

GRAND EFFECTS

Fire Pit/Fire Pit Inserts

For (Automated) Model 100-A

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 E)

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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: | 120,000 Btu |
|-----|-----------|------------------|-------------|

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.

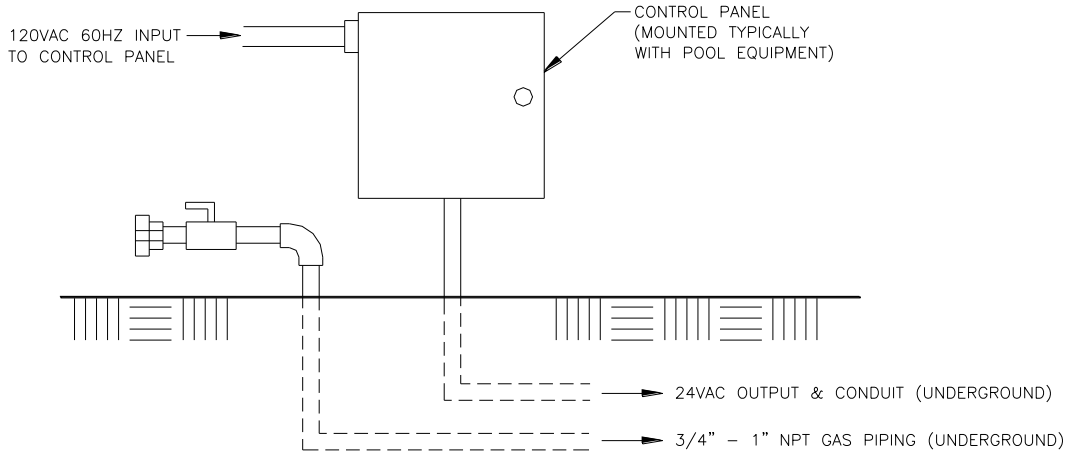
2.0 Installation for Fire Pit Insert

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

- 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.
- 2.4 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.
- 2.5 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.
- 2.6 Install the Control Panel and gas piping as shown in Fig. 1(Natural Gas) or Fig. 2 (Propane Gas) or Fig. 3 (Commercial Installation). Gas lines must be clean and free from any dirt, debris or contamination
- 2.1 A gas pipe elbow must be installed on gas line for proper installation of gas hose. (See Fig. 4) Do not kink or make tight radius bend on gas hose.
- 2.65 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 Panel can come from any 120v source, including pool controller or home system. 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 upstream of the Grand Effects Control Panel.
- 2.8 Providing good drainage is critical as shown in Fig. 4
- 2.9 Venting (air gap at bottom of fire pit walls) is required as shown in Fig. 4 and Fig. 5.
- 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 Adjust the height of the Support Plate as shown in Fig. 3 & 4. Cut off excessive length of bolts.
- 2.95 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.
- 2.96 Using fire brick to line the inside of the fire pit is not recommended. Fire brick will retain heat and may result in over heating of the electronics.

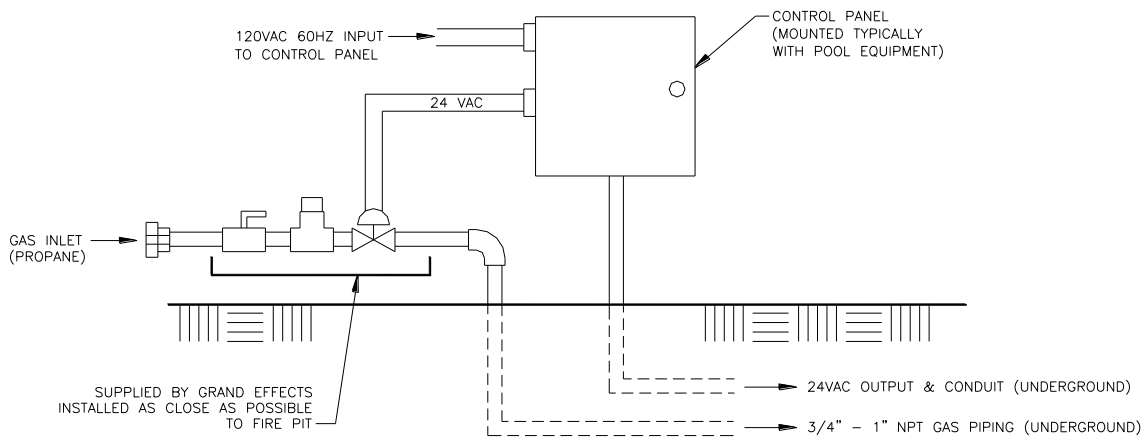
IMPORTANT!!

