

INSTALLATION, OPERATION & MAINTENANCE MANUAL

Sunglo Patio Heaters

MODEL PSA265 (V,E)

MODEL A242

MODEL A244 (V,E)

NOT FOR USE IN RESIDENTIAL DWELLINGS

DANGER

FOR YOUR SAFETY – If you smell gas;

1. Open windows.
2. DO NOT try to light any appliance.
3. DO NOT use electrical switches
4. DO NOT use any telephone in your building
5. Leave the building immediately
6. Immediately call your local gas supplier after leaving the building. Follow the gas supplier instructions.
7. If you cannot reach your gas supplier, call the Fire Department.

WARNING: FIRE HAZARD



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

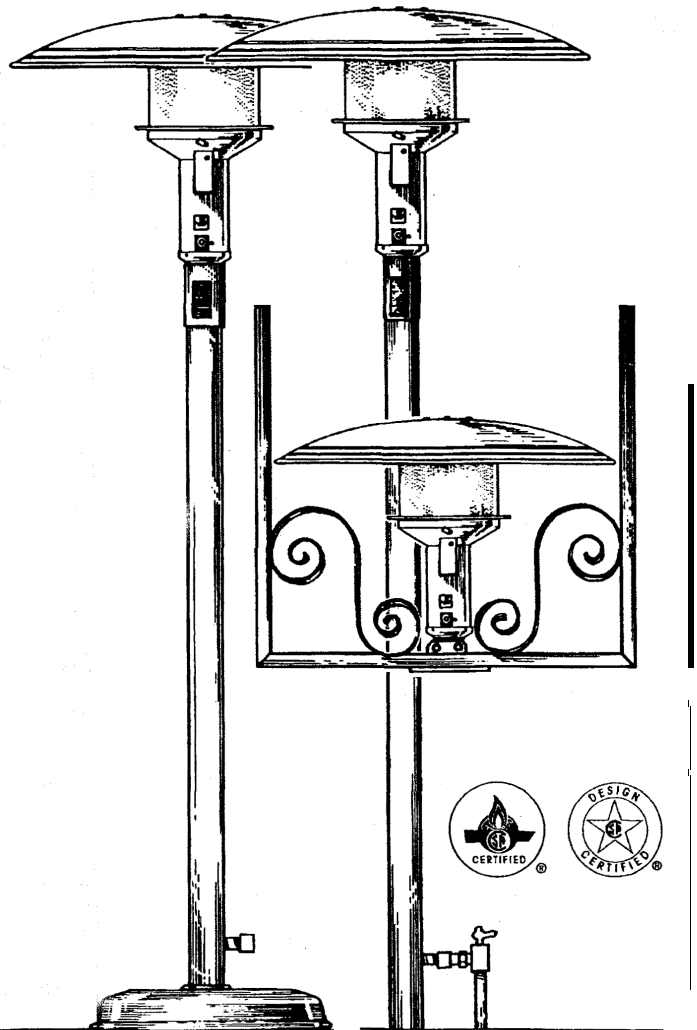
Failure to follow these instructions can result in death, injury or property damage.

WARNING: FIRE AND EXPLOSION

Installation and replacement of gas piping, gas utilization equipment, or accessories, and repair and servicing of equipment shall be performed by a qualified agency familiar with all precautions required regarding type of equipment and that has complied with all requirements of the authority having jurisdiction.

WARNING: California Prop 65

If not installed, operated and maintained in accordance with the manufacturer's instruction, this product can expose you to substances in the fuel or from combustion including carbon monoxide which can cause death or serious illness and which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65WARNINGS.CA.GOV



Manufactured by

Infrared Dynamics, Inc.

Yorba Linda, CA 92886 U.S.A

Toll Free (888) 317-5255

www.infradyne.com

TO THE INSTALLER: Please read and understand all instructions prior to installation. Give a copy of this manual to the owner after installation.

TO THE OWNER: Keep this manual in a safe place to retain for future reference

OWNER'S MANUAL

Before Starting Your Heater

Before you start your heater examine the heater installation to determine that;

- Areas immediately around the heater including the air inlet and the flue areas are free from obstructions
- There is no obvious deterioration of the heater.
- Portable type heaters must be placed on level and adequate footing.

