



FOLLOW SPOTLIGHT INSTRUCTION MANUAL

Equipment Type 7201156 • Rev. June 2007



a division of Ballantyne of Omaha, Inc.

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PREFACE

THE STRONG XENON SUPER TROUPER® is a direct current follow spotlight system complete with a xenon lamphouse, power supply, optical system, and a floor stand and yoke assembly. An optional six-color, self cancelling boomerang (Order No. 7201188; see Figure 7) may be ordered with new equipment, or it can be added at a later date.

ONLY THE SPECIAL XENON POWER SUPPLIES manufactured by Strong International can be used with the xenon spotlight. For installation and operation of the power supply, see the manual furnished separately.

THE XENON LAMPHOUSE utilizes a deep ellipse dichroic metal reflector designed to operate in a fixed position with a horizontally mounted xenon bulb as the light source. A heat filter is located in the front of the lamphouse to reduce the heat at the optical system and color boomerang.

ONLY XENON BULBS designed for horizontal operation should be used in this spotlight. The lamphouse is designed for use with the standard 2000 watt horizontal theatre bulb, and an optional Adapter Kit (Order No. 7201192) allows use of 1000 and 1600 watt bulbs. See the listing in this manual for the approved types and necessary adapters.

ADJUSTMENT CONTROL for positioning the xenon bulb is located at the rear of the lamphouse. The adjustments are for the horizontal, vertical, and focus control of the bulb.

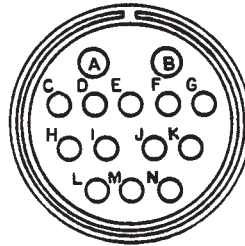
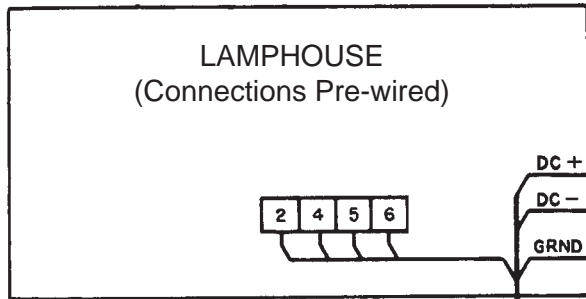
THE LAMPHOUSE INSTRUMENT PANEL is equipped with an ammeter and running time meter. The ammeter indicates the operating current of the lamp, and the running time meter records the number of hours the lamp has operated. The xenon bulb is ignited and extinguished by use of the LAMP switch mounted on the instrument panel.

THE LAMP BLOWER, internally wired in the lamp, operates on 115 V.AC and is required to keep the seals on the bulb at a safe operating temperature. This blower will operate continuously until power is turned off at the main line switch to the xenon power supply. An air flow switch in the lamphouse prevents operation of the xenon lamp if the blower is not operating, or if airflow is inadequate. If additional cooling is required (i.e. 50 Hertz power source), an optional Exhaust Blower Assembly (7201036; see Figure 8) may be mounted to the top of the lamphouse.

THE LAMPHOUSE is supplied with a 12 foot cable containing the two DC leads, the ground lead, and all AC control leads. The cable terminates in a multiple-pin MS connector to mate to the receptacle on the power supply.

WHEN TRANSPORTING the follow spotlight, it is recommended that the xenon bulb be removed from the lamphouse and placed in its original shipping carton with the protective cover on the bulb to prevent breakage.

LAMPHOUSE - POWER SUPPLY Interconnection Diagram

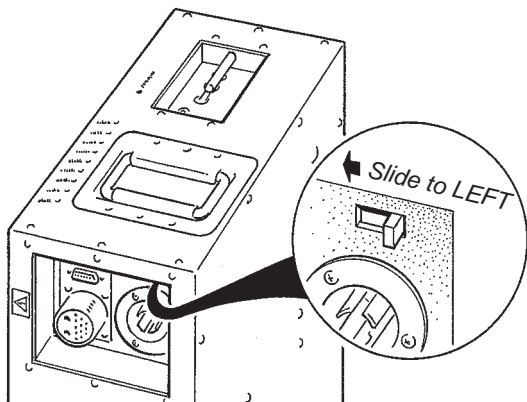
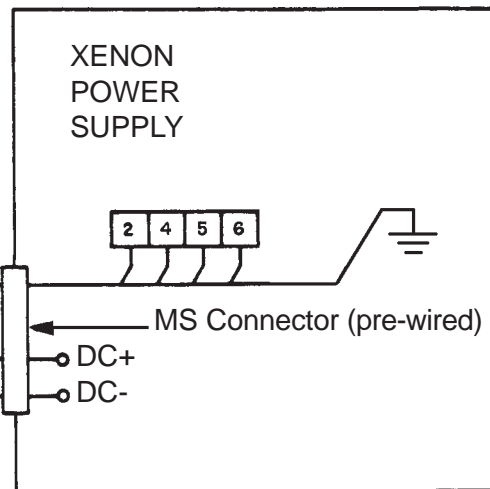


Pin	Wire No.
A	DC-
B	DC+
C	2
E	4
F	5
G	6
M	Grnd

Lamphouse
Cable Assembly

SYSTEM MUST BE GROUNDED
All wiring must conform to local codes;
shield lamphouse cable in conduit if
required.

Check Slide Switch (below) on Power
Supply for correct positioning.



INSTALLATION AND SETTING UP SPOTLIGHT

THE XENON SUPER TROUPER is shipped in sections which must be assembled. The Folding Base Stand Assembly 65826000 (see Figure 6) is shipped collapsed, and requires only folding down and pinning the four base legs.

WHEN INSTALLED in a permanent location, the leveling feet must be removed, and the clearance holes in the base leg brackets used for hardware (user supplied) to bolt the base to the floor or platform. If it is desired to have the unit portable, when operating, the leveling feet must be adjusted down until the weight of the spotlight has been shifted from the casters to the leveling feet.

THE INNER TUBE and support yoke has three holes to permit adjusting the height of the spotlight. The three holes are on four-inch centers and will allow an optical height of approximately 53 inches, 57 inches, and 61 inches above floor level to the optical center of the lamphouse and lens system. The leveling feet may be adjusted through an additional two inch range. Insert the height location pin (Figure 5, Item 16) through the hole in the outer tube and one of the holes in the inner tube.

THE HORIZONTAL SWING and vertical tilt locking knobs are on the right hand (operating) side of the yoke assembly. Tighten both of these locking devices (Figure 6, Items 19 & 21) securely before attempting to place the lamphouse and lens system on the support yoke.

PLACE THE LAMPHOUSE and lens system on the yoke assembly (Figure 6, Item 4), with the spot size control handle to the right hand (operating) side, the same as the locking controls on the yoke. Line up the four mounting holes in the bottom of the base rail with four mating holes in the support yoke and secure with the four 5/16-18 wing screws. There are (2) sets of four mounting holes to insure correct balance of the spotlight with or without the optional color boomerang. An optional Counterweight Kit (7201191) is also available for setting concise balance adjustments.

