

INSTRUCTION MANUAL

XENON SUPER TROUPER

Follow Spotlight

Type 83051, 83071

Rev. June 2005



STRONG INTERNATIONAL

a division of Ballantyne of Omaha, Inc.

4350 McKinley Street

Omaha, Nebraska 68112 USA

Tel 402/453-4444 • Fax 402/453-7238

www.strong-lighting.com

PREFACE

THE STRONG XENON SUPER TROUPER is a direct current follow spotlight system complete with a xenon lamphouse, power supply, optical system, base and yoke assembly, and six-color boomerang.

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 presently approved ratings for bulbs used in this spotlight are 1000, 1600, and 2000 watt. 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.

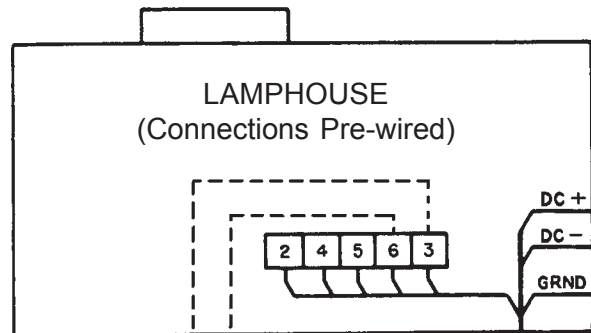
THE BULB is ignited and extinguished by use of the LAMP switch mounted on the instrument panel. Remote ignition switching is accommodated by wiring a five ampere dry contact across wires 3 & 6. See the Interconnection Wiring Diagram.

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 the airflow is inadequate.

THE LAMPHOUSE is supplied with a 13 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 cover on the bulb to prevent breakage.

LAMPHOUSE - POWER SUPPLY Interconnection Diagram

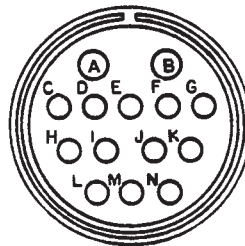


Conduit

Remote - Auto Sustained 5 Amp. Dry Contact
(by Installer as req'd.)

MS CONNECTOR

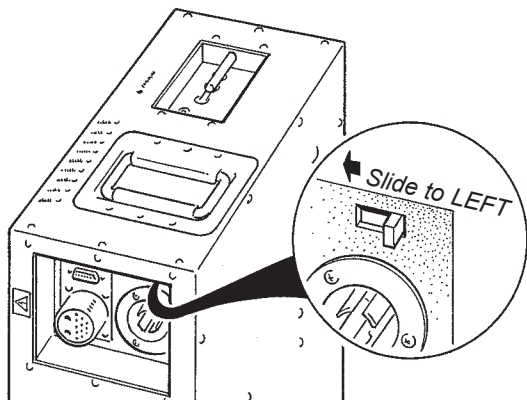
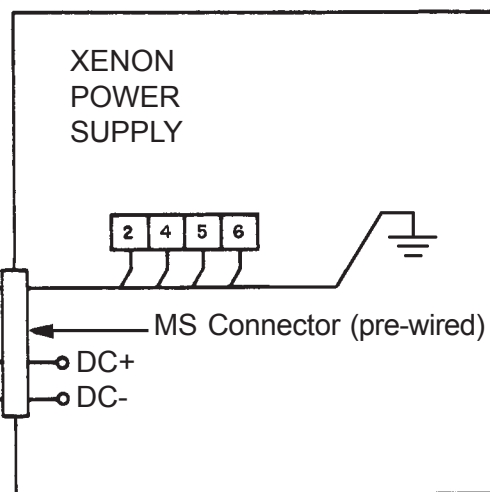
Pin	Wire No.
A	DC-
B	DC+
C	2
D	3
E	4
F	5
G	6
I	7
J	8
M	Grnd



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 65826 (see Figure 5) is shipped collapsed, and requires only folding down and pinning the (4) 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 5, 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 5, 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 the four mating holes in the support yoke and secure with the four 5/16-18 wing screws.