Starting and Shutting Down Your Heater

Sunglo heaters can utilize a variety of gas control systems. With some models it is necessary to manually light a pilot. Other models have a fully automatic ignition system. Identify the model of your heater on the Basic Lighting instructions chart on page (*??) and follow the lighting instructions. If heater fails to light or does not heat properly discontinue use of the heater and contact your local distributor, or qualified service agency.

Performing Routine Maintenance

Overtime, particularly during longer periods of disuse, the heater can accumulate dirt and debris in and around the pilot and burner. Routine maintenance should be performed at least once a year by a qualified service technician to insure the heater is operating properly. More frequent service may be required for heaters located near waterfronts

Warning Labels

It is important that warning labels including the lighting instructions are not removed from the heater. If labels are damaged, replacement labels are available from your local dealer or from the factory

Stainless Steel Care

Stainless steel needs to be cared for like any other surface. We recommend washing the stainless-steel post and base with a mild detergent solution, and applying a stainless cleaner to bring back the original shine. The stainless steel may be expected to permanently darken around the top of the heater.

Before You Remodel

If you plan to make changes to the patio or building structure after the heaters have been installed, your heater installation must be reviewed by a qualified

agency to ensure that clearances from combustible materials and ventilation requirements are maintained after alterations are complete. When plastic curtains or drops are used to enclose a patio, you must take steps to ensure that all Sunglo heaters have the required permanent access to outside air. If the patio is to be partially enclosed a qualified agency familiar with this type of heating equipment must be consulted to ensure the safe operation of the equipment.

Warning

Improper installation, adjustment, alteration, service or maintenance can result in death, injury or property damage. Read instructions thoroughly before installing or servicing this equipment.

HEATER LAYOUT AND PATIO DESIGN

There are a number of considerations in determining the type and number of heaters to be used and their best location on your outdoor patio.

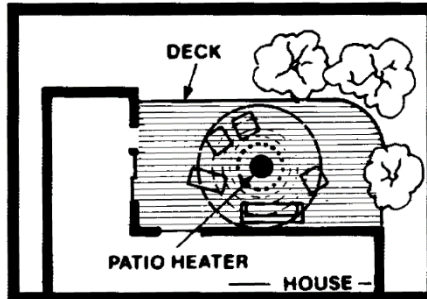
Concept of Patio Heating. Hot air from conventional heaters is not an option for heating an outdoor patio so a patio heater uses radiant heat like we receive from the sun

Radiant Heat: Is the type of heat you receive from a fireplace, potbelly stove, or the sun. It is an infrared wave length that heats objects without first heating the intervening air. Unlike ultraviolet light there is no sunburn or sun tanning affect. Infrared will not attract insects

Patio Heater: Is an unvented gas-fired infrared heater designed to concentrate radiant heat in outdoor areas.

Definition of Outdoors: (for the purpose of these instructions). An appliance is considered to be outdoors if installed with shelter no more inclusive than:

1. With walls on all sides but with no overhead cover.
2. Within a partial enclosure which includes an overhead cover and no more than two side walls. The side walls may be parallel, as in a breeze way, or at right angles to each other.
3. Within a partial enclosure which includes an overhead cover and up to three side walls, as long as 30% or more of the horizontal periphery of the enclosure is permanently open.



GENERAL RULES FOR LOCATING HEATERS:

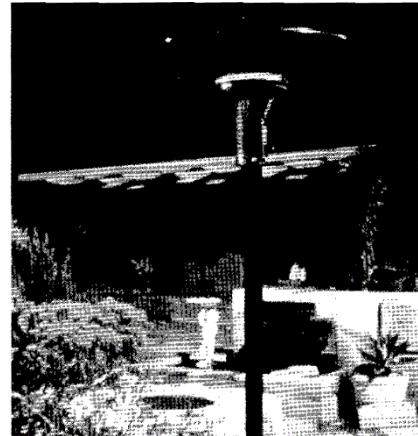
A Sunglo™ Patio Heater can operate effectively to maintain comfort even in completely exposed areas, although weather protected areas are desirable. Weather and wind protection allows the air to be warmed to enhance the direct radiant warming effect.