**Note: 18" Minimum Depth Requirement of Fire Pit (as shown in Fig. 4 and Fig. 5)
Venting is required for cooling Burner Assembly (as shown in Fig. 4 and Fig. 5)**



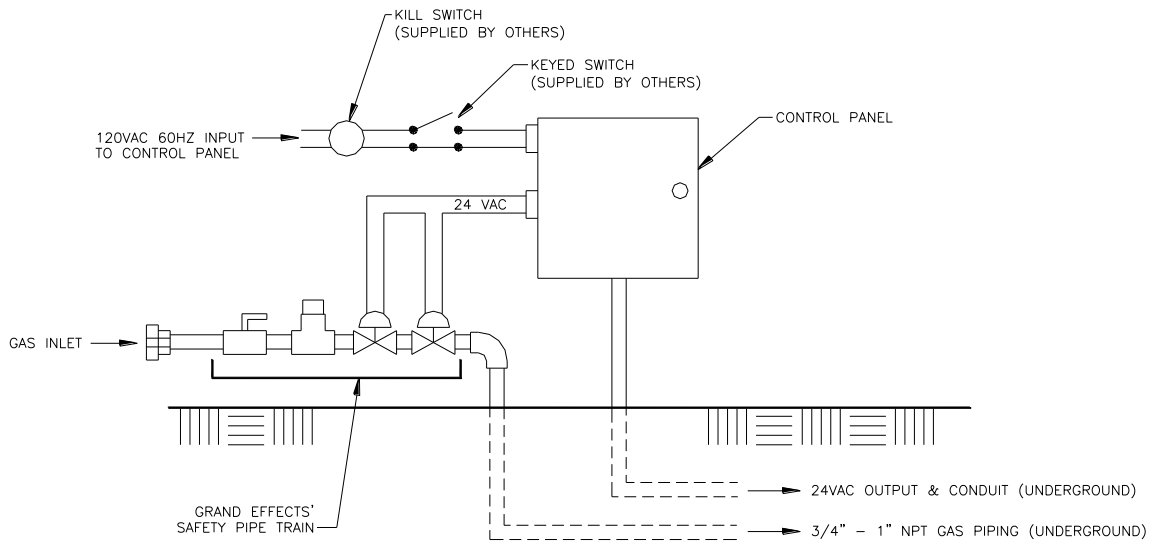
Set up for Natural Gas

Fig. 1



Set up for Propane Gas

Fig. 2



(Commercial Installation)

Fig. 3

Important: Do not kink or make sharp radius on metal gas hose. Do not come straight up with gas hose. As shown below, a 90 gas pipe elbow must be installed on gas line for proper installation of gas hose. If not installed with elbow as shown below, product warranty will be void.

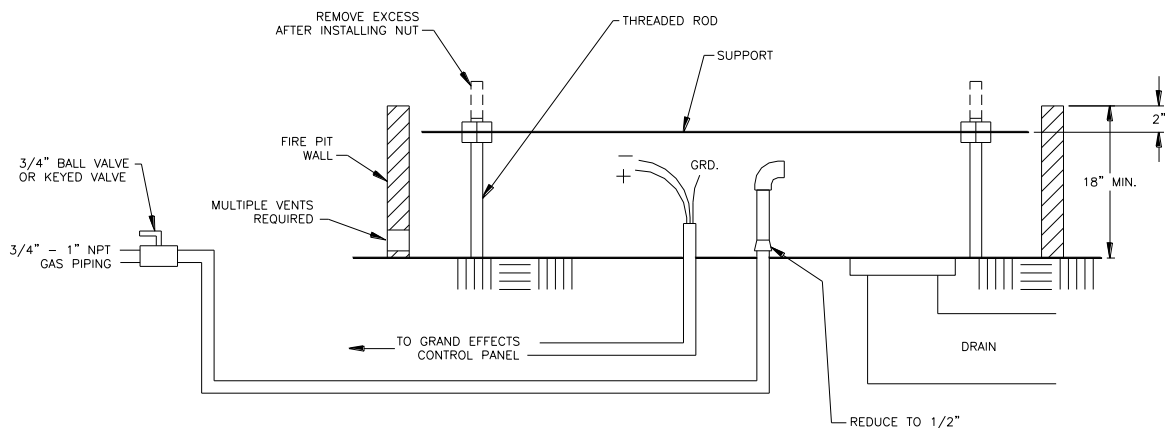


Fig. 4 (Natural Gas)

