



SUPER-Glo BROODER HSI Infrared

America's Finest Brooder



Warning !

- Ventilation Must Be Maintained To Prevent CARBON MONOXIDE (CO) Poisoning! Extreme Sickness Or Death Can Result From Over-Exposure To Carbon Monoxide!
- Use Caution When Handling Sharp Metal.

Gas Pressure Requirements

LP/Propane Gas	Burner manifold gas pressure is to be 11 in. W.C. (27.4 mbar). Gas pressure should be checked by a certified gas technician, with maximum load on supply and while brooder is in operation.
Natural Gas	Burner manifold gas pressure is to be 5 in. W.C. (12.5 mbar). Gas pressure should be checked by a certified gas technician, with maximum load on supply and while brooder is in operation.

Maximum Input

42,000 BTUH
(12.3 kW)

Minimum Ventilation

272 CFM per brooder
(462 m³/hr per brooder)

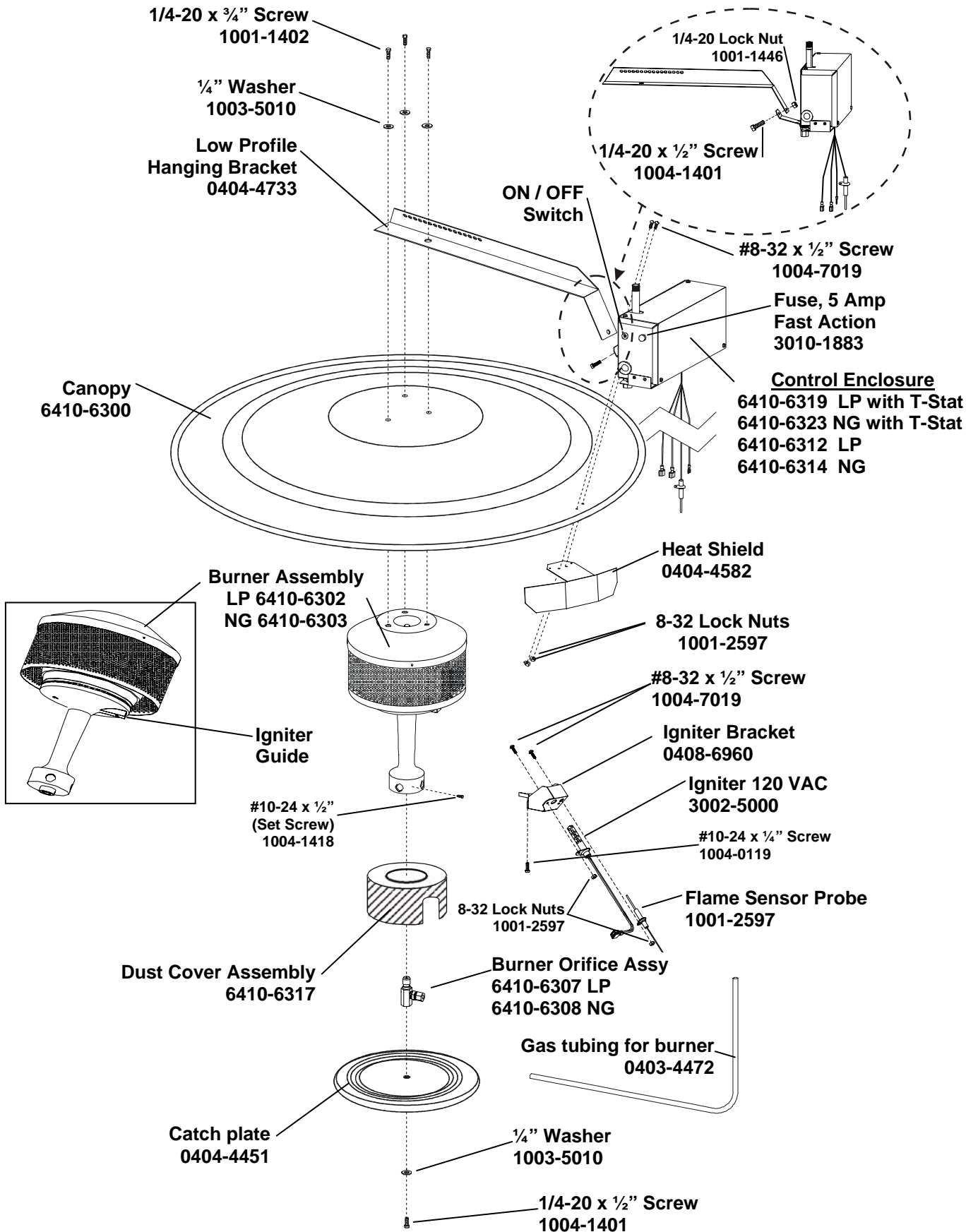
Limited Warranty

Hired Hand Mfg., Inc. (the "Manufacturer") warrants that this product is free from defects in material and workmanship, if it is installed and operated in strict accordance with the installation instructions, for a period of one (1) year from the date of purchase. This warranty is for parts only. Liability is limited to the sales price if any products prove to be defective or, at the Manufacturer's option, to the replacement of such products upon return. No products are to be returned to the manufacturer. All inquiries should be directed to the authorized distributor who sold the product. If the distributor is not known, write the Manufacturer at the address below and direct your correspondence to the attention of the Customer Service Manager.

This limited warranty is expressed in lieu of any and all representations and warranties expressed or implied, including any implied warranty of merchantability or fitness of the product for a particular purpose. The remedy set forth in this warranty shall be the exclusive warranty available to any person, and the purchaser shall have