THE OPTIONAL COLOR BOOMERANG (7201188) mounts to the front opening of the optical system on two studs aligning to keyhole slots at the top of the housing, and is attached to the spotlight at the bottom of the housing by a thumbscrew (see Page 15). Make certain the thumbscrew is secured, and install the safety cable between the boomerang housing and the spotlight frame.

ATTACH THE LAMPHOUSE CABLE connector to the receptacle on the xenon power supply. Align the pins before tightening the locking ring. Do not energize the power supply before first completing the bulb installation procedure.

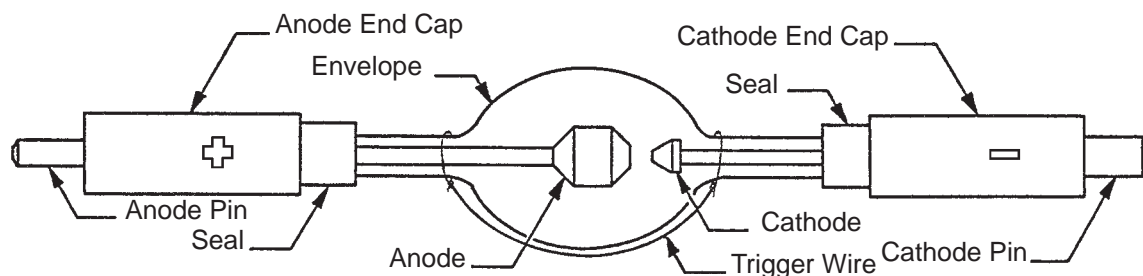
CHECK THE SLIDE SWITCH on the xenon power supply cabinet and verify that it has been paced in the "LAMPHOUSE/SPOT" position. See the illustration on the inside front cover of the Xenon Power Supply Instruction Manual.

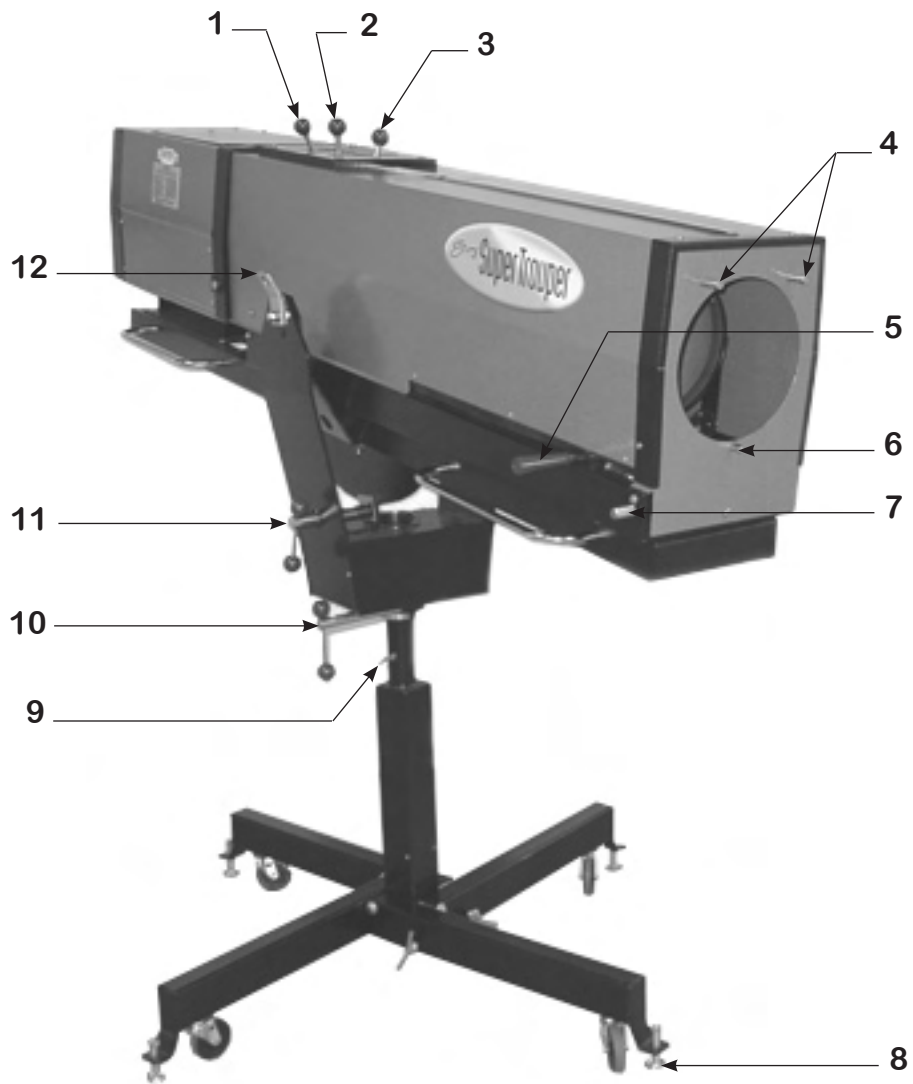
SAFETY PROCEDURES

THE XENON BULB is highly pressurized. When ignited, the normal operating temperature of the bulb increases the pressure to a level at which the bulb may explode if not handled in strict accordance to the manufacturer's operating instructions. The bulb is stable at room temperature, but may still explode if dropped or otherwise mishandled.

REFER bulb replacement and service to QUALIFIED PERSONNEL with adequate protective clothing (face shield, clean cotton gloves, welder's jacket). For routine lamphouse service, observe the following rules:

1. Allow the bulb to cool to room temperature before opening the lamphouse. Put on protective clothing described above.
2. De-energize the xenon power supply at the AC source before opening the lamphouse compartment.
3. When possible, encase the bulb in its protective cover when cleaning or servicing the lamphouse interior. The bulb, when outside the lamphouse, must be encased in the cover.
4. Clean the bulb after it has cooled to room temperature. Do not touch the quartz envelope of the bulb; fingerprints will burn in and create hot spots which may shorten bulb life. If fingermarks are made, they should be carefully removed with methyl alcohol and cotton prior to bulb operation.
5. Never view an ignited bulb directly. **BLINDNESS OR PERMANENT EYE DAMAGE MAY BE INCURRED.**
6. Use only xenon bulbs designated as OZONE FREE. When possible, vent the lamphouse exhaust to outside atmosphere.
7. Maintain the lamphouse blower in good operating condition. Keep the blower inlet clean for unrestricted air flow.
8. To insure maximum bulb life, operate the lamphouse blower and the exhaust system for *at least* ten minutes after extinguishing the bulb.
9. If returning a bulb for warranty adjustment, pack it in its original shipping container. Complete and return all required warranty information.
10. Dispose of expired bulbs that are beyond warranty in the following manner: Wrap the bulb tightly in several layers of canvas or heavy cloth. Place it on a hard surface and shatter the envelope with a sharp hammer blow. **DO NOT** place an unshattered bulb in an ordinary refuse container.
11. **DO NOT PERMIT UNAUTHORIZED PERSONNEL TO PERFORM OR ATTEMPT ANY PHASE OF XENON BULB HANDLING OR SERVICE.**





