

# **GRAND EFFECTS**

## **360 Fire-Water Bowls and Fire-Water Inserts**

### **Model 100**

#### **OWNER'S MANUAL / OPERATING AND MAINTENANCE INSTRUCTIONS**

**For your safety:**

If you smell gas:

1. Shut off gas to the appliance
2. Extinguish any open flame near unit.
3. If odor continues, immediately call your gas supplier

**For your safety:**

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



This manual should remain with the homeowner or parties responsible for operation.  
(Rev A)

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## **1.0 Gas and Electrical requirements:**

- |     |                |   |                |
|-----|----------------|---|----------------|
| 1.1 | Input Voltage: | 120 Vac / 60 Hz to Grand Effects Control Panel                        |                |
| 1.2 | Gas type:      | <u>Natural Gas</u>  | <u>Propane</u> |
| 1.3 | Gas Pressure:  | Nominal: 7" wc  | 11"wc          |
| 1.4 | Gas flow:      | 1 Burner System: 60,000-80,000 Btu/Hr                                 |                |
| 1.5 | Water flow:    | 25-50 gpm (Flow will vary depending on bowl size and flow preference) |                |

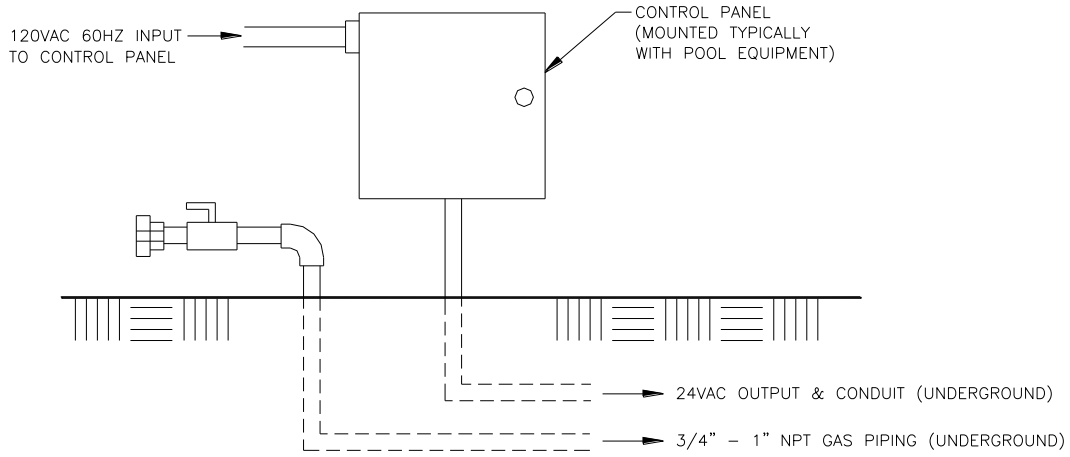
Note: Check with your gas supplier to verify gas flows and pressures available at the location of your installation. In many cases utility companies will install larger meters at no charge to accommodate larger flows.