no other remedy for any defect or condition of the product, regardless of whether the cause of action is in tort, contract or otherwise. No person is authorized to bind the Manufacturer to any representation or warranty other than this limited warranty. The Manufacturer shall not be liable for any consequential damages from the use of its products or caused by any defect, failure or malfunction of its products.

Manufacturer: Hired Hand Mfg., Inc., 1733 County Road 68, P. O. Box 99, Bremen, Alabama 35033.

Diagram 1 Exploded View



Materials List

Description	Qty	Hardware kit	Qty
*Depending on the specific model, one of the following control assemblies is included:		1004-7019 Screw 8-32 x 1/2"	4
6410-6319 (LP) Control Assembly w/T-Stat	1	1001-2597 Nut Lock, 8-32	4
6410-6323 (NG) Control Assembly w/T-Stat	1	1001-1402 Screw Cap, 1/4-20 x 3/4"	3
6410-6312 (LP) Control Assembly	1	1004-1401 Screw Cap, 1/4-20 x 1/2"	2
6410-6314 (NG) Control Assembly	1	1001-1446 Nut Lock, 1/4-20	1
6410-6317 Dust shield	1	1003-5010 Washer Flat, 1/4	4
0404-4733 Hanging bracket	1	1004-1418 Screw Machine, 10-24 x 1/2"	1
0404-4451 Catch plate	1	1004-0119 Screw Machine, 10-24 x 1/4"	1
6410-6302 Burner Assembly -LPOR 6410-6303 Burner Assembly - NG	1 1	6410-6307 Orifice Burner Assy - LP OR 6410-6308 Orifice Burner Assy - NG	1 1
3010-1883 Fuse, 5 Amp Fast Action	1	0408-6960 Igniter Bracket	1
0404-4582 Heat Shield	1	3002-5000 Igniter 120 VAC	1
0403-4472 Gas tubing	1	1007-2299 Tie Nylon 3-3/4"	6
6410-6300 Canopy (shipped separately)		1012-0102 Hook S	1

Tools Required

7/16 in. (11 mm) Wrench
5/8 in. (16 mm) Wrench
11/32 in. (5 mm) Nut driver
1/4 in. (7 mm) Nut driver
Phillips screwdriver
Flat screwdriver
Gas leak testing solution
Wire Pliers

4801-5121 Manual

Replacement Kits

6450-9072 KIT SG HSI Igniter Replacement Kit 120v
6450-9068 Hardware Kit (LP)
6450-9070 Hardware Kit (NG)

ASSEMBLY INSTRUCTIONS

Follow steps of assembly in the order presented.