- | | |
|--|------------------------------------|
| 1. Fade-Out Mechanism Control Lever | 7. Spot Focus Control Knob |
| 2. Masking Shutter (Chopper) Control Lever | 8. Leveling Foot |
| 3. Iris Control Lever | 9. Height Adjust Pin |
| 4. Boomerang Mounting Stud, Upper* | 10. Horizontal Swing Control Lever |
| 5. Spot Size Control Handle | 11. Vertical Tilt Control Lever |
| 6. Boomerang Mounting Stud, Lower* | 12. Lifting Strap |

* Color Boomerang *optional*; see Figure 7

EXHAUST SYSTEM INSTALLATION

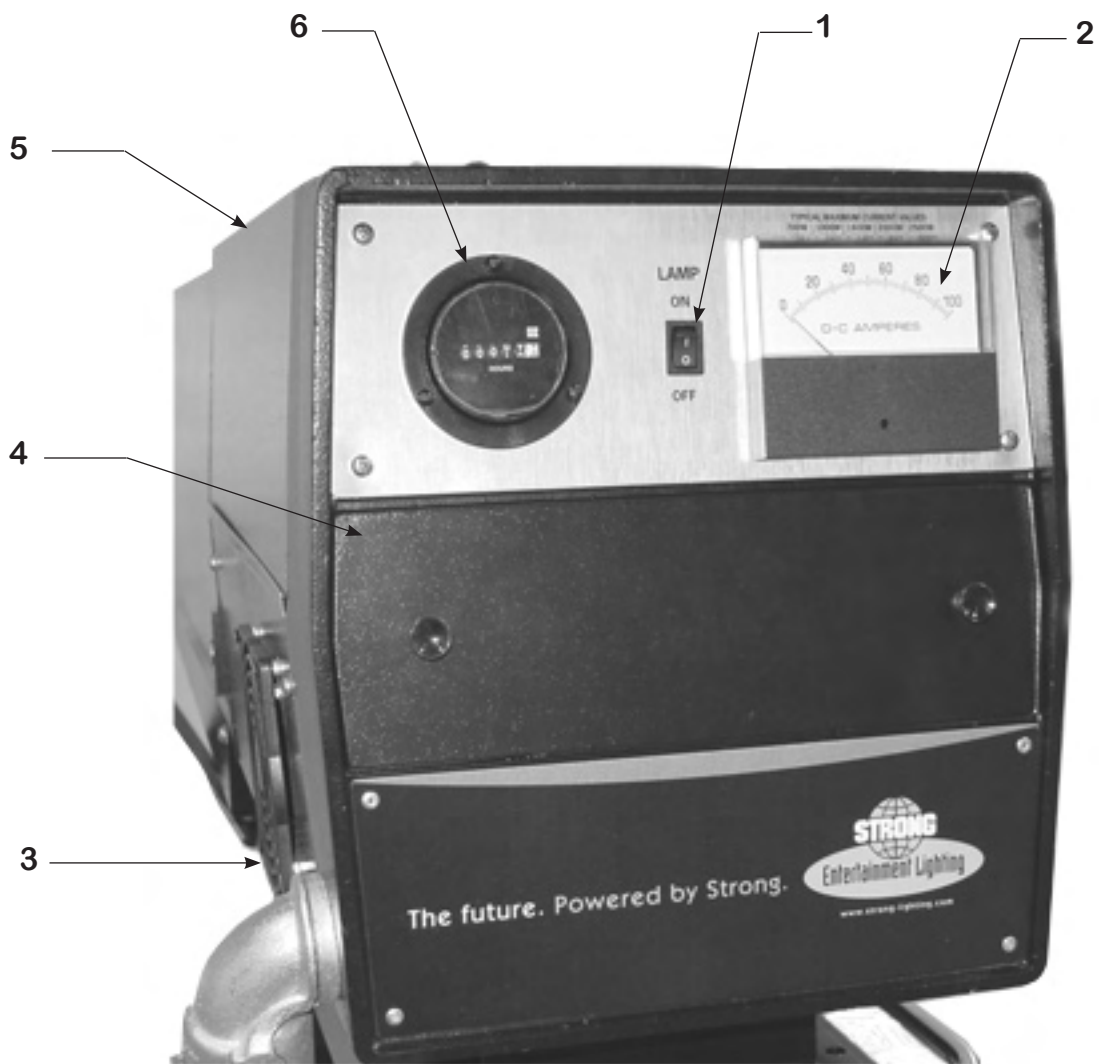
IF THE SPOTLIGHT is installed in a closed booth, it is recommended to vent the lamphouse exhaust to outside atmosphere to remove the heat from the booth. An optional lamphouse top cover plate with an exhaust stack (Part No. 7201222) may be ordered from Strong and installed in place of the standard top cover plate (see Parts List, Figure 2, Item 27).

THE EXHAUST STACK of the optional lamphouse cover plate is designed to fit a six-inch diameter duct. The exhaust system must be designed and installed in a manner as to eliminate any possibility of a down draft or of rain dripping into the lamphouse. The exhaust fan must be capable of removing 750 lineal feet per minute (150 cfm) of air from each lamphouse.

TO PERMIT MOVEMENT of the follow spotlight, install a section of six-inch diameter, non-flammable, flexible ducting between the lamphouse exhaust stack and the projection booth exhaust system. Two screw holes in the exhaust stack can be used to secure the ducting with #6 self-tapping sheet metal screws.