Breezy Conditions:

Sunglo™ heaters are designed to work well under a variety of outdoor conditions. However, wind and other weather conditions will affect how well the heater operates, or if it should be in use at all. The heater can be safely operated when the cross wind or breeze is 0-10 mph. If heaters are mounted on the edge of a precipice or sea cliff where wind is directed upwards into the reflector hood, damage to the heater will occur. Upward thrusts of wind can also occur because of wind walls or other architectural elements near the patio. The patio should be designed to protect the heaters against this type of condition.

Using Multiple Heaters:

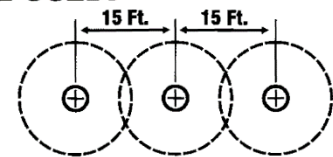
When more than one heater is used in an area, it is generally preferable to locate them close together. Multiple heaters located on 8' to 15' centers will give overlapping heat patterns, increasing the overall effective coverage for each heater.



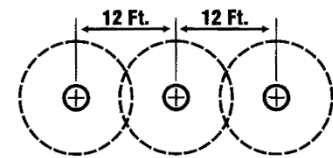
CONTROL SYSTEMS:

Sunglo™ heaters are available with a variety of control systems from manual controls requiring no electrical connections to a 24 VAC fully automatic ignition and control system (see Basic Lighting instructions on page *). It is recommended that when multiple heaters are used, that the electrical circuitry be arranged so heaters can be switched on and off individually or in groups to provide maximum flexibility for heating the patio.

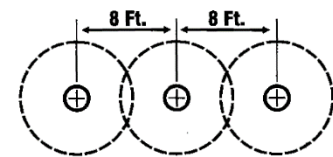
SUGGESTED SPACING WHEN MULTIPLE HEATERS ARE USED:



Spacing For: WELL PROTECTED AREAS AND MILD CLIMATIC CONDITIONS



Spacing For: SEMI EXPOSED AREAS WITH AVERAGE WEATHER CONDITIONS



Spacing For: COMPLETELY EXPOSED AREAS WITH SEVERE WEATHER CONDITIONS

INSTALLATION AND SERVICE INSTRUCTIONS

Receiving Equipment

On receipt of equipment it is suggested that a visual inspection be made for external damage to the carton. If the carton is damaged, a note should be made on the Bill of Lading when signing for the equipment. Remove the heaters from the carton. If there is damage, report the damage to the freight carrier immediately.

Each Sunglo™ heater is carefully tested and adjusted at the factory. Before attempting to install this equipment a thorough inspection is required to insure the heaters are in the original condition from the factory. Check for any loose parts or damage such as dents or parts that may affect the operation of the heater. If there is any question in regards to the condition of the equipment, contact the factory.

INSTALLATION INSTRUCTIONS

Important Notice

These instructions are intended for qualified personnel, specifically trained and experienced in the installation of this type of equipment and related system components. Some states or provinces require installation and service technicians to be licensed. If your state or province is such, be sure your contractor bears the appropriate license. Persons not qualified shall not attempt to install this equipment nor attempt repairs.

Code Requirements

Installation must be in accordance with local codes, or in absence of local codes, with the latest edition of the National Fuel Gas Code, NFPA 54/ANSI Z223.1 and the National Electrical Code ANSI/NFPA 70, and for Canada, the latest edition of CAN/CGA-B149.1 and B149.2 and Canadian Code CSA C22.1 Part 1 and Part 2.

Heaters to be installed in Aircraft hangars must be installed in accordance with the American National Standard for Aircraft hangars, ANSI/NFPA No. 409.

Heaters to be installed in Public Garages must be installed in accordance with NFPA No. 88A, Standards for Parking Structures.

Heaters must be installed so that minimum clearances marked on the heater will be maintained from vehicles parked below the heater.

When an external electrical source is utilized each heater must be electrically grounded in accordance with the National Electrical Code ANSI/NFPA 70. In Canada, the Canadian Electrical Code CSA C22.1 Part 1 applies.

