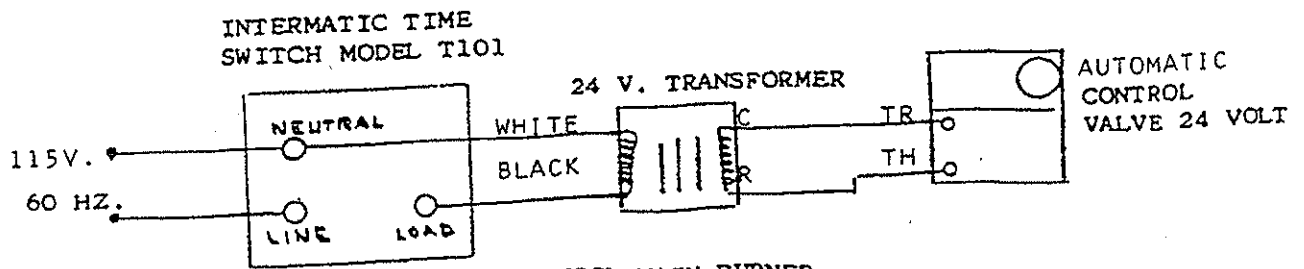
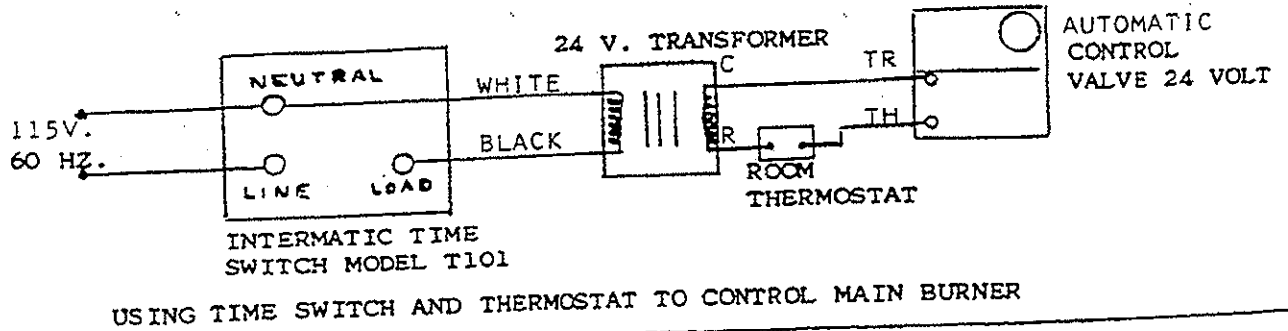
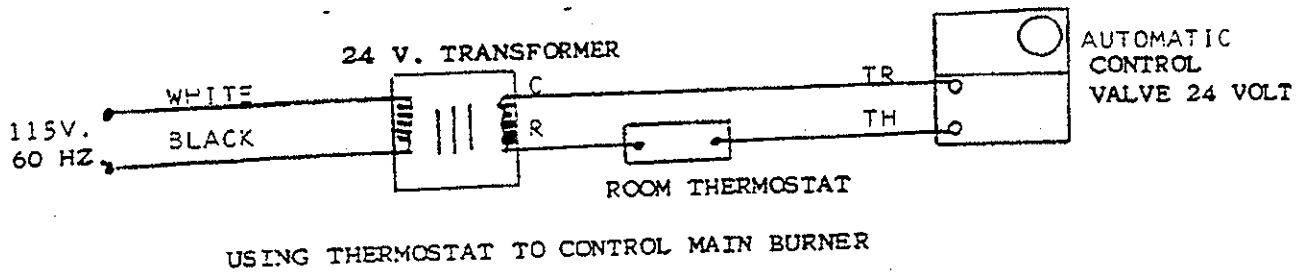
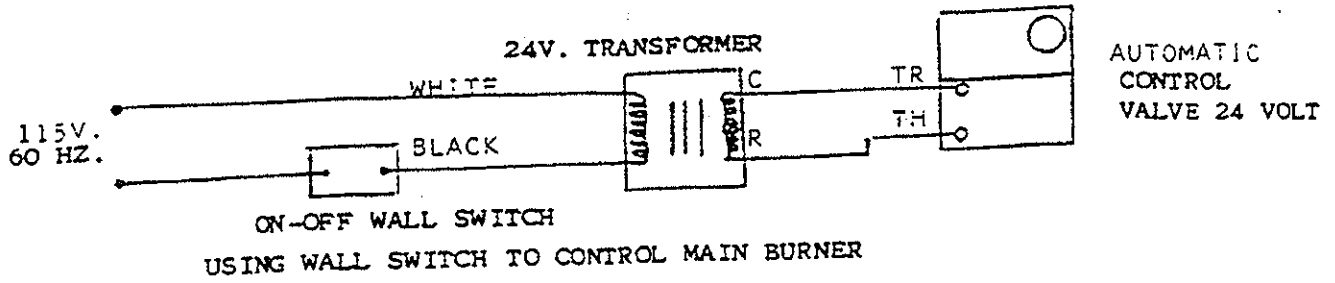
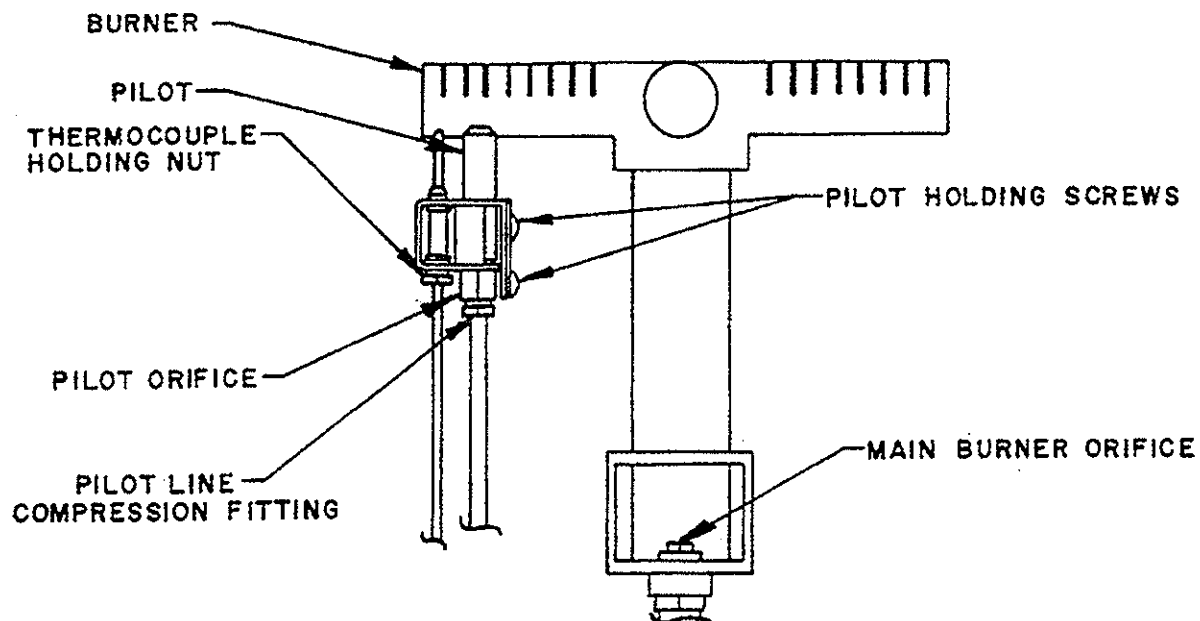