Canopy, Burner, Control Assy., Hanging Brkt., & Heat Shield

- Align center holes of canopy with holes in top of burner assembly and install two of the three screws and washers. Do not install the screw and washer used to attach the hanging bracket. **Refer to Diagram 1.**
- IMPORTANT:** Keep igniter guide on underside of burner aligned with control assembly mounting holes during this step.
- Assemble the Control Assembly to the Hanging Bracket as shown using the 1/4-20 x 1/2" screw, and 1/4-20 lock nut.
 - Align hanging bracket with hole in canopy exactly as shown in Diagram 1 and install the 1/4-20 x 3/4" screw and 1/4" washer through the hanging bracket, canopy, and into the burner assembly.
 - Attach control enclosure assembly and heat shield to the holes near edge of canopy with 8-32 x 1/2" screws and 8-32 lock nuts.

Burner Orifice, Dust Screen, Burner Gas Tubing & Gas Valve

- Flip entire brooder upside down.
- Insert the 10-24 x 1/2" set screw into the threaded hole in the side of the burner. Tighten just enough to hold the screw in place.
- Slide dust screen over orifice with the screen notch pointing up.
- Remove nut from burner orifice gas fitting. Be careful to retain ferrule when nut is removed.
- Slide ferrule & nut onto long end of gas tubing.
- Insert long end of tubing into gas fitting of burner orifice. Turn short end of tubing parallel with the burner orifice. Slide nut & ferrule against fitting. Tighten nut loosely.

- Unscrew the nut from the gas valve of the control enclosure. Be careful to retain ferrule when nut is removed.
- Slide nut & ferrule onto short end of gas tubing.
- Insert short end of tubing into gas fitting of the control enclosure. Tighten nut loosely.
- Insert head of burner orifice into bottom of burner. Tighten the set screw firmly to lock orifice in place.

NOTE: Ensure the burner orifice is placed completely inside the burner and secured while in place.

- Slide nuts & ferrules against fittings at the burner orifice and control enclosure. Tighten nuts securely.
- NOTE:** Do not over-tighten nut as this may cause ferrule to crimp tubing.

Igniter Assembly & Catch Plate

- Use the provided 10-24 x 1/4" screw to fasten the igniter bracket to the burner assembly.
- Unwrap the igniter and flame sense probe wires attached to the control enclosure. Very carefully snip the wire bundle cable tie.
- Slide the hot surface igniter through the igniter bracket so the ceramic element is located between the burner ports and emitter. Repeat this step with the flame sense probe.
- Secure the igniter and flame sense probe to the igniter bracket with the 8-32 x 1/2" screw and 8-32 lock nut. Use one of the screws to also secure the green ground wire from the control enclosure to the burner.
- Connect the control enclosure brown & orange wires to the igniter quick-connect wires.
- Use the provided wire-ties to fasten the wires neatly to the gas tubing. Do not allow the wires to contact the canopy or other hot surfaces.
- Fasten catch plate onto bottom of burner orifice (catch plate turned downward) with 1/4-20 x 1/2" screw and 1/4" washer. Tighten screw securely.

ASSEMBLY COMPLETED

INSTALLATION

Installation of your assembled appliance involves suspending the appliance, connecting gas supply & checking gas pressure, and ignition & 'burn-off' of ceramic radiant.

Hanging The Brooder

To hang the brooder, simply run your hook or cable through the appropriate hole on the hanging bracket.

Be certain to observe clearances in Diagram 3 and re-level the brooder after the gas line is connected for proper operation.

