in which the heater is installed, central heating, ceiling fans, drafts, altitude, the size of the firebox, paint or soot inside the firebox, etc., all have an influence on the proper operation of any vent free gas log set. A normally operating CHILLBUSTER Gas Log Heater will possess the following characteristics:

- Clean burning combustion, which, after normal break in, will produce no soot or smoke.
- A full bodied, lively flame. The flame will be blue at the base and a combination of blue and yellow at the body and tips. **Figure 17**.
- Produce no odor other than the normal odors associated with the combustion of Natural or Propane gas.
- Will produce water vapor (increase indoor humidity) which may be beneficial during the dry heating season.



## MAINTENANCE AND CUSTOMER RESPONSIBILITIES

- Keep the area around the CHILLBUSTER free and clear from debris. From time to time, visually check pilot flame for proper appearance (**Figure 16**). The pilot, air shutter and burner must be free of lint and dirt for optimum performance. Periodically use a brush with stiff bristles to clean pilot, and burner. Use soft bristle brush to clean logs.
- Do not operate in a dirty firebox or in a previously used firebox which has not had all soot completely removed or it's chimney flue cleaned. Previously used fireboxes must have flue and stack professionally cleaned by a chimney sweep. Additionally, firebox walls and damper must also be thoroughly cleaned of all burn residue and soot using a damp cloth, sponge or brush.
- Do not operate this set with any logs other than the RASMUSSEN CHILLBUSTER Refractory Logs specifically designed and approved for use with this Burner System.
- Do not use with blower inserts or heat exchangers.
- If used, glass doors must be wide open when burner is on.
- Do not remove Rating Plate/Warning Tags. These tags serve you and any future user as an integral safety and identification component of the CHILLBUSTER gas log heater. Removing these tags voids the warranty.
- Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place blower inside area of firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning may occur. Sooting can settle on household surfaces outside the fireplace.
- During periods of heavy use, inspect frequently for evidence of sooting. If sooting is present, discontinue use until source of sooting is determined and corrected.
- Maintain log positioning as shown in **Figures 7 and 8** at all times.
- The Enhancement Package (Model EP) option is for decorative use in front of the CHILLBUSTER grate. Do not place the log or pinecones on the CHILLBUSTER log stack or in the flame. **Doing so may cause improper combustion.**

## HOW TO ORDER PARTS

Parts can be ordered through the supplier from whom you purchased your log set.

When ordering parts, always specify (From information available on name plate attached to grate) the following:

1. Model number of the log set.
2. Serial number of the log set.
3. Type of gas (natural or propane Gas).
4. The name of the part and part number from parts list.