TYPICAL WIRING DIAGRAMS FOR NO. 1332 CO₂ GENERATOR



NOTE: 3 CONTROL VALVES CAN BE RUN FROM ONE CONTROL SYSTEM, USING TIME SWITCH, THERMOSTAT, AND TRANSFORMER PURCHASED FROM JOHNSON GAS APPLIANCE COMPANY, CEDAR RAPIDS, IOWA.

NO. 1332 CO² GENERATOR ORIFICE REPLACEMENT INSTRUCTIONS



TO REPLACE PILOT ORIFICE IN #1332 CO² GENERATOR

1. Remove thermocouple by loosening thermocouple holding nut to give ready access to pilot line.
 2. Loosen pilot line compression fitting.
 3. Remove screws holding pilot and remove pilot from unit.
 4. Remove pilot orifice and replace with proper orifice.
 5. Replace pilot, pilot line, and thermocouple.
- Be sure to snug up all connections to prevent possibility of gas leaks.

TO REPLACE MAIN BURNER ORIFICE

1. Remove present main burner orifice as shown above.
2. Screw in proper orifice.

ORIFICE SIZES

	<u>LP GAS</u>	<u>NATURAL GAS</u>
Main Burner	#45 Drill	#27 Drill
Pilot	.013	.023

SPECIFICATIONS

JOHNSON NO. 1332 CO² GENERATOR

Greenhouse Area (sq. ft. per unit)*	4,800
Capacity Btuh/hr	60,000
Cubic feet/hr CO ² (60°) (LP Gas)	72
Pounds of CO ² /hr (LP Gas)	8.25
Gas Control Valve	24v - 60cy
Gas Pressure Required - LP gas (inches w.c.)	11"
Gas Pressure Required - Natural Gas (inches w.c.)	5"
Gas Connection Size	3/8" pipe
Thermostat	Optional
Timer	Optional
Transformer	Optional

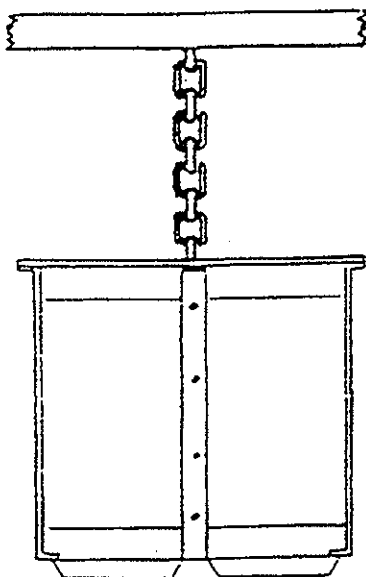
*Based on 1 air change per hour to furnish 1500 ppm CO².