Connecting Gas Supply

1. All brooders must be connected to gas supply with an American Gas Association approved gas hose and fittings. An approved hose is available at your Hired-Hand Manufacturing, Inc. dealer.
2. More than one brooder may be connected to one regulator provided it can maintain the rated pressure and flow capacity to each brooder while all brooders are in operation.
3. Do not allow the gas hose to make contact with the canopy at any time. Ensure that contact is not possible at any operating height.

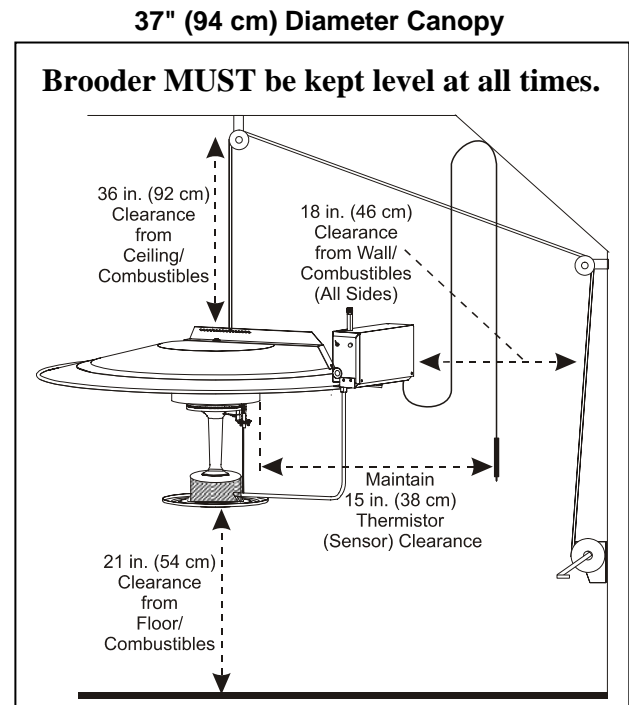


Diagram 2: Clearances

Checking Manifold Pressure

1. Unplug heater from power source and turn ball valve to OFF position.
2. Remove outlet pressure tap plug from gas control valve and connect pressure gauge.
3. Return electrical power to heater and plug to power source.
4. Turn ball valve to ON position.
5. To obtain an accurate manifold pressure reading, heater must be cycled on and off several times to stabilize the pressure regulator diaphragm.
6. If necessary, adjust pressure regulator on gas control valve to the acceptable manifold pressure found on rating plate.
7. Remove pressure regulator adjustment screw.
8. Using a screwdriver, turn inner adjustment screw clockwise to increase or counter clockwise to decrease manifold pressure to burner.
9. Replace cap screw and tighten firmly to prevent gas leakage.
10. Unplug heater from power source and turn ball valve to OFF position.
11. Remove pressure gauge and replace outlet pressure tap plug.
12. Return heater to operation and observe through at least one complete cycle to ensure all controls are operating properly.
13. Perform gas leak test at outlet pressure tap plug. (Soap and water work well).

Electrical Connection

1. Run a 120 VAC 3-wire cable to the control enclosure.

Warning !

- Installation By A Qualified Electrician Required.
- Wiring And Connections Must Comply With All National And Local Electrical Codes.
- Ensure All Power Is Off Before Connecting Power Supply And Power Cable.

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, SERIOUS INJURY, OR DEATH.

2. Remove the cover of the control enclosure.
3. Pull a generous length of cable into the box.
4. Secure the cable in place with an elliott. Take caution that the cable does not hang below or touch the canopy.
5. Strip the wires and attach 120 VAC Power to the terminal block L1 (Hot), N (Neutral), and Ground as shown in the Wiring Diagram. Add connection and location of the thermostat if the specific brooder model is equipped for this option.
6. Place the cover back on the control enclosure.