## **2.0 Installation for 360 Water Fire Bowl/ Water Fire Bowl Insert**

**Warning: This unit is for outdoor use only**  
**Recommended CSA/AGA Clearances: Sides 4ft/Top 6ft**

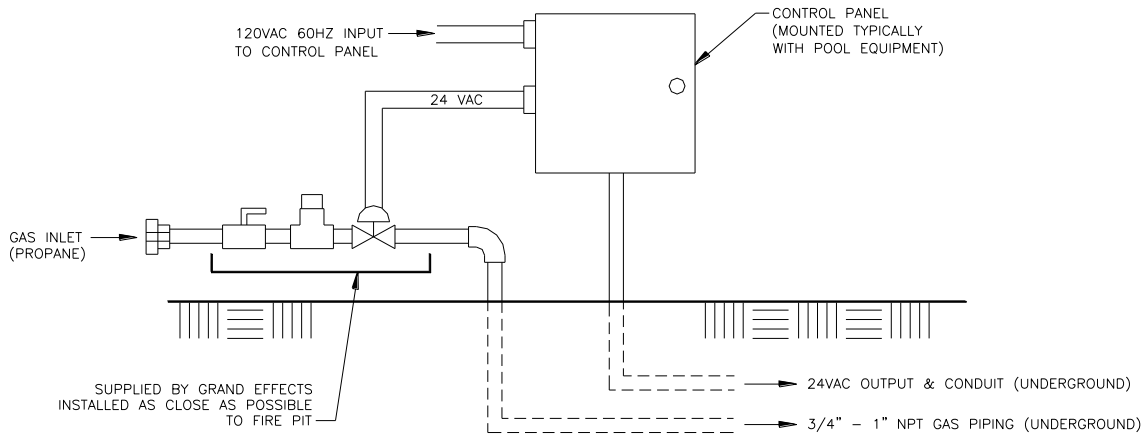
- 2.1 Do not install near any combustibles such as wood structures, fuels, clothing, fabrics or dry vegetation.
- 2.2 Install Burner Assy well out of the way of pedestrian traffic.
- 2.3 Installation shall be performed by a licensed contractor. All aspects of installation must conform to local or National codes, or in the absence of codes, with National Fuel Gas Code ANZI Z223.1.
- 2.4 The Control Panel and approved manual gas valve shall be located where they can be easily accessible so that the gas can be shut off quickly in case of an emergency.
- 2.5 Install the Control Panel and gas piping as shown in Fig. 1(Natural Gas) or Fig. 2 (Propane Gas) or Fig. 3 (Commercial Installation).
- 2.6 Note that piping is different for propane than natural gas as shown in Fig. 1 and Fig. 2
- 2.7 Low voltage 14 or 16ga wiring (24Vac) shall be installed underground between the Control Panel and the Burner Assembly. Wire per Grand Effects Wiring Diagram. 120v source into Control Typically, the pool controller is the device that turns the unit on/off. If a pool controller is not available, Grand Effects can provide a hand held remote system or an electrician can wire a decorative switch for on/off control up stream of the Grand Effects Control Panel. Panel can come from any 120v source, including pool controller or home system.
- 2.75 Control Panel should be installed at higher elevation than water bowl.
- 2.8 Maintain good piping practice by keeping pipe length and elbows to a minimum to eliminate unnecessary pressure drops. (Do not use any corrugated flexible gas line).
- 2.9 On commercial installations, it is recommended to install a keyed switch and kill switch located in close proximity and in visible sight of feature or features. The keyed and kill switches are supplied by others.
- 2.91 Gas/electrical and drain connections must be located to fit in a 6" sleeve. Make area around connections water tight as shown in Fig. 4. Elbows need to be installed on gas/electrical and drain for hoses to be positioned properly as shown in Fig. 4