ATTACH THE COLOR BOOMERANG to the front of the optical system by inserting the hinge pin through the hinge on the boomerang and optical system. Fasten the boomerang yoke to the slotted angle bracket on the underside of the optical system pan. Adjust and securely tighten the wing nut and lock nuts to hold the boomerang parallel with the front of the optical system housing.

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.

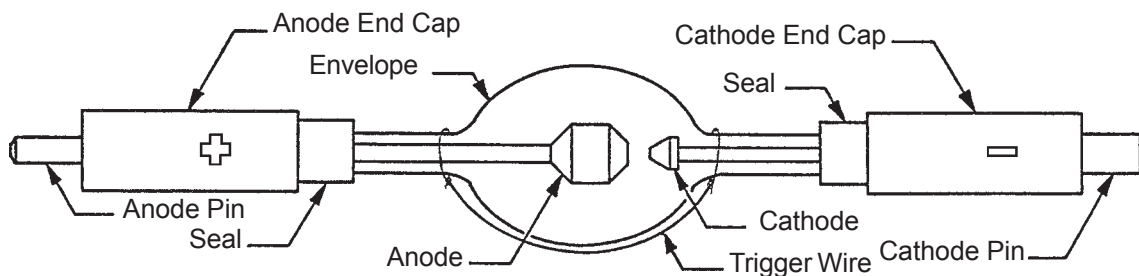
CHECK THE SLIDE SWITCH on the xenon power supply cabinet and verify that it has been paced in the "LAMPHOUSE" position. See the illustration on the inside front cover of the Xenon Power Supply Instruction Manual.