◊Save these instructions◊

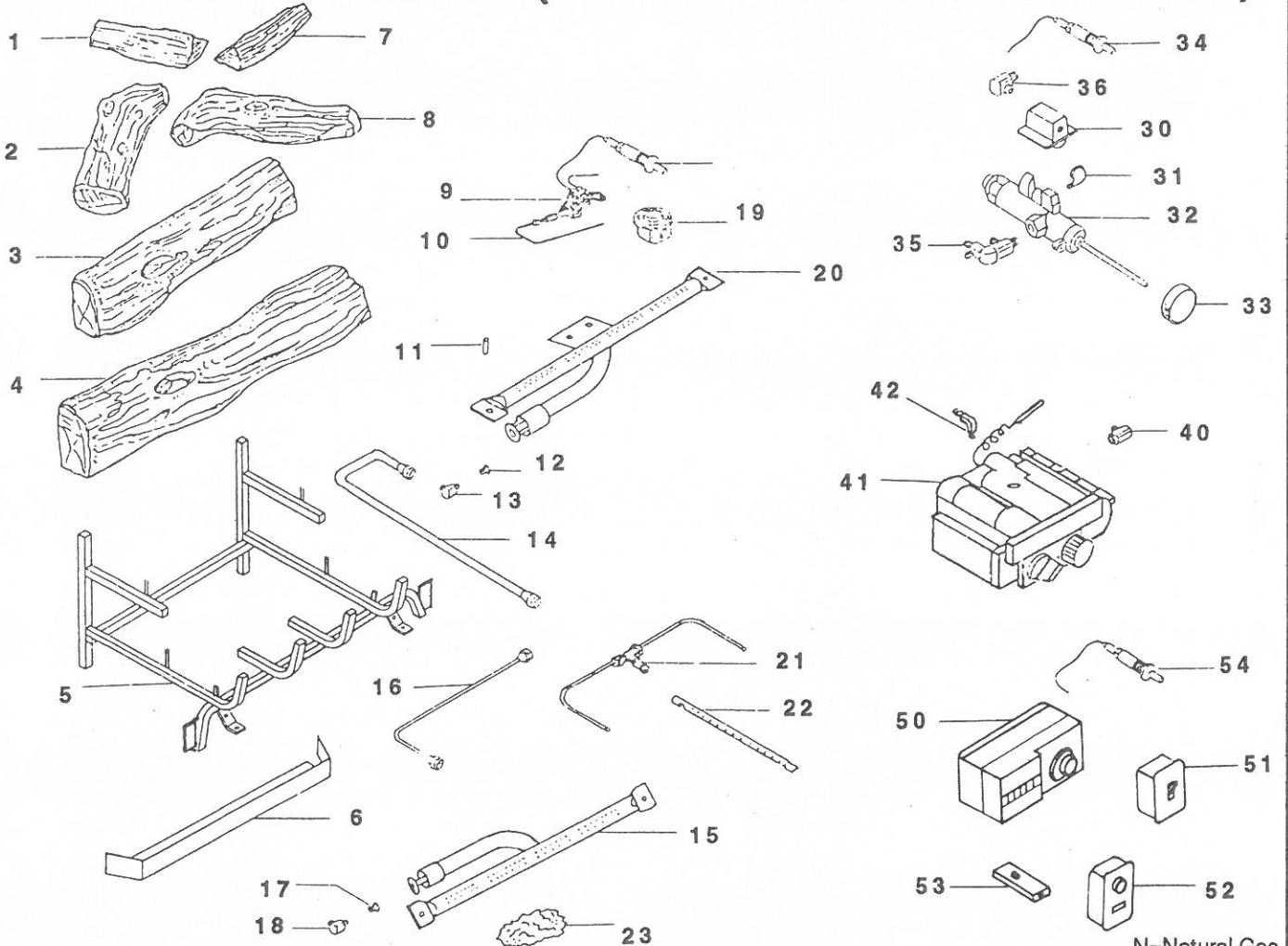
Manufactured By: RASMUSSEN IRON WORKS, INC.  
12028 E. Philadelphia Street  
Whittier, California 90601

## CONSUMER RECORD CARD

Fill in blanks below for your permanent record.

DATE PURCHASED \_\_\_\_\_  
MODEL NO. \_\_\_\_\_  
DATE INSTALLED \_\_\_\_\_  
SERIAL NO. \_\_\_\_\_  
INSTALLED BY: \_\_\_\_\_  
GAS TYPE: \_\_\_\_\_  
DEALER: \_\_\_\_\_

## PARTS LIST C2A/C2B (Manual/Thermostat/Switch/Remote)



N=Natural Gas  
P=Propane Gas

1. Top Log Small (Left)
2. Top Log Large (Left)
3. Rear Log
4. Front Log
5. Grate
6. Ember Tray
7. Top Log Small (Right)
8. Top Log Large (Right)
9. O.D.S. Assembly (N)
- 9a. O.D.S. Assembly (P)
10. Pilot Manifold Tubing
11. Cylindrical Spacer
12. Orifice (Natural)
- 12a. Orifice (Propane)

13. Orifice Holder
14. Manifold Tubing 3/8"
15. Front Burner
16. Manifold Tubing 1/4"D
17. Front Burner Orifice (N)
- 17a. Front Burner Orifice (P)
18. Front Burner Orifice Holder
19. Pilot Pressure Reg (Nat)
- 19a. Pilot Pressure Reg (Lp)
20. Burner (back)
21. Carryover Tube Orifice Holder (Natural)
- 21.a. Carryover Tube Orifice Holder (P)