**Note: Control Panel should be installed at higher elevation than Fire-Water Feature**



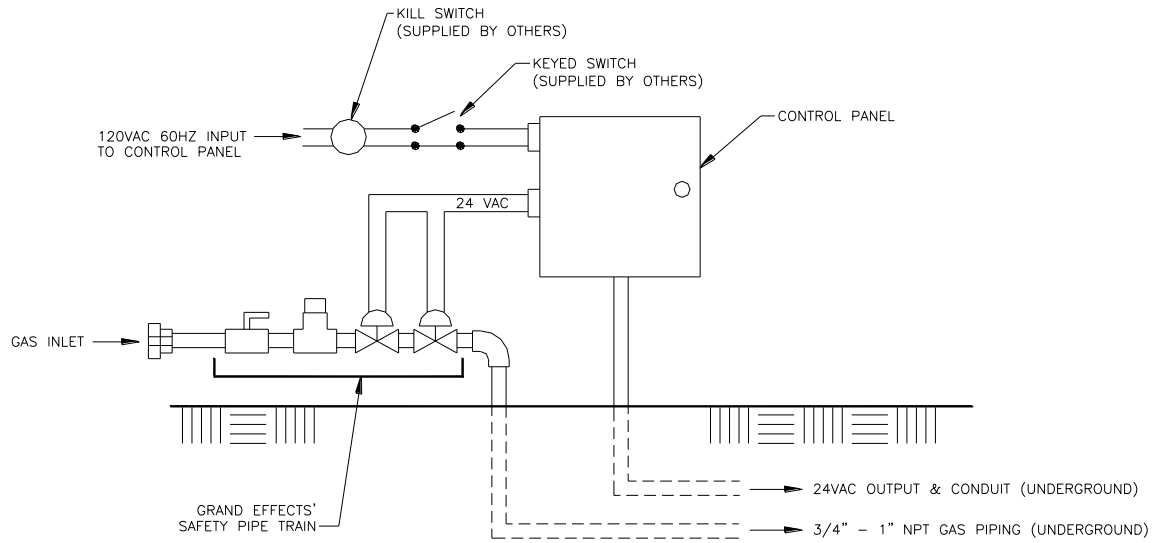
**Set up for Natural Gas**

Fig. 1