3.0 Installation of Fire Pit Insert

- 3.0 Install Burner Assembly as shown in Figure 6. The Burner Assembly shall be centered and supported by the "SUPPORT Plate".
- 3.1 Connect Gas Hose to Burner Assembly as shown in Figure 6.
- 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 fire pit, away from bottom of Burner Assembly.
- 3.3.1 With all gas connections tight, position Burner Assembly so that it sits level on the "SUPPORT Plate".

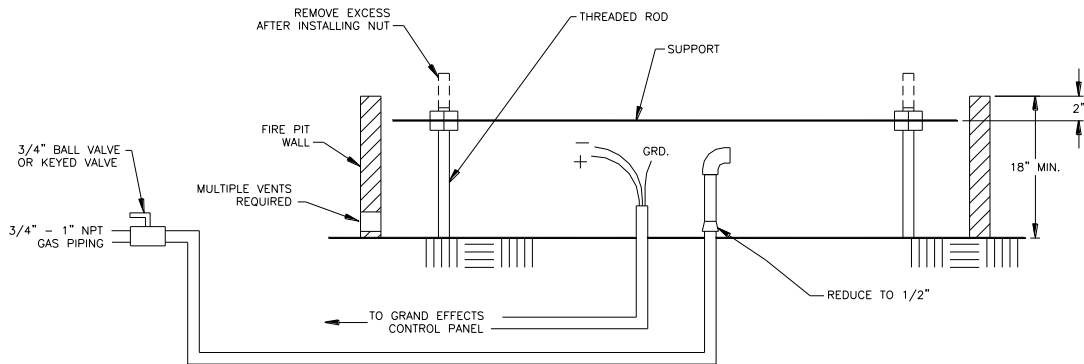


Fig. 5 (Propane)

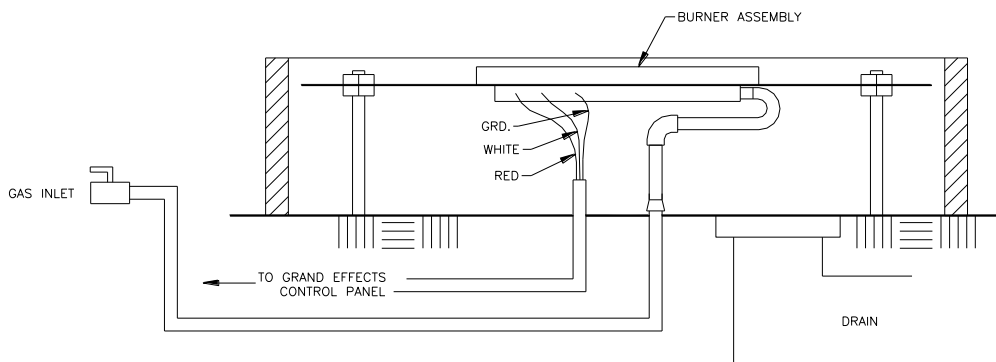


Fig. 6

4.0 Installation for Bowl Features (42”Biltmore/45”Cielo/48”Essex/GrandCorinthian/Classic)

Warning: This unit is for outdoor use only

- 4.1 Do not install near any combustibles such as wood structures, fuels, clothing, fabrics or dry vegetation.
- 4.2 Install Bowl Feature well out of the way of pedestrian traffic.
- 4.3 Installation shall be performed by a licensed contractor. All aspects of installation must conform to local codes, or in the absence of codes, with National Fuel Gas Code ANZI AZ223.1
- 4.4 The Control Panel shall be located where it can be easily accessible so that the gas can be shut off quickly in case of an emergency. An approved gas valve or keyed valve shall be installed upstream of the unit and located in an accessible area.
- 4.5 Install the Control Panel and gas piping as shown in Fig. 1(Natural Gas) or Fig.2 (Propane) or Fig. 3 (Commercial Installation).
- 4.6 Low voltage 14 or 16ga wiring (24 vac) shall be installed underground between the Control Panel and the Bowl Feature. Wire per Grand Effects Wiring Diagram.
- 4.7 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).
- 4.8 Install Bowl Feature and Burner Assembly as shown in Fig. 7. (Gas piping and electrical must be centered with the hole in the bottom of the Bowl).
- 4.9 Install Burner Assembly as shown in Figure 7. The Burner Assembly shall be centered and supported by the “SUPPORT Plate”.
- 4.91 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 fire pit, away from bottom of Burner Assembly.
- 4.95 With all gas connections tight, position Burner Assembly so that it sits level on the “SUPPORT Plate”.
- 4.97 On commercial applications, 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 switch are supplied by others. It is acceptable for a customer supplied timer switch to be wired in conjunction with the Grand Effects System.