Diagram 3: Wiring Diagram (With Thermostat)

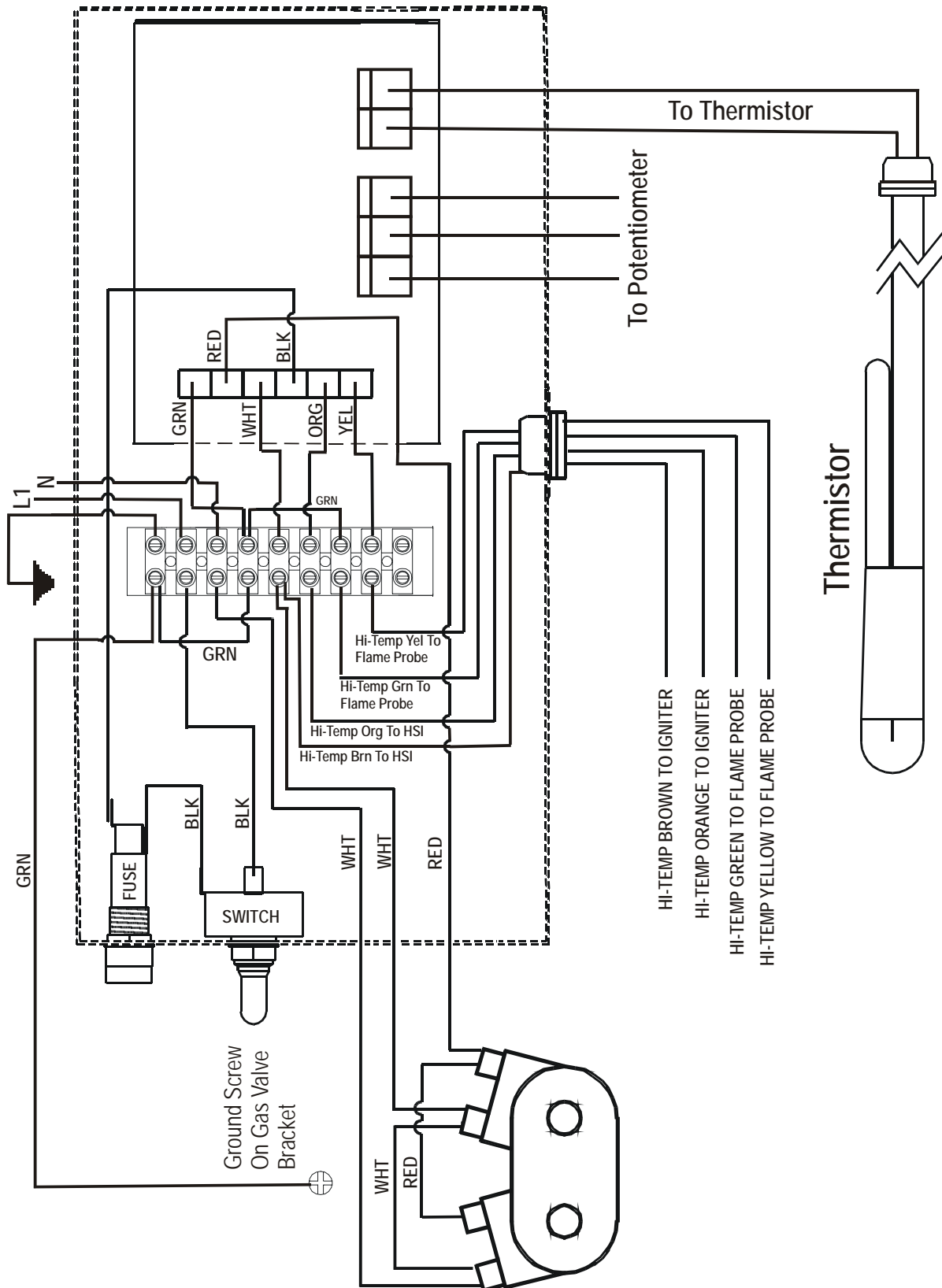
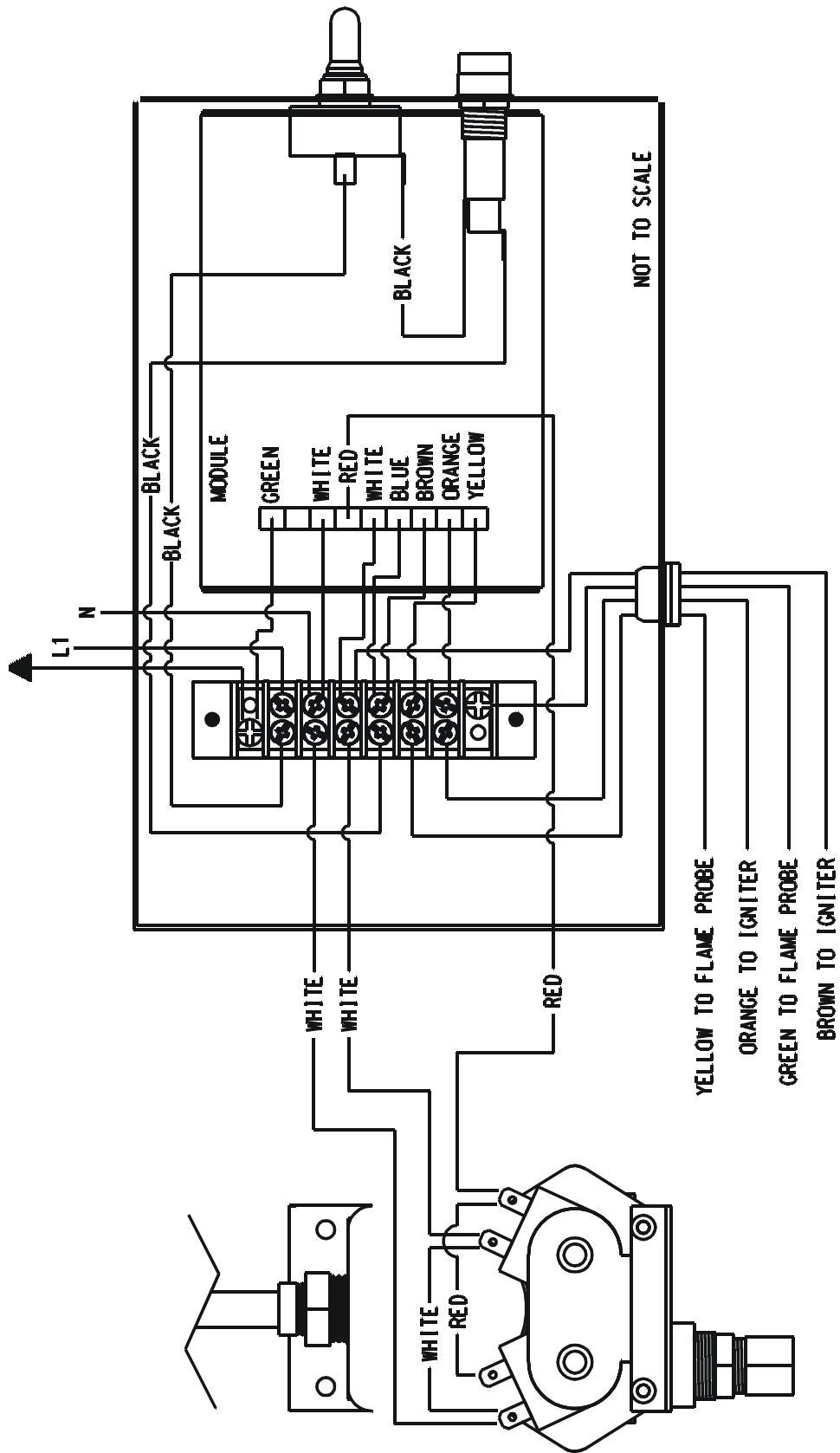