**Set up for Propane Gas**

Fig. 2



**(Commercial Installation)**

Fig. 3

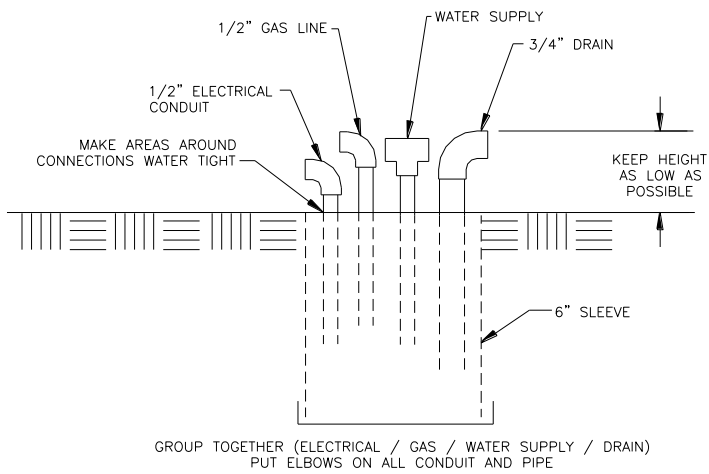
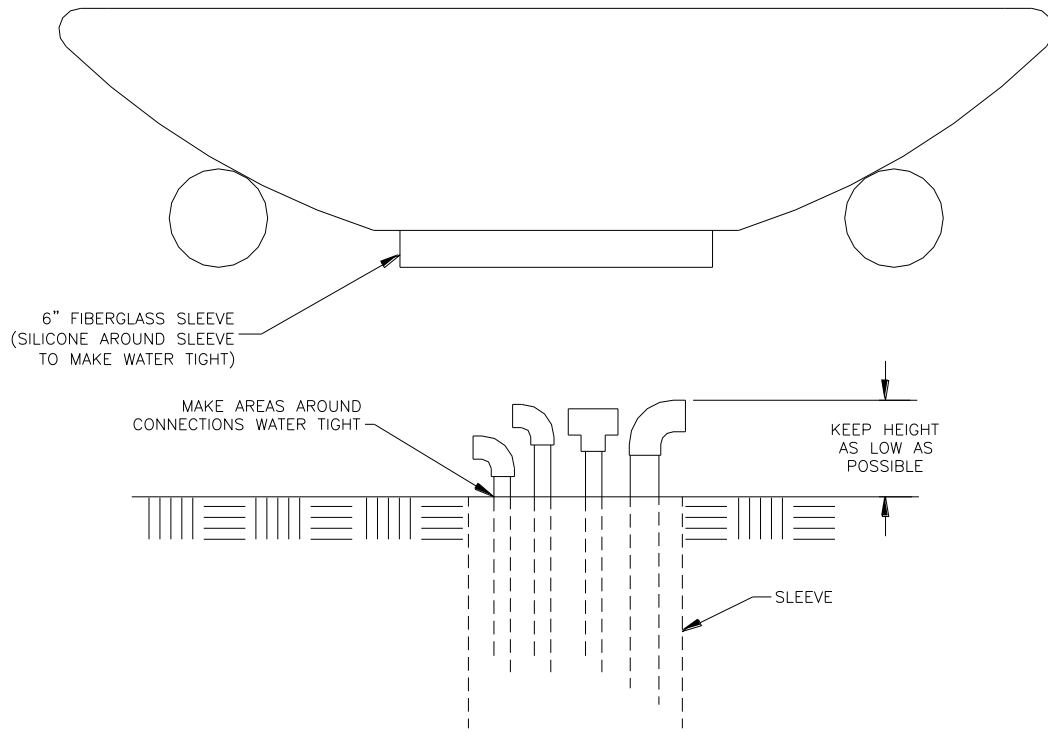
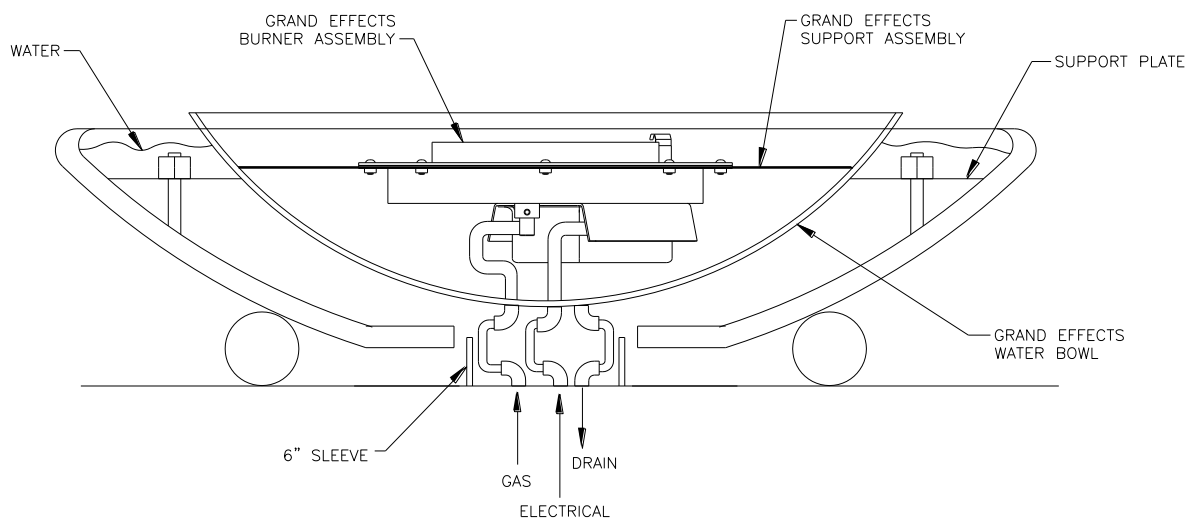