Gas Supply

The gas inlet supply pressure and manifold pressure required for each heater are listed below. For gas supply line pressures in excess of ½ psig, consult your natural gas representative or the factory.

Gas Inlet Pressure	Nat Gas	Propane
Maximum Pressure	½ psig	11 » W.C.
Minimum Pressure	6 »	11 W.C.
Manifold Pressure	5 » W.C.	11 » W.C.

It is important that the gas piping system be adequately sized for all the gas appliances it serves.

Clearance Requirements

Each heater must be installed such that the following "Minimum Clearances from Combustible Materials" are always maintained. Combustible materials include all wood, compressed paper, plant fibers, plastics, Plexiglas and other materials capable of being ignited or burned. Such materials shall be considered combustible even though flame-proof, fire retardant treated or plastered. Additional clearance may be required for vinyl siding, glass, painted surfaces or other materials that may be damaged by radiant or convection heat.

Clearance from Combustibles

Top
Side
Below

Fire Sprinklers

Fire Sprinklers must be located at an appropriate distance from each heater to avoid accidental activation of the sprinkler. Ethylene glycol or propylene glycol must never be used in fire sprinkler systems where heaters are present, as these substances may become flammable when heated. A fire sprinkler professional must be consulted when heaters are installed to insure heaters and fire sprinklers are properly integrated. Specific guidelines can be found in NFPA 13, Installation of Fire Sprinkler Systems.

Electrical (V,E) Models Only

These heaters require 24 VAC to operate. The installer must provide a NEC Class 2 transformer. Each heater requires 20VA or 0.8 amperes (AMP). When multiple heaters are connected to one transformer, that transformer must be sized to accommodate the entire electrical load.

Control wire used to electrically connect one or more heaters together must have adequate capacity and insulation temperature rating for the total connected load. Use at least 18 GA wire up to 50 feet from the heaters to the transformer or wall switch. Use minimum of 16 GA wire for over 50 foot distances.

If any of the original wire supplied with the heater must be replaced, it must be replaced with wiring having a temperature rating of at least 105 centigrade.

Ventilation

1. It is required that areas above and below the heater be properly vented to allow for necessary combustion air and removal of combustion gases.
2. Heater shall be provided with natural or mechanical means to supply and exhaust at least 4 cfm per 1,000 BTU per hour of heater input. Exhaust opening for removing the flue products shall be above the level of the heaters.
3. Heater ventilation must comply with state and local codes.

Gas Piping

1. A minimum pipe size of ½" is required for inlet piping. A ½" lever handled shut-off gas cock must be installed within 6 feet of the heater for servicing the unit.
2. Gas lines must be adequately sized to carry the total connected gas load. Check with local and state plumbing and heating codes regarding sizing of gas line.
3. All gas pipe connections to the heater(s) must be sealed with a gas pipe compound resistant to liquefied petroleum gases.
4. Installation of a drip leg in the gas supply line going to each heater is required to minimize the possibility of any loose scale or dirt within the gas supply line from entering the heater's control system.
5. When checking for gas leaks do not use an open flame. Use a soap and water solution.
6. For gas supply line pressures in excess of ½ psig, consult the factory or your local natural gas representative.
7. Installation of a 1/8" N.P.T. plugged tapping accessible for test gage connections is required upstream of the gas supply connections to the heater.