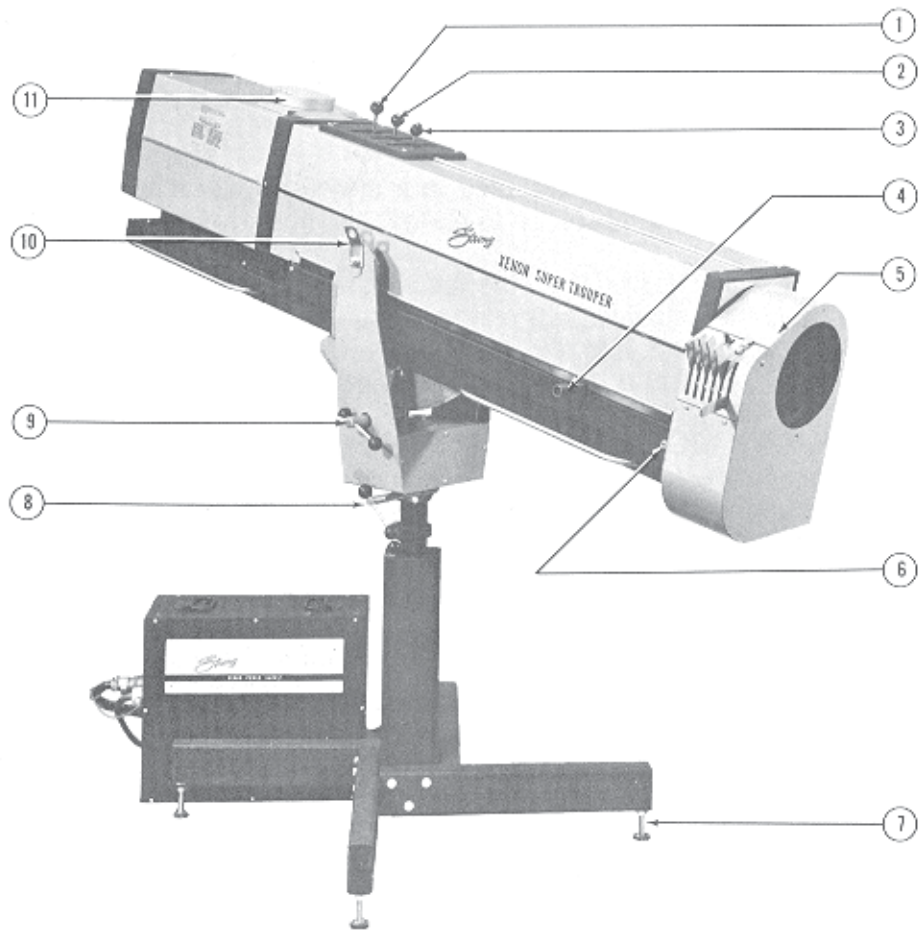
SAFETY PROCEDURES

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
2. Masking Shutter (Chopper) Control Lever
3. Iris Control Lever
4. Spot Size Control Handle
5. Color Boomerang
6. Spot Focus Knob
7. Leveling Foot
8. Horizontal Swing Control Lever
9. Vertical Tilt Control Lever
10. Lifting Strap
11. Cap, Exhaust Stack

EXHAUST SYSTEM INSTALLATION

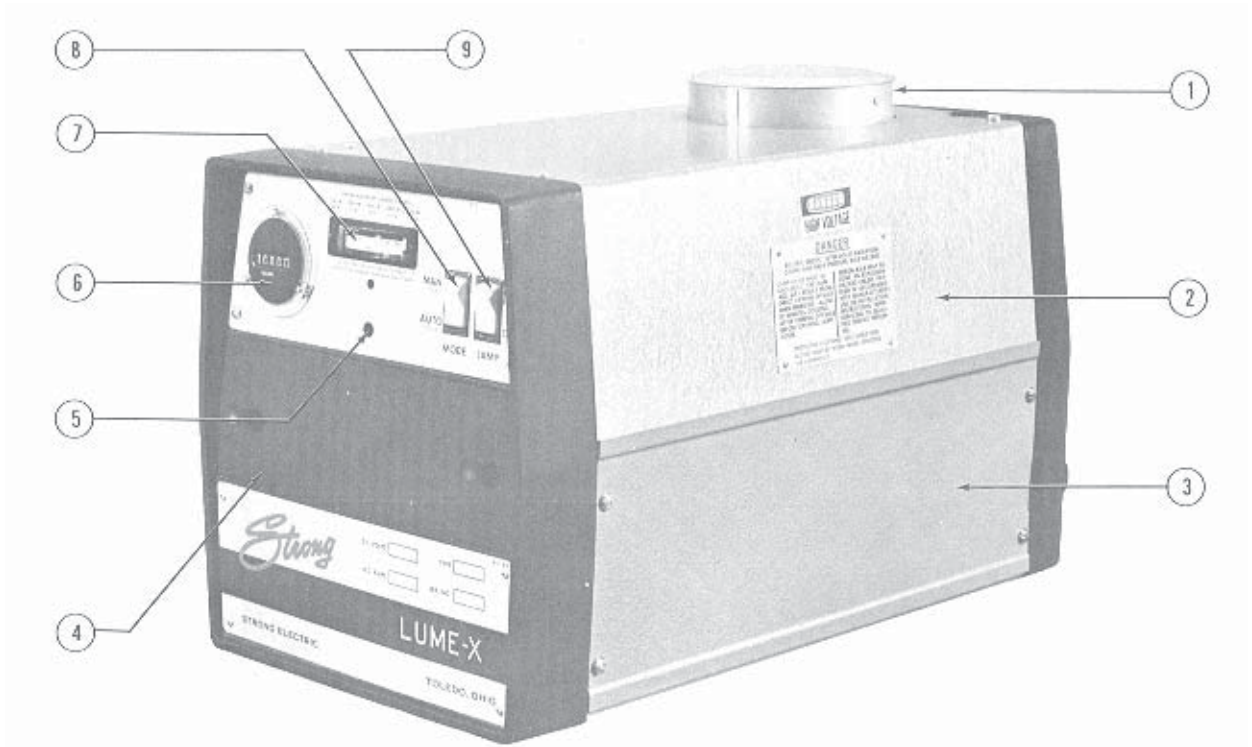
IF THE SPOTLIGHT is installed in a closed booth, it is recommended to vent the lamphouse exhaust to outside atmosphere to remove the heat from the booth.