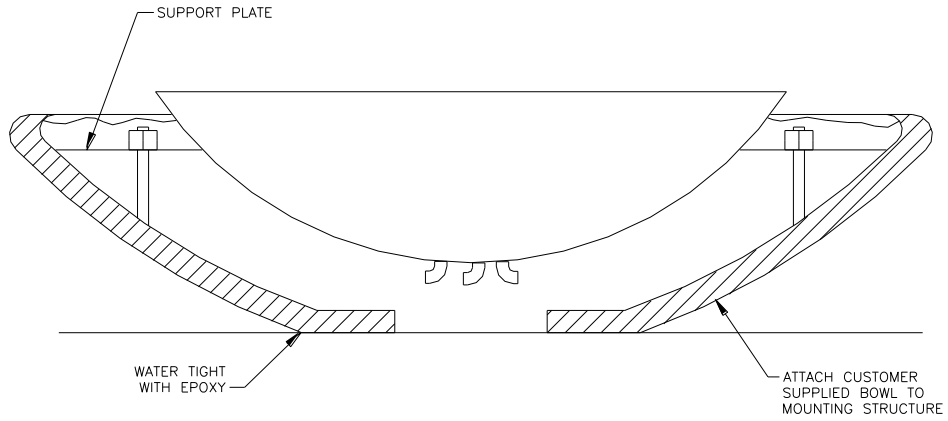
Fig. 4



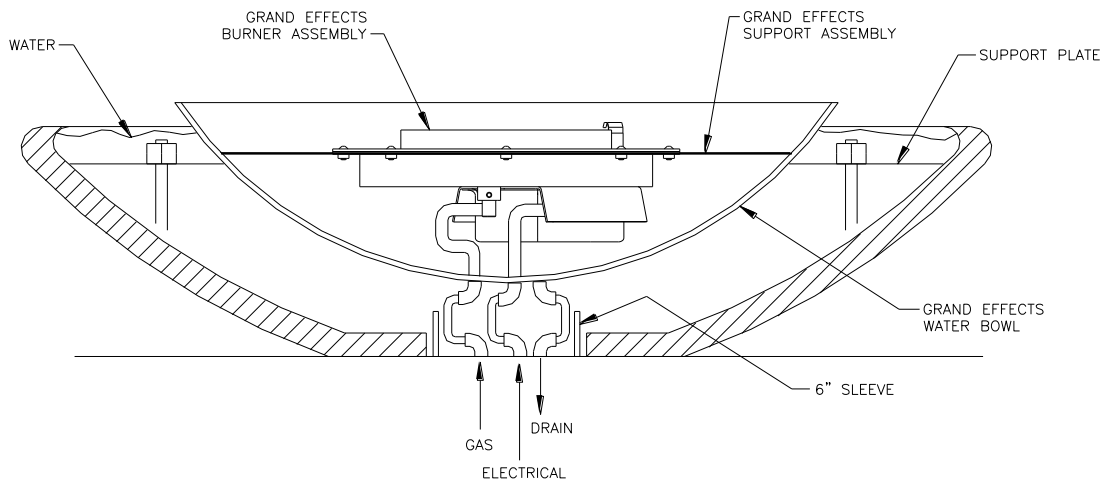
42" Biltmore with Ball Legs  
Fig. 5



42" Biltmore with Ball Legs  
Fig. 6



42" Biltmore/48" Essex/42" Legacy/Customer Supplied Bowl  
Fig. 7



42" Biltmore/48" Essex/42" Legacy/Customer Supplied Bowl  
Fig. 8

- 3.0 Connect gas/electrical and drain hoses to Water Bowl Assembly as shown in Figure 6 and Figure 8.
- 3.1 Make sure drain hoses are not kinked.
- 3.1 Check drain by filling water bowl with water from hose. Water should drain quickly.
- 3.15 Install Burner Assembly in Water Bowl. Connecting gas hose to Burner Assembly.
- 3.2 Install wire nuts on wires from Control Panel and Burner Assembly. Be careful to hook up the “positive” to the red wire and the “negative” to the white wire. Wrap wire nuts with electrical tape or some means to prevent moisture from getting in. Make sure wire nuts are positioned at bottom of Water Bowl away from bottom of Burner Assembly. Make electrical connections water tight inside of water bowl.
- 3.3.1 With all gas connections tight, position Burner Assembly and Water Bowl so that it sits level on the “SUPPORT Plate”.

## **5.0 Burner Setup and Adjustment**

- 5.1 With the upstream gas valve in the “closed” position and 110Vac coming into the Control Panel, turn the switch located in the panel to the “On” position.
- 5.2 At the Burner Assembly, check that the spark electrode is arcing across the gap. You should be able to hear and see the electrode spark. If there is no spark, make sure that the Burner Assembly is receiving 24vac from the Control Panel.
- 5.3 Open the upstream gas valve.
- 5.4 In the Control Panel, turn the switch to the “On” position.

**Important : At this time the corresponding Fire Bowl should ignite.  
If Burner does not light, it may be a result of air in the gas line.  
If this happens, carefully purge the air from the gas line.**

**Caution: When purging air from a propane system, disconnect wires going to Burner Assemblies (terminals X1/X2) located in Grand Effects Control. There should be no power at Burner Assemblies when purging Propane. Propane Adder valve should remain wired and energized when Purging. After purging is complete, make sure area is vented and free from built up gas. Reinstall wires at X1/X2 terminals, thus providing to Burner Assemblies.**

**Note: Each Burner should have a flame height of 12” – 15” from the top of the Bowl. A lower flame height may create an unstable pilot, resulting in possible on/off cycling.**



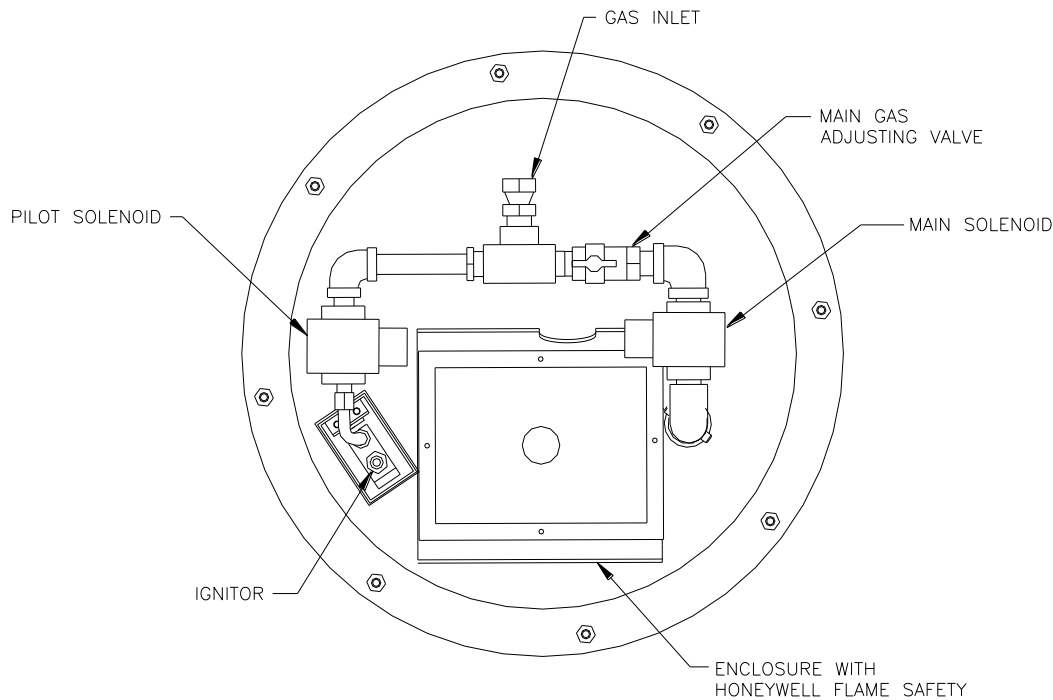


Fig. 8  
(View is from bottom side of Burner Assembly)