Note: 45” Cielo/48”Essex require installation of Grand Effects Mounting Bracket

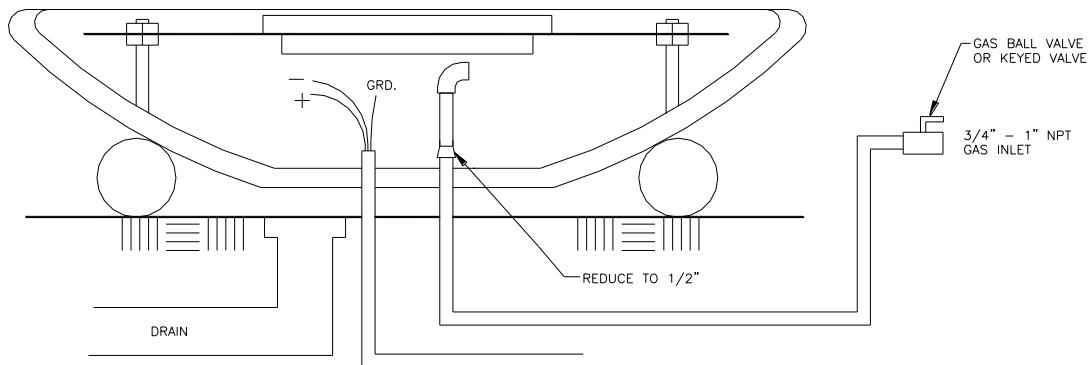


Fig. 7

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.

**Note: At this time the Burner Assembly should ignite.
If it does not light, it may be a result of air in the gas line.
Purging the air from the gas line may be required.**

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.

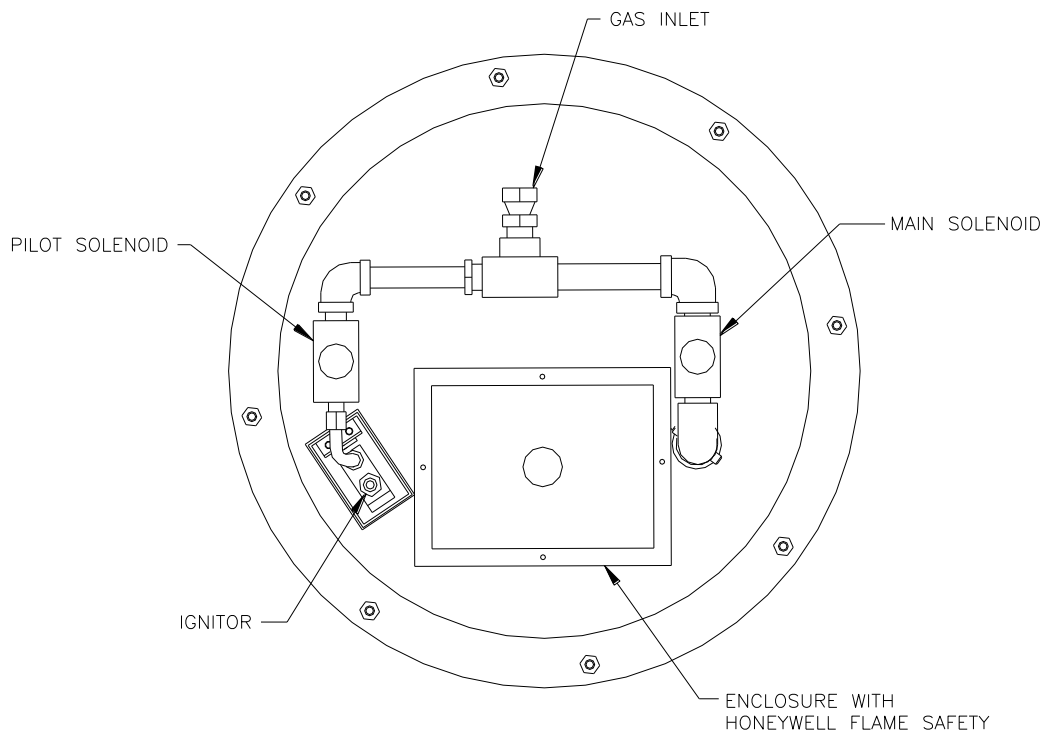


Fig. 8
(View is from bottom side of Burner Assembly)