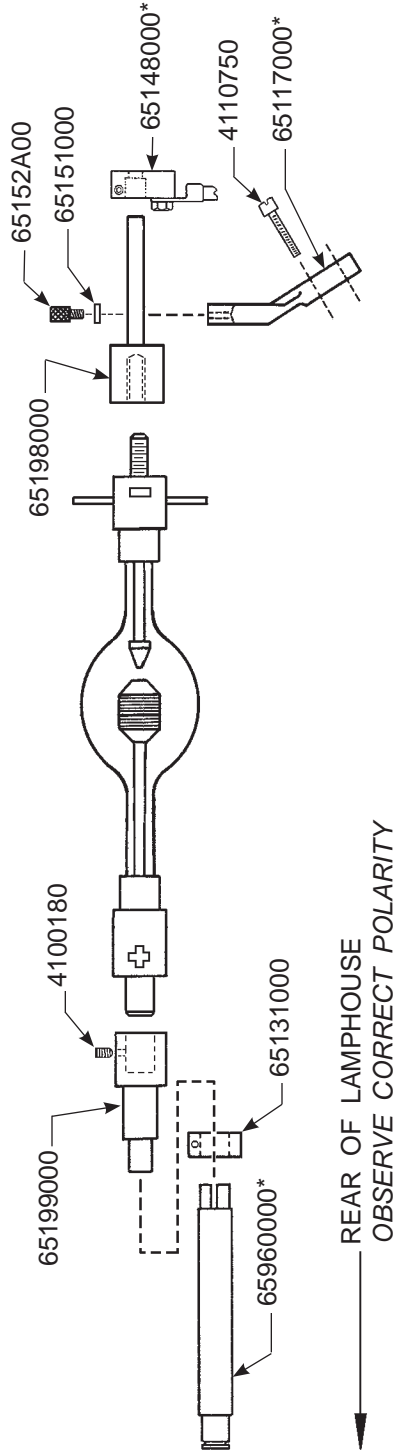
IF ADDITIONAL BULB COOLING is required (i.e. 50 Hertz power source), an optional Exhaust Blower Assembly (Part No. 7201036; see Figure 8) may be mounted to the existing top cover of the lamphouse. This blower assembly exhausts into the surrounding air and does not allow connection to a ducted exhaust system.

THE RADIATION from some xenon bulbs can convert the oxygen in the surrounding air to ozone. In large quantities, ozone can endanger health, but it spontaneously changes back into oxygen in a very short time, especially if it mixes with a large volume of air (as in an auditorium, arena, or outdoors). Most currently manufactured xenon theater bulbs are classified as *ozone free* and do not release ozone.



1. LAMP Switch (ON-OFF)
2. Ammeter
3. Air Intake, Blower
4. Cover, Bulb Adjust Controls
5. Top Cover, Lamphouse
6. Elapsed Hour Meter

1000, 1600 WATT BULB INSTALLATION
Requires optional/Bulb Adapter Kit 7201192



* Replace Collet, Front Bulb Support, and Cathode Clamp before installing bulb.

Part No.	Description
65117000	Bulb Support Yoke
65131000	Anode (+) Contact Clamp
65148000	Cathode (-) Contact Clamp
65151000	Retainer Plate
65152A00	Thumbscrew (2 req'd.)
65198000	Cathode Adapter
65199000	Anode Adapter
65960000	Rear Bulb Support Collet
4080870	Clamping Screw (for 65131000 & 65148000)
4100180	Set Screw, Anode Adapter
4110750	Bulb Support Mounting Screw
4250373	Lead Mounting Screw (for 65131000 & 65148000)
<i>NOT SHOWN</i>	
65948000	Negative (-) Lead Assembly, 29" (Clamp to Shunt)
65966000	Positive (+) Lead Assembly (incl. 65131000)

1000 Watt Operation: 50 Amperes Nominal
DO NOT EXCEED 58 AMPERES

1600 Watt Operation: 65 Amperes Nominal
DO NOT EXCEED 70 AMPERES

BULB INSTALLATION

CAUTION: OBSERVE ALL SAFETY PROCEDURES. Put on the protective face mask. Wear clean cotton gloves to prevent marking the quartz envelope of the bulb with fingerprints.

REMOVE THE TOP COVER of the lamphouse by removing the four Holt head (tamperproof) screws with the special screwdriver provided.

NO BULB ADAPTERS are required to install the 2000 watt bulb in the Xenon Super Trouper lamphouse. Components and adapters required to install the 1000 watt or 1600 watt bulb in the lamphouse are available in an optional Adapter Kit (Part No. 7201192). See the Bulb Adapter Chart on the facing page for the correct adapters and sequence of assembly.

1000 & 1600 Watt Bulb Installation

DISMOUNT AND REMOVE the front bulb mounting ring assembly from the air duct casting in front of the reflector and replace it with the smaller bulb support yoke casting included in the 7201192 Bulb Adapter Kit. Install the 65148000 cathode clamp in place of the standard 2 kW clamp. Remove the rear bulb support collet assembly (nylon rod and brass socket) from the bulb focus assembly behind the reflector and replace it with the collet assembly included in the Bulb Adapter Kit.

ASSEMBLE THE REQUIRED ADAPTERS to the 1000 or 1600 watt bulb prior to inserting the bulb into the lamphouse. Be very careful **not** to apply any strain on the quartz envelope when installing adapters. Handle the bulb by its metal end caps only. Screw the threaded cathode adapter onto the negative stud so it seats firmly against the shoulder of the cathode (-) end cap. Apply torque using the pins on the cathode end cap. Slip the anode adapter with set screw over the positive stud, up to the shoulder of the anode (+) end cap. Tighten all fasteners securely to insure a good electrical connection.

REMOVE THE PLASTIC PROTECTIVE COVER from the xenon bulb only if necessary. Insert the bulb through the top of the lamphouse, between the reflector support and the front casting. Pass the anode (+) end of the bulb through the hole in the reflector, taking care **not** to touch the surface of the reflector.

INSERT THE ANODE ADAPTER STEM of 1000 and 1600 watt bulbs into the rear support collet. The stem must be inserted into the socket as far as possible to permit full focus travel of the bulb. Place the stem of the cathode adapter into front bulb support yoke, pivot the retaining plate to its closed position, and tighten the (2) thumb screws. Tighten the socket head clamping screw in the anode contact securely to insure a good electrical contact.

INSTALL THE CATHODE LEAD CONTACT over the end of the cathode adapter up to the shoulder of the contact and tighten the clamping screw securely. Dress the lead in front of the air duct to minimize the shadow.

BULB INSTALLATION (continued)

2000 Watt Bulb Installation

THE 2000 WATT bulb mounting components include a shock mount support at the front of the lamphouse. Insert the 2000 watt bulb through the top of the lamphouse, passing the anode (+) end through the hole in the reflector. Pass the anode pin as far as possible to the rear of the lamphouse to permit sliding the cathode (-) end cap through the ring of the shock mount. Temporarily removing the 65131000 anode clamp from the brass socket of the collet allows added clearance for the bulb. Gently rotating or turning the bulb while sliding the cathode end cap through the shock mount will slightly compress the coil spring and prevent stripping the spring from its channel in the ring.

REPLACE THE ANODE CLAMP over the rear bulb socket. Insert the anode (+) pin of the bulb into the rear support collet, and firmly tighten the socket head clamping screw. Slide the 65410000 cathode contact clamp over the cathode (-) pin and tighten securely.