- 5.5 After the “Burner Assembly” has been lit, it can now be adjusted for flame size.
- 5.6. The height of the flame can be adjusted by opening or closing the ball valve as shown in Fig. 1 and Fig. 2.
- 5.7. Install decorative rock or glass on top of “Burner Support” and “Burner Assembly”. Larger lava rock is recommended (2”-4” in size). It will work better than smaller rock. Make sure that all rock is clear of the pilot area and hood area. Pilot Hood area needs to remain clear of rock for proper operation.
- 5.8 Note: Do not use glass with propane installations. (If you use glass, please consult Grand Effects Glass Install Manual. If you use ¼” pieces of lava it should be treated as a glass installation).

**Note:** Both sides of Pilot Hood need to be clear of rock for proper ventilation and operation.

**Important:** Do not use Fire Glass with propane installations!!

**CAUTION!!** Lava Rock is an accepted medium for fire features. However, pieces may pop or explode when exposed to heat or when wet and exposed to heat. Use caution when in immediate area.

## **6.0 Maintenance**

- 6.1 Periodically clean the Burner Assembly with a wet cloth or cleaning solution to remove carbon build-up.
- 6.2 Frequency of the cleaning will depend on usage.
- 6.3 Periodically inspect the underside of the Burner Assembly for any signs of excessive temperatures.
- 6.4 Check that all gas connections are tight.
- 6.5 The units should be cycled frequently (especially after a rain). The Burner Assemblies will not work in snow and ice conditions. They should be covered or removed for storage in snow and ice conditions. The Units should not be operated in high wind conditions. High winds can limit the cooling air required for cooling of the Burner Assembly.
- 6.6 Gas should be securely shut-off during non use.

**IMPORTANT: The System needs to be turned on/off after a rain to remove any water in the pilot area.**

**Note: If any problems are present, consult a licensed heating specialist or call Grand Effects.**

## **7.0 Operation**

**Warning: This unit is for outdoor use only**

For your safety:

- 1. If you smell gas, shut off Gas Valve immediately.
- 2. Extinguish any open flame.
- 3. If odor continues, immediately call your gas supplier.
- 4. Do not store or use gasoline or other flammable vapors and / or liquids in the vicinity of this appliance.
- 5. Do not leave flame on while unsupervised.
- 6. Do not operate in windy or rainy conditions. If this is done, unit will cycle on and off automatically.
- 7. Unit should be operated only by a responsible adult.
- 8. When in use, an open flame is present, therefore, use with extreme care and at your own risk.
- 9. Before any inspection of the unit, always turn off power and gas supply at the Control Panel.
- 10. If you experience problems with this unit, call Grand Effects or a licensed heating professional. All work on this unit shall be performed by a licensed heating professional.

**Caution!** Before you turn on the Grand Effects System, make sure that it is clear of people, animals or any objects that are combustible.

**Operating Instructions:**

To turn unit "On":

1. Turn Burner Switch "On".

To turn unit "Off":

1. Turn Burner Switch "Off".

**Note: If Burner fails to light, turn corresponding Burner Switch in the Control Panel to the "Off" position then to the "On" position. This will initiate a new trial for ignition.**

## TROUBLE SHOOTING GUIDE

### Model 100 Burner Assy.

#### Main Burner Does Not Light (No Spark)

- 1) Remove rock/glass away from pilot area (Look for small pieces obstructing pilot)
- 2) If still no spark, confirm that you have 24vac out of Panel and at Burner (measure voltage on terminals 1, C)
- 3) If you have voltage going out to Burner, but no spark -Replace Control Module (Look for excess heat on module)
- 4) If you have no voltage out of Panel, check fuses F1 and F2 & GFI confirm 110v going into panel on terminals H, N
- 5) If you have 110 V on H, N and Fuses check OK, but still no 24 v output, replace transformer

#### Spark (No Pilot)

- 1) Remove rock/glass away from pilot area (Look for small pieces obstructing pilot)
- 2) Confirm if gas is coming out of pilot, you can hear it. (use BBQ Lighter to determine if gas is coming out of pilot)
- 3) If no pilot gas, check that gas is turned on.
- 4) Pilot orifice may be plugged. Replace orifice or complete pilot assembly
- 5) If still no gas, pilot valve may not be opening. Turn gas off and confirm if Pilot Solenoid is energizing
- 6) If not energizing-replace module if it is energizing-clean out Pilot Solenoid