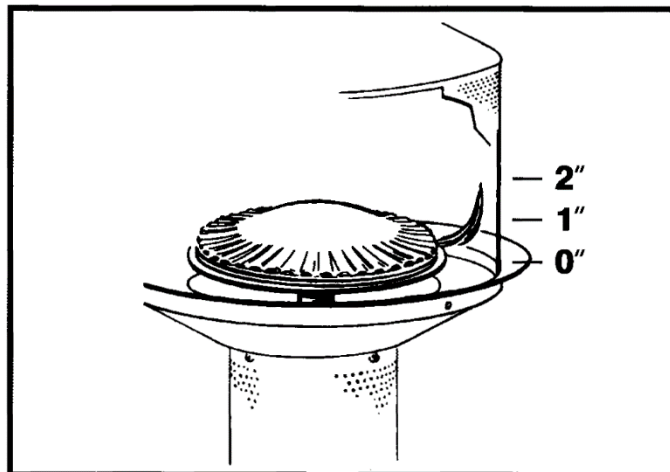


Figure 1. Normal Flame Position

Initial Start-Up Procedure

1. Make sure the gas lines are completely purged of air before attempting to light heater.
2. Follow lighting instructions on page ?? for your particular model.
3. Check all gas connection for leaks using soapy water.
4. Flame should travel completely around the inside of the emitter grid.
5. Emitter grid should become RED within 5 minutes (this may be difficult to see in bright sunlight).

NOTE: Some white smoke may appear during or just after the initial start-up of the heater. White smoke will dissipate with procedure.

Servicing Instructions

Service checks on these heaters should be performed at least annually or more frequently depending on their use to verify the proper operation of these heaters. If the pilot fails to light or the heater does not heat properly the heater must be repaired before being put back into service.

1. Turn off gas and electrical before attempting to any service.
2. Remove reflector and emitter assembly from heater as shown on page (**)
3. Using low pressure air (maximum of 30 psig) clear burner and pilot of any dirt or debris. NOTE: Appropriate eye protection must be worn).
4. Using a metal brush remove any accumulated dirt from the inside of the emitter grid.
5. Reassemble heater and observe whether heater has been restored to proper operation.
6. If heater does not operate properly it may be necessary to remove burner and orifice for cleaning.
7. Any corroded or deteriorated parts must be replaced.

THIS WARRANTY IS APPLICABLE TO THE ORIGINAL OWNER ONLY in accordance with the warranty terms and conditions specified below.

One year Homeowner Warranty/90 Day Commercial Warranty

Infrared Dynamics (warrantor) will furnish the original owner replacement parts for any component part which fails before one year of residential use, or 90 days of commercial use, following installation. At our option, Infrared Dynamics may offer to rebuild or replace the heater within the limited warranty period.

Installation, use and maintenance must be in accordance with instructions contained in the installation instructions.

THE WARRANTY DOES NOT COVER

- Service and labor costs incurred for diagnosing, removing, or reinstallation of the heater(s) or parts(s) thereof.
- Shipping and delivery charges for defective parts or the heater to nearest distributor or manufacturer to the claimant. Any costs pertaining to permits or materials for installation of the heater or parts.
- Any product purchased over the Internet, or purchased second hand.
- Damage or repairs due to faulty installation, misapplication, negligence, thermal shock, earthquake, fire, flood, and/or purposeful damage to the heater.
- Failure to work due to electrical service including voltage conditions, blown fuses or circuit breakers, or damage due to the inadequacy or interruption of electrical service.
- Failure to work due to a break or interruption in natural gas or propane lines to the heater.

GENERAL CONDITIONS PERTAINING TO WARRANTY

The warranty shall be null and void if the heater is not installed by an experienced heating contractor, or if the heater is not installed according to the Installation Instructions, normal industry practices, and/or if the heater is not maintained and repaired according to the instructions.

Normal product wear (oxidation, scratches, battery replacement, etc.) does not constitute a material defect and applicable warranty claim.

Written permission is required for the return of any parts or equipment and any such return must be made on the basis of transportation charges prepaid. Shipment may be refused unless prior written permission is obtained and goods returned prepaid.

LIMITATION ON IMPLIED WARRANTIES

Implied warranties, including any warranty of merchantability imposed on the sale of this heater under state law are limited to one year duration for the heater or any of its parts. Some states do not allow limitations on how long an implied warranty lasts.

CLAIMS PROCEDURE

Any claim under this warranty should be initiated with the dealer who sold the heater, or with any dealer handling the warrantor's products. If this is not practical, the owner of the heater should contact: Infrared Dynamics, 3830 Prospect Ave. Yorba Linda, California 92886. Toll Free: 1-888-317-5255. Hours of operation 7-3 PST MF). Website: www.infradyne.com.