AN ALTERNATE METHOD of installing the 2000 watt bulb is to dismount the 83748000 shock mount ring from the front bulb support assembly by removing the 4100620 socket head clamping screw. Slide the ring over the cathode (-) end cap of the bulb, and install the bulb by inserting the anode (+) end cap through the reflector center hole and seating the anode pin into the rear support collet. Remount the ring to the 83364000 base bracket of the front bulb support using the socket head screw. DO NOT dismount or reposition the factory-aligned base bracket. Secure the anode (+) clamping screw; install and tighten the cathode (-) contact clamp.

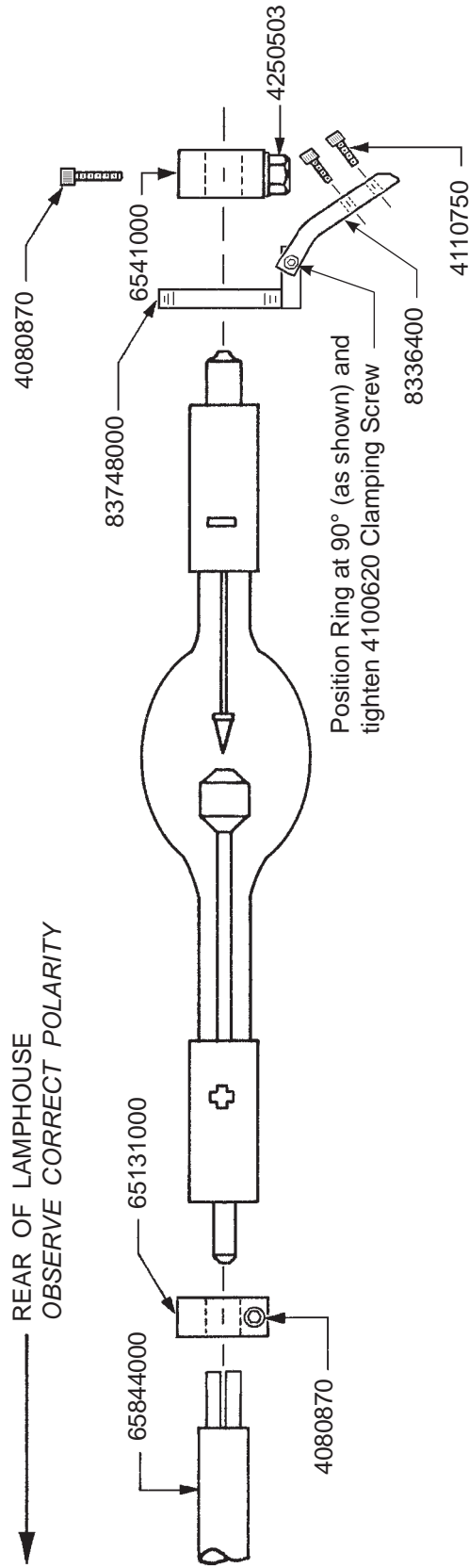
THE SOCKET HEAD SCREW which mounts the 83748000 bulb support ring to the 83364000 base bracket must be tightened securely enough to *clamp* the upright bulb support ring in a vertical (90°) position and prevent its tilting forward or back as the bulb is focused. The end cap of the bulb should touch only the coils of the 83410000 shock mount spring to allow the bulb to slide forward and back with a minimum of friction and *no stress* on the quartz envelope.

OBSERVE THE POSITION of the Trigger Wire on the xenon bulb relative to the point where the bulb passes through the center hole of the reflector. Some bulb manufacturers attach one end of the trigger wire to the anode end cap; if this trigger wire approaches the reflector too closely, the DC current may follow this path to ground and prevent bulb ignition. In this event, detach the trigger wire from the anode end cap and loop it around the bulbous portion of the envelope as illustrated on the line drawing at the bottom of the SAFETY PROCEDURES page.

IT IS RECOMMENDED to establish a routine for periodically checking all electrical connections for tightness, particularly those at the bulb. A loose connection in the DC circuit will cause failure of the contacts and leads, and may destroy the bulb.

THE REFLECTOR is optically positioned at the factory. Do not alter the position of the reflector by adjusting the threaded tie rod located in the upper corner of the lamphouse.

2000 WATT BULB INSTALLATION



Part No.	Description
65131000	Anode (+) Contact Clamp
65410000	Cathode (-) Contact Clamp
65844000	Rear Bulb Support Collet, 2 kW
83364000	Front Bulb Support Base Bracket
83410000	Coil Spring (<i>inside 83748000; not shown</i>)
83748000	Front Bulb Support Ring
4080870	Contact Clamping Screw
4100620	Support Ring Clamping Screw
4110750	Bulb Support Bracket Mounting Screw
4250503	Lead Mounting Screw

NOT SHOWN

- 65948000 Negative (-) Lead Assembly, 29" (Clamp to Shunt)
- 65966000 Positive (+) Lead Assembly (incl. 65131000)

**DETACH & DISCARD ANY FACTORY-MOUNTED
LEAD CONNECTED TO BULB END CAP**

**SHORT 2000 WATT (Type "HS") BULB NOT
USED IN XENON SUPER TROUPEUR**

2000 Watt Operation: 75 Amperes Nominal
DO NOT EXCEED 90 AMPERES

OPERATION

REMOVE THE PLASTIC COVER from the xenon bulb. **Do not** ignite the lamp with the protective shipping cover on the bulb.

A GLASS HEAT FILTER is supplied to reduce the temperature at the optical system and color gels. This filter is a narrow glass strip that covers only the center portion of the beam. Insert the heat filter in the bracket provided on the inside of the lamphouse at the front opening (see Figure 2, Item 2). Place the filter in position *with the coated surface facing the bulb*. The coated surface is indicated by a small XX or other marking. To prevent damage to optical system components, **do not** operate the spotlight with the filter removed or reversed.

SECURE THE LAMPHOUSE COVER with the (4) tamperproof screws using the special screwdriver provided. The cover must be securely in position to actuate the interlock switch and permit lamp ignition.

CLOSE THE CIRCUIT BREAKER on the xenon power supply to energize the power supply. The blowers in the power supply and in the lamphouse will start; the lamphouse blower will actuate the air intake interlock switch to permit bulb ignition. The lamp and power supply blowers will operate continuously until the xenon power supply is de-energized.

PLACE THE LAMP SWITCH in the ON position and the xenon bulb will ignite. Allow a few minutes for the current to stabilize, and read the lamphouse ammeter. The bulb must be operated within the current range specified by the bulb manufacturer. The ranges for the xenon bulbs approved for use with the Xenon Super Trouper are as follow:

<u>WATTAGE</u>	<u>NOMINAL CURRENT</u>	<u>DO NOT EXCEED</u>
1000	50 A.	58 A.
1600	65 A.	70 A.
2000	75 A.	90 A.