#### Burner Goes ON/OFF

- 1) Is it going off because of wind? If so, how windy-slight breeze-gusty?? (If wind, rotate Burner Assy in bowl, or add 3.5" x 17" Wind Band)
- 2) Remove rock/glass away from pilot area (Does it get better?) How much glass? Thin down
- 3) Remove all Rock/Glass from Burner Assy. (Does Problem go away ?)
- 5) Is main flame adjusted to low? (If Burner is adjusted to low, pilot will be to small and unstable)
- 6) If burner shuts off after a 30-4min period and then goes off and does not come back on (Replace Control Module)

#### Pilot comes on but no main burner

- 1) Confirm that red handled ball valve underneath burner is open
- 2) If possible confirm that main gas solenoid is energizing, if not possibly replace Control Module)
- 3) Main Burner Solenoid may have to be replaced if buzzing

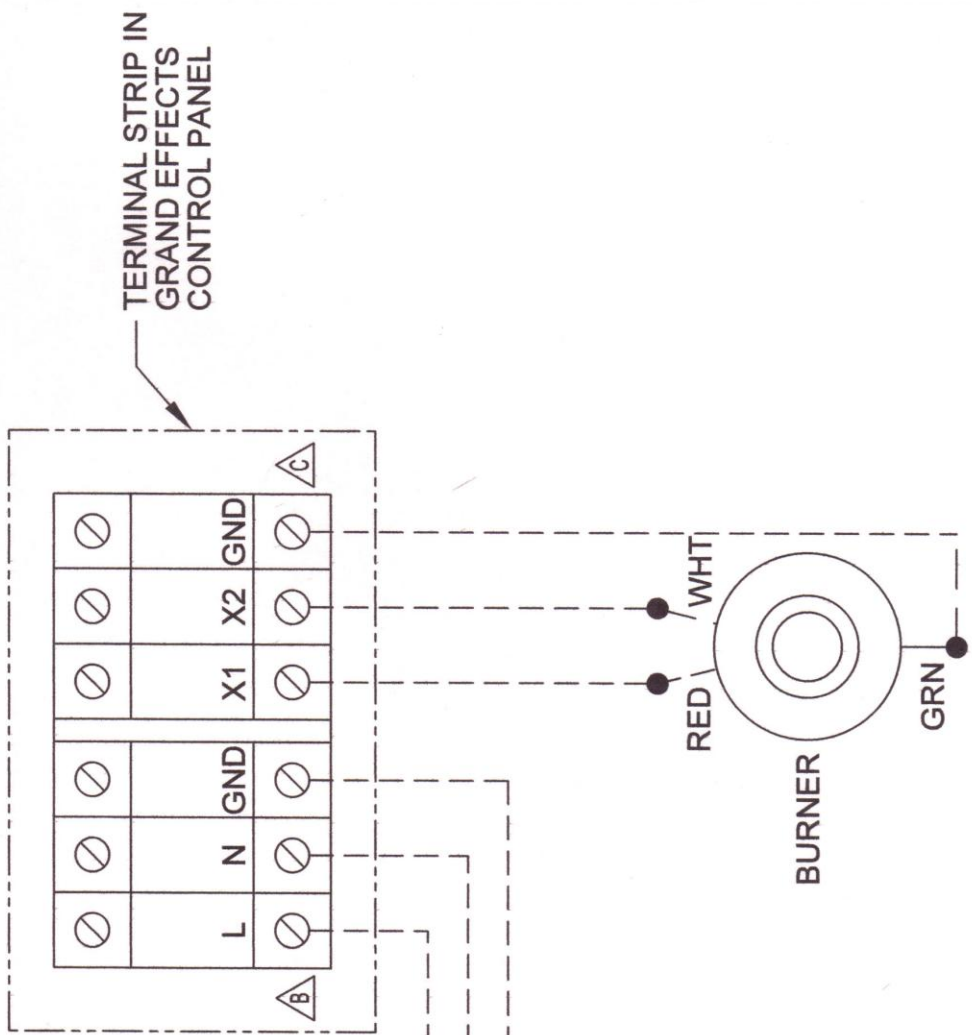
#### Main Burner or Pilot does not shut off

- 1) Remove Solenoid Coil and clean inside of solenoid (looking for contaminants)