Diagram 4: Wiring Diagram (No Thermostat)



OPERATING INSTRUCTIONS

Super-Glo Brooder

The brooder is simple to operate because it only has one switch. To turn the unit ON, flip the switch on back of the controls enclosure to the ON position. Likewise, to turn OFF, flip the switch on back of the controls enclosure to the OFF position. If you have a thermostat connected to your brooder, you will need to set your thermostat then turn the brooder on.

Super-Glo with Individual Thermostat Control

With the toggle switch in the ON position, the brooder acts in the same manner as a simple thermostat. Set the temperature dial to the desired room temperature, and the brooder will run only when necessary.

Remember, that once you turn the brooder on, it may start at any time. If you must reach into the unit, please disconnect power for your own safety.



WARNING

First Ignition Of Brooder Will Give Off Unpleasant Odor And Smoke!
THIS IS NORMAL. A 'Burn-off' Period Is Required To Eliminate Smoke & Odor.
If Possible, Run Ventilation During First Operation Of Brooder.
After 'Burn-off' Period, Brooder Will Operate Normally.



WARNING

Read and understand all the following precautions before installing or operating this appliance.

1. Installation must comply with all local, state, and national codes.
2. Follow safety, maintenance, and test firing instructions packaged with brooder.
3. Refer to model specifications label for gas type (LP/propane or natural gas).
4. Check all connections for gas leaks.
5. Gas supply and regulator must be installed outside building.
6. The gas hose should be protected from traffic, building materials, and any contact with hot surfaces both during use and while in storage.
7. Do not move or handle brooder while brooder is hot or while brooder is burning.
8. Turn off gas supply before servicing. (Brooder may start at any time).
9. Brooder surfaces may be hot. Do not permit feathers, hay, straw, dust, or other combustible materials to accumulate on brooder. A FIRE MAY RESULT.
10. Heater is not recommended for heating human living quarters.
11. Inadequate gas volume and (or) pressure will directly influence the combustion efficiency of the brooder. Adequate gas volume and (or) pressure is the responsibility of the installer.
12. Adequate ventilation must be provided.
13. Position brooder properly before use. Brooder must be level and in accordance with minimum clearances.
14. Keep temperature of fuel containers below 100° F. Containers must be installed outside building.
15. Brooder must not be operated for one hour following wash down.
16. Thermistor wire must never contact canopy nor come within 15 inches of emitter. The wire can extend straight down or straight away from brooder.

Maintenance Notes

1. Your infrared brooder should be inspected before each use and at least annually by a qualified service person.
2. The appliance area should be kept clear and free from combustible materials, gasoline, and other flammable liquids and vapors.
3. The gas hose should be inspected prior to each use of the brooder. If it is evident there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to brooder being put into operation.
4. Inspect brooder and gas connections periodically for gas leaks with an approved gas leak testing solution (soap and water work well).
5. The orifice and hot surface igniter must be kept clean and free of carbon deposits at all times.
6. The brooder must be cool before wash down. Do not operate for one hour following wash down.
7. When washing the brooder, take care to avoid getting water into the control enclosure and damaging the hot surface igniter.
8. Brooder MUST be kept level at all times.

Trouble Shooting Guide

Symptom	Possible Cause	Remedy
Hot surface igniter does not glow	Thermostat is not calling for heat	Set target temperature above room temperature and watch brooder
	Blown fuse	Remove power then replace the fuse
	Poor electrical connection	Check that 120V is being supplied to the igniter leads
	Igniter is damaged	Contact distributor to replace igniter
Igniter glows, but burner does not light	Poor gas supply	Adjust manifold pressure to manufacturer's recommended pressure
	Blocked orifice	Remove and clean orifice
Burner lights only for a couple seconds	Poor electrical connection	Check the ground connections
	Flame sense probe is damaged	Contact distributor to replace flame sense probe.
Flame is not clean	Burner air intake is blocked	Clean dust shield and burner inlet
Main burner will flash back	The orifice may be misaligned	Position orifice perfectly vertical



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