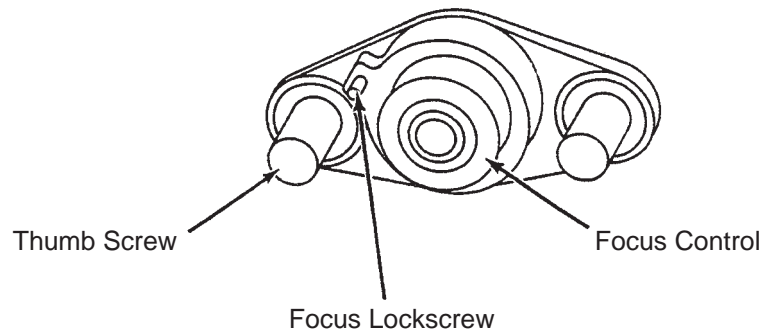
ADJUST THE POWER SUPPLY as instructed in the power supply manual for the correct operating current. The current setting must be increased in time to compensate for bulb aging, but *do not*, at any time, exceed the maximum current rating.

REMOVE THE REAR COVER PANEL (two black plastic pull-type knobs) to expose the bulb position adjustment control.

THE CENTER SECTION of the control is a threaded member that focuses the bulb in relation to the reflector. Turning this adjustment moves the bulb on the horizontal plane, into or out of the reflector. Rotating this section clockwise moves the bulb away from the reflector. The small knurled screw to the left of this section can be tightened to lock the focusing mechanism in place after the bulb alignment procedure has been completed.

THE THUMB SCREWS to the left and right of the focusing control lock the horizontal and vertical position of the bulb.

BULB ADJUSTMENT CONTROLS



TWO METHODS, details following, are recommended to align the bulb in order to project the best light to the stage.

MOVE THE SPOT SIZE CONTROL HANDLE on the large lens carriage to the forwardmost position to project the smallest spot possible. Set the iris, choppers, and dimming control to their full *open* positions. Project the spot to a wall or similar flat perpendicular surface opposite the spotlight position.

TURN THE CENTER FOCUS CONTROL counterclockwise until a small black spot is projected on the wall. It may be well to run this adjustment both directions to permit positive identification of the dark spot.

LOOSEN THE TWO THUMB SCREWS to the left and right of the focus control just enough to permit manual movement of complete control assembly. Move the control assembly around the two thumb screws and observe the smooth dark shadow of the bulb electrode inside the shaded circle of the reflector center opening. The shadow of the electrode must be centered in the projected opening of the reflector.

MOVE THE CONTROL ASSEMBLY around the thumb screws until the dark electrode shadow is as round as possible to project. It may be necessary to again rotate the focus control to define the electrode shadow.

AFTER THE ELECTRODE SHADOW is as even around the outside as possible, tighten the two thumb screws to lock this adjustment in place, and rotate the focus control to obtain the brightest light with the best light distribution. Turn the spot focus control knob, located on the front of the lens mechanism, to sharpen the edge of the spot.

THE SECOND METHOD of aligning the xenon bulb is to project the spot to the stage, and using the bulb adjustment controls, obtain a “hot spot” in the projected spot. Center this “hot spot” in the projected spot by moving the entire control section around the two thumb screws. Once

the “hot spot” is centered in the projected spot, lock the adjustment control in position with the two thumb screws and rotate the focus control to obtain a spot with an even distribution of light. Turn the spot focus control knob at the front of the lens mechanism to sharpen the edge of the spot.

THIS ADJUSTMENT should not be disturbed until the xenon bulb is replaced. At this time it will be necessary to repeat the alignment procedure.

REPLACE THE REAR COVER PANEL over the bulb adjustment control mechanism. Secure using the plastic fasteners.

BECAUSE OF MANUFACTURING TOLERANCES and normal bulb aging, it may be necessary to operate one lamp at slightly higher or lower current than others to balance light output between multiple units. These adjustments are made at the xenon power supply.

TO EXTINGUISH THE ARC, place the LAMP switch in the OFF position. The blower in the lamphouse will continue running until the xenon power supply is de-energized. Allow the blower to operate and cool the bulb for *at least* five minutes after extinguishing. This measure will prolong bulb life.

HANDLING THE SPOTLIGHT

GENERALLY THE BEST POSITION for the operator to stand is near the center of the spotlight, on the right hand side, although the angle of tilt and the size of the porthole may alter the position for the most convenient operation.

EACH OPERATOR will, after a few minutes of operation, generally develop his own system and position for operating the unit.

THE HORIZONTAL SWING LOCK LEVER and vertical tilt lock lever located on the base assembly can be set to give the desired amount of friction on the spotlight swing to suit the individual operator. An optional counterweight assembly (Part No. 7201191; see Figure 7) allows adding or removing weights for concise adjustment of the spotlight balance.

THE LENS CARRIAGE FRICTION BRAKE is a nylon drag screw located on the outrider of the large lens carriage (see Figure 4, Items 16 & 17), and is preset at the factory for most satisfactory operation. Individual requirements may vary, and the brake can be adjusted to best suit the operator or to allow for a severe “down” angle. Remove the color boomerang and lens mechanism housing, loosen the nylon lock nut and tighten or loosen the screw on the friction brake to apply the desired tension. Tighten the lock nut and replace the housing and boomerang.

OPERATION OF COLOR BOOMERANG

THE OPTIONAL COLOR BOOMERANG is equipped with six color filter holders. Additional filter holders (51928000 & 51376000) can be supplied by your Strong dealer.

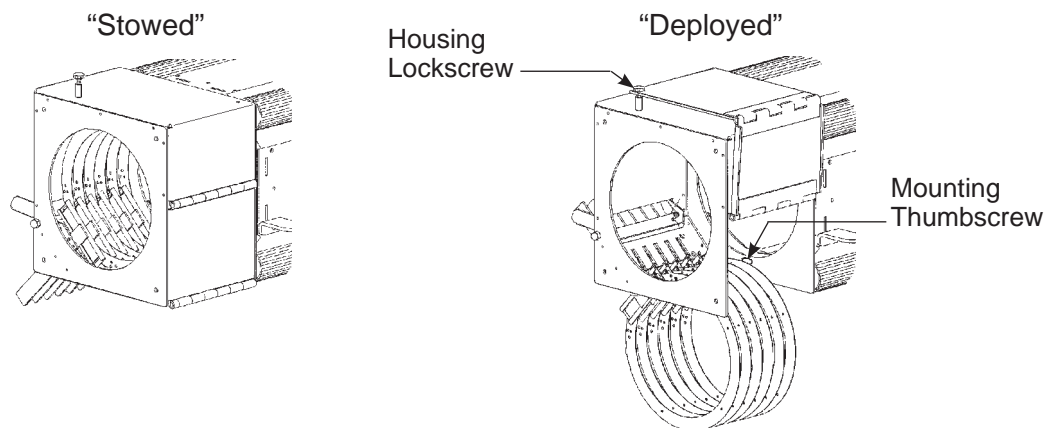
TO OPERATE INDIVIDUAL COLOR FILTERS, lower the desired filter selector lever. A rocker catch located in the color disc housing holds the filter in position.