- 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 customer ball valve as shown in Fig. 1 and Fig. 2. On propane installation you can adjust valve provided with propane adder. Flame height should be adjusted to 10”-12”. More flame height can result in overheating of the burner.
- 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 with natural gas, you will need to lay down stainless mesh screen to prevent glass from falling through-please consult Grand Effects Glass Install Manual. If you use ¼” pieces of lava it should be treated as a glass installation).

IMPORTANT: Do not use fire glass with propane installations!!

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 Power "On".

To turn unit "Off":

1. Turn Burner Power "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.

8.0

Spare Parts

1/4" Pilot Solenoid

3/8" Main Solenoid

Ignition Module

Model 100/100A Burner Assy.

Main Burner Does Not Light

- 1) Remove all rock/glass away from pilot area and under Pilot Hood (Look for small pieces obstructing pilot)
- 2) Open up Grand Effects Control Panel (Make sure GFI switch has not tripped-reset switch)
- 3) Do you hear ignitor spark at burner?
- 5) Does pilot come on? If not, Pilot may be plugged. (Contact Service)

Burner Goes ON/OFF

(In windy conditions, burner will recycle on/off) On sixth Burner will go into a 5 minute lockout. After 5 minutes Burner will come back on.

- 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) After a 30-45 min time period the Burner will shutoff and not reignite. (Contact Service)

Main Burner or Pilot does not shut off

When power is off, the pilot or main burner does not shutoff. Immediately close gas ball valve located upstream (Contact Service)