22. Carryover Tube
23. Ember Material

### CB II (Manual)

30. Gas Pressure Reg (N)
- 30a. Gas Pressure Reg (P)
31. Elbow Reducer
32. Gas Valve (C)
33. Valve Knob
34. Push Button Piezo Ignitor
35. Valve Output Fitting Assm.
36. Regulator Outlet Brass

### CB II (Thermostat)

40. Brass Elbow
41. Gas Valve (E)
42. Outlet Brass elbow

### CB II (Switch/Remote)

50. Gas Valve (I)
51. Manual Switch
52. Wireless Remote Receiver
53. Wireless Remote Trans
54. Push Button Piezo Ignitor

# TWO YEAR CONSUMER PRODUCT WARRANTY

The following warranty has been drafted to comply with the MAGNUSON-MOSS WARRANTY ACT applicable to products manufactured after July 4, 1975. It replaces and supersedes any warranty in this package or in any printed literature.

## LIMITED WARRANTY:

RASMUSSEN IRON WORKS INC, 12028 E. Philadelphia Street, Whittier California, U.S.A., Warrants this Gas Log Set and accessories against defects in materials and workmanship, and suitable for a particular purpose, for a period of:

- (1) LOG CASTING - All logs are guaranteed against burnout in the original installation for two years from date of initial purchase.
- (2) BURNERS - 2 years from date of initial purchase.
- (3) SAFETY CONTROLS - Pilots and safety controls are covered by warranty of the original manufacturer only.

**THIS WARRANTY IS FOR THE BENEFIT OF THE ORIGINAL PURCHASER.**

## WARRANTY ADJUSTMENT:

- (1) RASMUSSEN agrees to repair or furnish a replacement for, but not remove or install any product or component which proves defective within the above warranty and appropriate time periods stated.
- (2) BUYER shall notify RASMUSSEN of any defect within this warranty no later than thirty (30) days after a defect is discovered.
- (3) No product will be accepted for return or replacement without written authorization of RASMUSSEN. Before returning merchandise, write to RASMUSSEN giving full details of the complaint and a copy of sales receipt or other evidence of purchase date. Merchandise returned without proof of purchase date will be serviced out-of warranty at our prevailing service and parts rates. If merchandise was damaged in transit, file claim immediately with the carrier. Products returned must be addressed as follows:

**RASMUSSEN IRON WORKS INC  
12028 E. PHILADELPHIA STREET  
WHITTIER CALIFORNIA 90601**

Shipping charges must be pre-paid by the buyer.  
**REPAIR OR REPLACEMENT UNDER THIS WARRANTY WILL BE SHIPPED FREIGHT COLLECT.**

## EXCLUSIONS FROM WARRANTY:

- (1) The foregoing warranty is limited solely as set forth herein and applies only for the periods designated above.
- (2) RASMUSSEN shall not be liable for any loss, damage, incidental or consequential damages of any kind, whether based upon warranty, contract, or negligence, arising in connection with the sale, use, or repair of the product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- (3) The maximum liability of RASMUSSEN in connection with this limited warranty shall not in any case exceed the contract price paid for the product claimed to be defective or unsuitable.
- (4) This warranty does not extend to any product manufactured by RASMUSSEN which has been subjected to misuse, neglect, accident, improper installation, or use in violation of instructions furnished by RASMUSSEN. Do not remove Rating Plate/Warning Tags. These tags serve you and any future user as an integral safety and identification component of the CHILLBUSTER gas log heater. Removing these tags voids the warranty.
- (5) This warranty does not extend to or apply to any unit which has been repaired or altered at any place other than RASMUSSEN IRON WORKS INC factory, or by persons not expressly approved by RASMUSSEN.
- (6) Components manufactured by any supplier other than RASMUSSEN shall bear only that warranty made by the manufacturer of that product.
- (7) Freight damage, cracking from thermal shock, and color changes occur from causes beyond manufacturer's control and are not covered by any warranty.

**THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.**

RASMUSSEN IRON WORKS, INC. shall be held harmless from any and all claims by the buyer as a result of injury or damage to an ultimate user or other person caused by the product sold herein by the seller to the buyer, whether the injury or damage results from the assembly, installation, operation, shipment, storage or manufacture of this product. RASMUSSEN IRON WORKS, INC. makes no warranties, expressed or implied, other than those expressly stated herein.