TO RELEASE A COLOR, push either filter release arm upward or engage another color, thus releasing the previous color automatically.

NOTE: WHEN PLACING COLOR FILTERS in the boomerang, the *less* dense colors (amber, pink) should be placed in the holders toward the **rear** of the boomerang (closer to the arc), and those of *greater* density (red, green) should be placed in the holders toward the **front** of the boomerang (away from the arc). Use RoscoLux® (or equivalent) *high temperature* filters.

COLOR TEMPERATURE REDUCTION FILTERS, required for use with television and videotape, are available from theatrical supply dealers.

PROVISION IS MADE for “stowing” color holders for transport. When stowed, the color holders are protected from breakage or other damage caused by moving the spotlight. To enable operation of the color boomerang, detach the lower thumbscrew securing the hinged portion of the boomerang housing and fold the panels upward. This allows the color holders to drop into a “deployed” position for normal operation. An upper thumbscrew allows locking the hinged panels in the upper position. To again stow the color holders for transport, raise all six color holders to their engaged position, loosen the upper lockscrew, unfold the hinged boomerang housing, and secure in the lower position.



OPERATION OF OPTICAL SYSTEM

THE IRIS CONTROL is the front lever which projects through the top of the optical system housing. When this lever is to the right (as viewed from the rear of the unit), the largest aperture is provided. Smaller apertures are selected as the lever is moved to the left.

THE SPOT SIZE CONTROL HANDLE is located on the right hand side of the optical system just above the base rail. A variation of spot sizes from full flood to small spot can be obtained by moving the spot size control handle from one extreme to the other. Beam intensity is increased by this optical system when reducing from flood to spot, and maximum intensity is reached when the spot size control handle is in the extreme forward position.

THE MAXIMUM FLOOD SPOT is obtained with all three beam shape control levers to the right (toward operating side) for the largest aperture, and with the spot size control handle moved as far to the rear as possible.

SMALLER SIZED SPOTS are projected as the spot size control handle is moved forward. Most of the spot sizes needed will be produced with the iris in its maximum open position.

FOR A "HEAD SPOT," or any spot smaller than can be obtained with the spot size control handle in its extreme forward position, shift the iris control lever to the left (away from operating side) for a smaller aperture. The iris control lever should always be returned to its extreme right position before the spot size control handle is again moved to obtain larger spots.

A "DIFFUSED" SPOT is projected by sliding the spot size control handle backward toward its "flood" setting while closing the iris (aperture selector lever toward left). A "diffused" spot is a soft-edged spot with low light intensity and is seldom required.

THE MASKING SHUTTER (chopper) lever is the middle lever projecting through the top of the optical system housing. The masking shutter blades are operated by this lever to shape the projected spot to a rectangle, strip spot, or dousing.

THE DISENGAGED POSITION of the masking shutter lever is to the extreme right (toward operating side) and varying degrees of masking to complete cutoff are obtained by moving the lever to the left (away from operating side).

THE ANGLE of the masking shutter blades can be adjusted to compensate for the horizontal projection angle. Remove the color boomerang and optical system housing, and loosen the screws holding each of the masking shutter blades enough to allow movement. Ignite the bulb and adjust the angle of the *bottom* blade by tapping with a screwdriver so its projected edge lies parallel to the footlights. Tighten the screw. Operate the masking shutter lever to close the blades. Adjust the upper blade to close in line with the bottom blade and tighten the screw.

OPERATION OF OPTICAL SYSTEM (continued)

THE FADEOUT MECHANISM AND DOUSER CONTROL is the rear lever projecting through the top of the optical system cover. This lever controls the intensity of light from complete fadeout when the lever is to the left, to full intensity when the lever is to the right.

THE SPOT FOCUSING CONTROL KNOB is located on the operating side of the optical system at the forward end above the base rail. This control is used to position the lenses of the optical system for the length of throw. When making an adjustment, rotate the spot focusing control knob until the sharpest edge is obtained on the projected spot.

IF UNABLE TO ACHIEVE A "HARD" EDGE on the spot, the ribbon joining the lenses (see Figure 4, Item 12) can be lengthened or shortened by repositioning the cotter pin attaching the ribbon to the small lens carriage; see Figure 4, Item 25. The ribbon may also require resetting if the spotlight is moved from its original location to a new position with a different throw distance.

A SLOT in the lens mechanism housing, between the beam shaping control levers and the front lens, allows insertion of special media such as frost gels. Additional gel frames (Part No. 83374000) may be ordered from Strong dealers.

MAINTENANCE

THE XENON SUPER TROUPER SPOTLIGHT requires very little maintenance to keep it in good working order.

THE REFLECTOR should be cleaned periodically with a clean, soft, lint free cloth to remove any dust from the reflective surface. *Do not* use abrasive cleaners.

CHECK ALL ELECTRICAL CONNECTIONS periodically for tightness, especially the bulb connections and other leads in the DC circuit.

THE XENON LAMPHOUSE requires no lubrication other than the blower motor. This should be lubricated with two or three drops of non-detergent oil at each oil hole every six months. The lamphouse cover must be removed to expose the oil holes.

THE XENON BULB should be checked occasionally for presence of foreign material on the quartz envelope. Any dirt or other foreign material must be removed immediately. **CAUTION:** Observe all safety procedures when working around the exposed bulb.

THE INSIDE OF THE LAMPHOUSE and the blower should be cleaned periodically, depending on the dust conditions at each installation. The blower requires cleaning to remove dust build up which accumulates over a period of time. Keep the air inlet grille clean to permit free air flow.