Units furnished for either LP or natural gas. CO² production will be slightly less than tabulated values when burning natural gas.

Flame safety control furnished as standard equipment provides 100% shut-off in case of pilot failure.

Appliance gas pressure regulators are available. (Not furnished as standard equipment).

Manufactured by:
Johnson Gas Appliance Company
Cedar Rapids, Iowa

1332 CO² GENERATOR INSTALLATION INSTRUCTIONS

NOTE: Proper ventilation must be supplied when using this heater. Approximately one (1) air change per hour.

Hang unit from ceiling to the desired height by using chain. (Not supplied with unit.)

Run gas line to the inlet of the unitrol valve. Gas pressure at the inlet should be 5" to 7" water column (3 ounces) on natural gas and 11" water column (6 ounces) on LP gas while the burner is in operation.

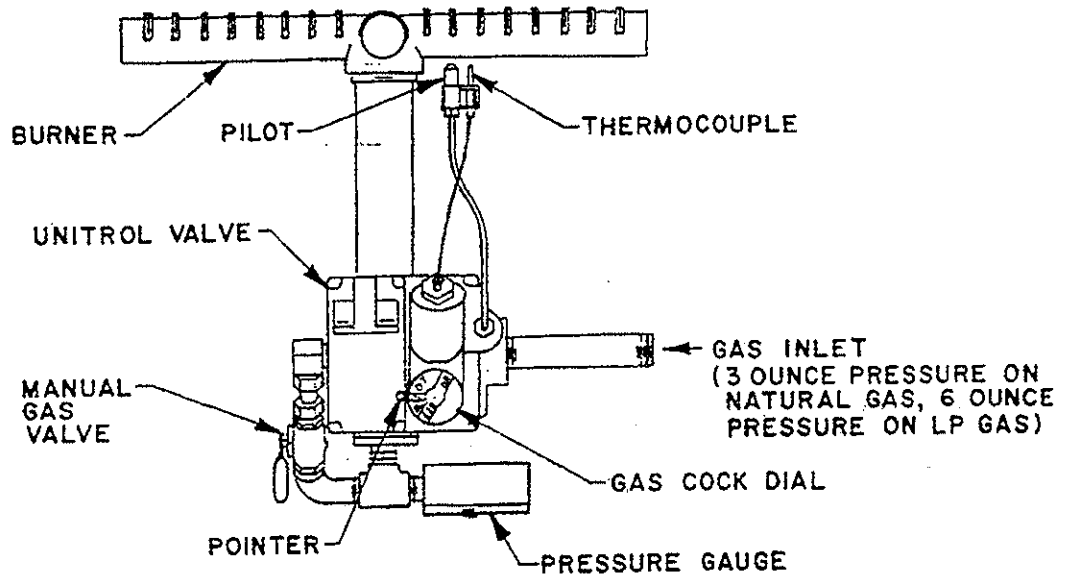
Supply a 24 volt electrical source to the unitrol valve. See for 292 for typical wiring diagrams. The 24 volt transformer, room thermostat and time switch can be purchased as optional equipment from the Johnson Gas Appliance Company. As many as three generators can be operated from one of these control set ups.

See form 294 for lighting instructions. See charts below for proper burner settings.

Check size of hot house area, adjust manual gas valve to obtain proper pressure gauge reading.

<u>LP Gas (Use H.D. 5 Propane)</u>			<u>Natural Gas</u>		
Pressure Gauge Reading Inches W.C.	Gas Input BTUH/hr.	Hot House Area in Sq. Ft.	Pressure Gauge Reading Inches W.C.	Gas Input BTUH/hr.	Hot House Area in Sq. Ft.
11	60,000	4,800	5	63,800	4,250
9	54,500	4,320	4	57,500	3,850
7	47,800	3,820	3	50,200	3,350
5	40,400	3,220	2	40,400	2,700
3	31,300	2,500	1	28,475	1,900
1	18,100	1,440			

LIGHTING INSTRUCTIONS FOR #1332 CO² GENERATOR



AFTER ALL WIRING AND PIPING HAVE BEEN COMPLETED

1. Make sure manual gas valve is in the "off" position. Turn the "gas cock dial" so that the "pilot" position lines up with the "pointer". Depress the "red button" down and ignite the pilot burner. Keep the button depressed until the pilot has burned for (40) seconds. Release button and pilot should remain burning. If not, repeat step no. 1.
2. Turn the gas cock dial counter-clockwise to the "on" position.
3. Supply 24 volt electrical power to the unitrol valve.
4. Consult the chart on Form 295 for proper pressure gauge setting. Turn on the manual gas valve until you obtain your desired reading on the pressure gauge.
5. To shut off the main burner and pilot, turn gas cock dial to the "off" position.

JOHNSON GAS APPLIANCE COMPANY
CEDAR RAPIDS, IOWA 52405

FORM 294
6-15-94