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**



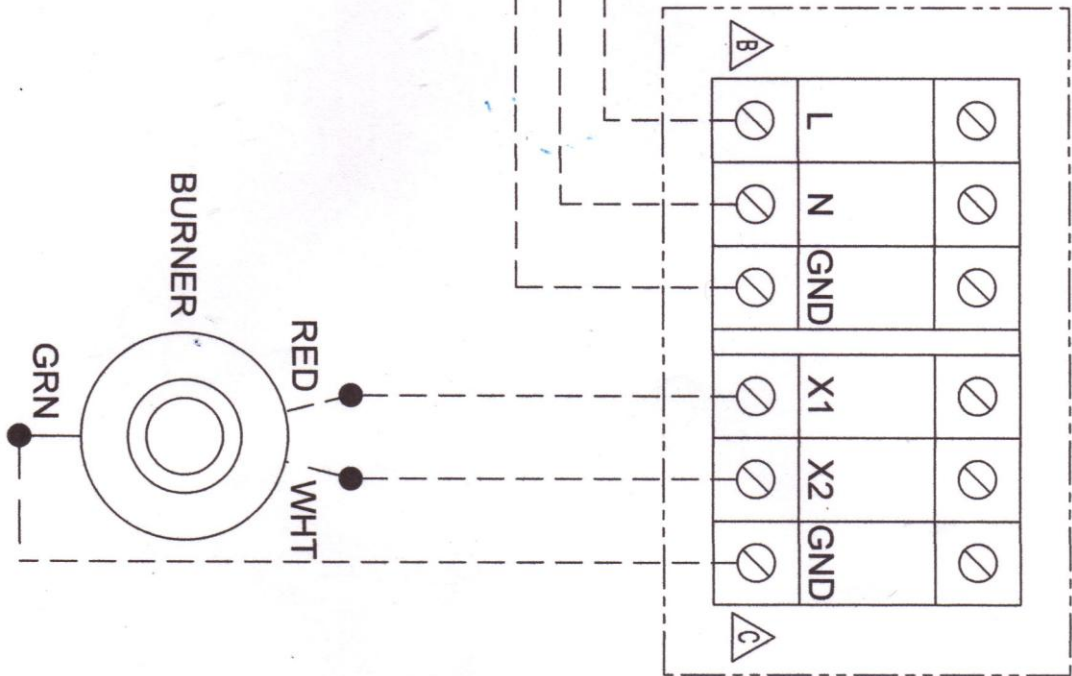
A FEEDER CIRCUIT PROTECTION
PROVIDED BY OTHERS

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



TERMINAL STRIP IN
GRAND EFFECTS
CONTROL PANEL

Revisions		
Rev	Date	Change

TOTAL CONTROL
a Division of **RSD**

26021 Alameda Ocean Drive
Lake Forest, CA, 92550
949-396-7678 949-396-9755 Fax

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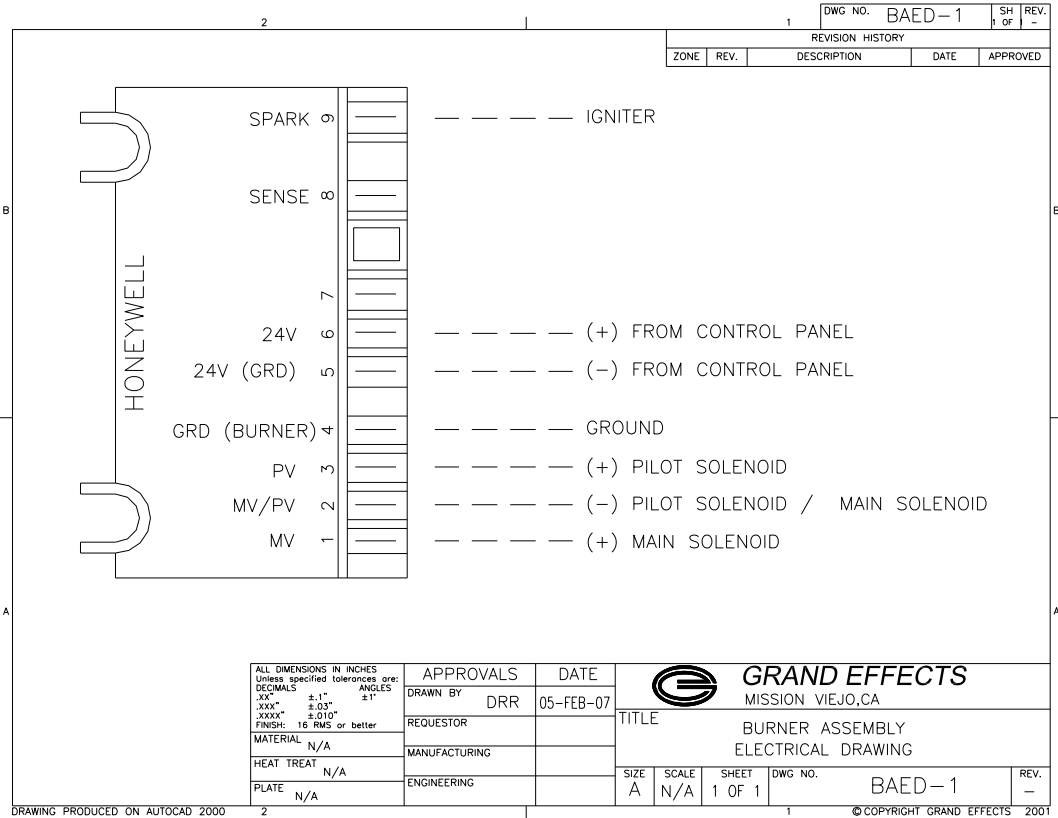
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PRIOR WRITTEN PERMISSION
FROM RSD/TOTAL CONTROL.

Project:

**GFCI POWER PANEL
WITH 24 VAC OUTPUT**

Contractor:

 **GRAND EFFECTS**
MISSION VIEJO, CA



ALL DIMENSIONS IN INCHES
 Unless specified tolerances are:
 DECIMALS ±.1" ANGLES ±1°
 .xxx" ±.03"
 .xxxx" ±.010"
 FINISH: 16 RMS or better

APPROVALS	DATE
DRAWN BY DRR	05-FEB-07
REQUESTOR	
MANUFACTURING	
ENGINEERING	

GRAND EFFECTS	
MISSION VIEJO, CA	
TITLE BURNER ASSEMBLY ELECTRICAL DRAWING	
SIZE A	SCALE N/A
SHEET 1 OF 1	DWG NO. BAED-1
	REV. -

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.



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