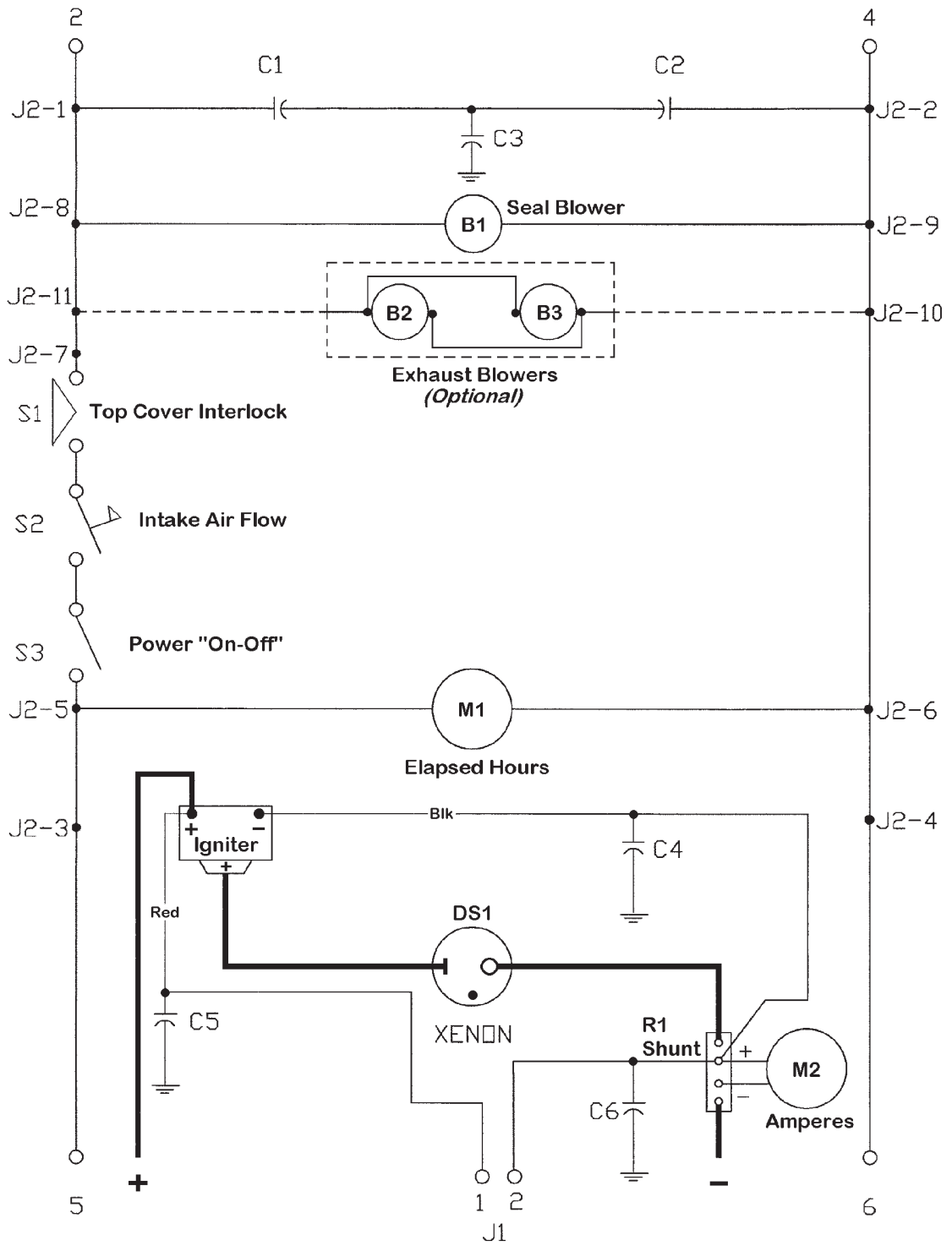
AN ARC STABILIZATION MAGNET is mounted to the base of the lamphouse below the reflector and is required by xenon bulb manufacturers for the correct operation of the 2000 watt horizontal bulb. If removed for any reason, it must be replaced with the NORTH seeking pole (unpainted) toward the right (operator's) side of the lamphouse. The presence of this magnet is not detrimental to the operation of 1000 or 1600 watt bulbs, if used in place of the 2000 watt bulb.

THE OPTICAL SYSTEM LENSES must be kept clean to prevent any light reduction in the projected spot. To gain access to the lenses, tighten the horizontal swing and vertical tilt locking clamps, and remove the color boomerang and optical system housing.

CLEAN THE PROJECTION LENS and large lens with any cleaner approved for use on coated projection lenses. If the projection lens is removed for cleaning, note the direction of the lens when reinstalling. The lens tube is marked with arrows indicating the end nearest the iris.

WHEN TRANSPORTING the spotlight, it is recommended that the xenon bulb be removed and placed in its original shipping carton with the cover on to insure against breakage. If the spotlight is equipped with the standard 2 kW bulb shock mount, the unit may be transported with the bulb installed, assuming reasonable caution is exercised. Under *no* circumstances should the unit be moved until the bulb has cooled to room temperature.

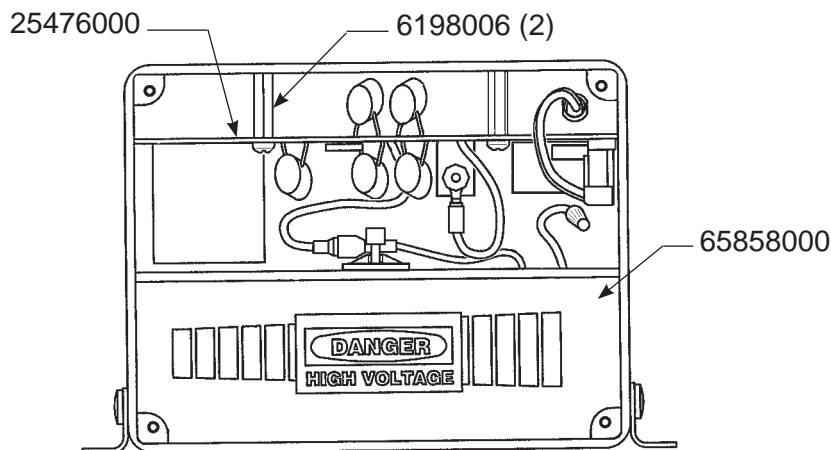
LAMPHOUSE SCHEMATIC



SCHEMATIC DIAGRAM
Parts List

Ref.		
<u>Desig.</u>	<u>Part No.</u>	<u>Description</u>
B1	7201038	Blower, 115 V.AC, 50/60 Hz.
B2,3	6198002	Blower, 115 V.AC, 50/60 Hz. (optional)
C1,2	76132000	Capacitor, .005 μ f, 600 WVDC
C3	76133000	Capacitor, .01 μ f, 400 WVDC
C4,5	6108075	Capacitor, 1.0 μ f, 630 WVDC
C6	79127000	Capacitor, .01 μ f, 1000 VDC
-	7201033	Capacitor PC Board Assembly (C1-C6)
DS1	-	Xenon Bulb (by Customer)
M1	7132002	Elapsed Time Meter, 50/60 Hz.
M2	7132001	Ammeter, 0-100 A.
R1	7198022	Shunt, 100 A. 50 mV.
S1	80168000	Cover Interlock Switch
S2	85106000	Air Flow Switch
S3	2161228	Rocker Switch, ON-OFF
-	65503000	DC Pulse Igniter Assembly
-	65858000	Igniter Case & Coil Assembly
-	25476000	Igniter Printed Circuit Board Assembly
-	7201031	Lamphouse/Power Supply Interconnect Cable (includes 88318000 MS Connector & 62151000 Clamp)

Specify Equipment Type and Serial Number when ordering replacement parts.



65503000 Igniter (detail); also see Figure 2, Item 9