**CPWD-1**

**LEGEND**

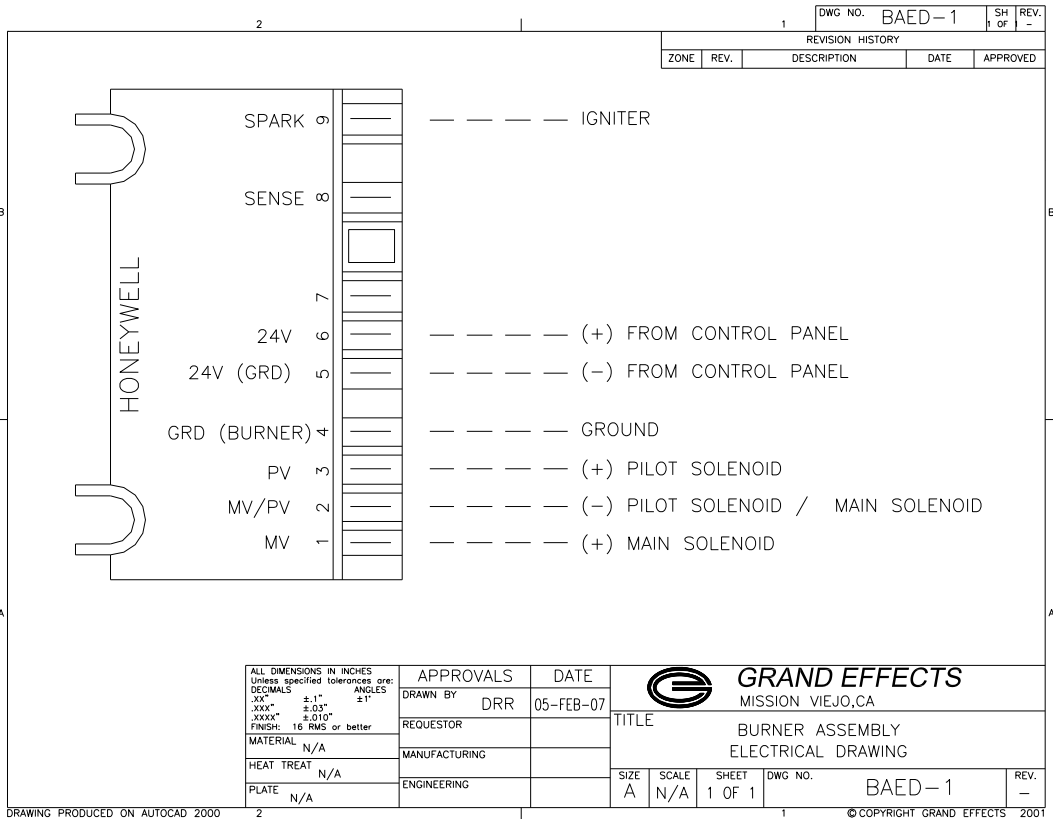
- L = 120 VAC LINE
- N = 120 VAC NEUTRAL
- GND = EARTH GROUND
- X1 = 24 VAC HOT
- X2 = 24 VAC COMMON



**ELECTRICAL SERVICE  
120 VAC SINGLE PHASE  
WITH EARTH GROUND**

**NOTES:**

- A** FEEDER CIRCUIT PROTECTION PROVIDED BY OTHERS
  - B** TORQUE TERMINAL BLOCKS TO 12.0-13 LB-IN. USE STRANDED COPPER CONDUCTORS ONLY RATED @ 60°C MIN
  - C** TORQUE GROUND TERMINALS TO 20 LB-IN.
  - FIELD WIRE BY OTHERS
- THIS PANEL ENCLOSURE IS RATED NEMA 3R. TO PRESERVE RATING USE NEMA 3R CONDUIT ENTRY HUBS



## **Grand Effects**

### **1 year Limited Residential Warranty/6mo Commercial**

Grand Effects will replace, at its expense, any unit, which in normal use, has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to Grand Effects with proof of product within one year and provides Grand Effects with reasonable opportunity to verify the alleged defect by inspection. Grand Effects will not be responsible for any asserted defect, which has resulted from misuse, abuse, repair or alteration. Under no circumstances will Grand Effects be liable for incidental or consequential damage resulting from defective products. This warranty is Grand Effects' sole warranty and sets forth the customer's exclusive remedy, with respect to defective products, all other warranties, expressed or implied, whether of merchantability, fitness for purpose or otherwise, are expressly disclaimed by Grand Effects. Grand Effects is not responsible for any injury or mishap related to misuse, abuse or lack of judgment choosing fire display locations.



Contact us at:

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