THE EXHAUST STACK of the lamphouse is designed to fit a six-inch diameter duct. The exhaust system must be designed and installed in a way 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 tubing between the lamphouse exhaust stack and the projection booth exhaust system. The two screw holes in the stack exposed by removing the vent cap can be used to secure the tubing.

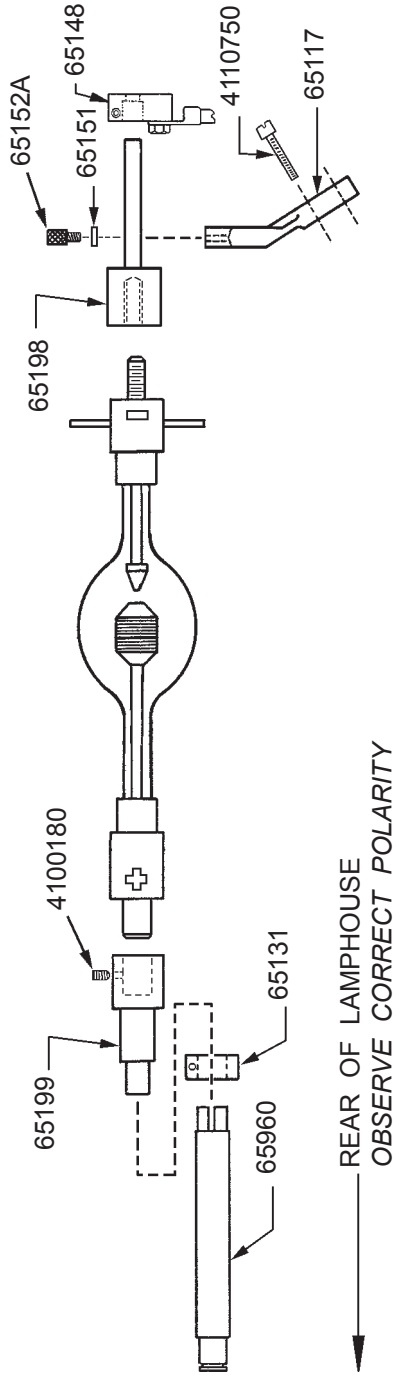
IF THE INSTALLATION is to be made in a location where it is not possible to install exhaust ducting, leave the vent cap mounted to the exhaust stack to prevent light leakage.

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. Cap, Exhaust Stack
2. Top Cover, Lamphouse
3. Access Panel, Igniter
4. Cover, Bulb Adjust
5. Current Control (early models)
6. Elapsed Time Meter
7. Ammeter
8. MODE Switch (AUTO-MAN.)
9. LAMP Switch (ON-OFF)

1000, 1600 WATT BULB INSTALLATION



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

Part No.	Description
65117	Bulb Support Yoke
65131	Anode (+) Contact Clamp
65148	Cathode (-) Contact Clamp
65198	Cathode Adapter
65199	Anode Adapter
65960	Rear Bulb Support Collet, 2 kW
4080870	Clamping Screw (for 65131 & 65148)
4100180	Set Screw, Anode Adapter
4110750	Bulb Support Mounting Screw
4250373	Lead Mounting Screw (for 65131 & 65148)
<i>NOT SHOWN</i>	
65948	Negative (-) Lead Assembly
65966	Positive (+) Lead Assembly

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 83071 Xenon Super Trouper lamphouse. Adapters used to install the 1000 watt or 1600 watt bulb in the 83051 lamphouse are supplied in the accessory kit. See the Bulb Adapter Chart for the correct adapters and sequence of assembly. Handle the bulb by its metal end caps only.

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. Screw the threaded cathode adapter on 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, 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.

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 65131 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 cathode contact clamp over the cathode (-) pin and tighten securely.

AN ALTERNATE METHOD of installing the 2000 watt bulb is to dismount the 83748 shock mount ring from the front bulb support assembly by removing the socket head 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 83364 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.

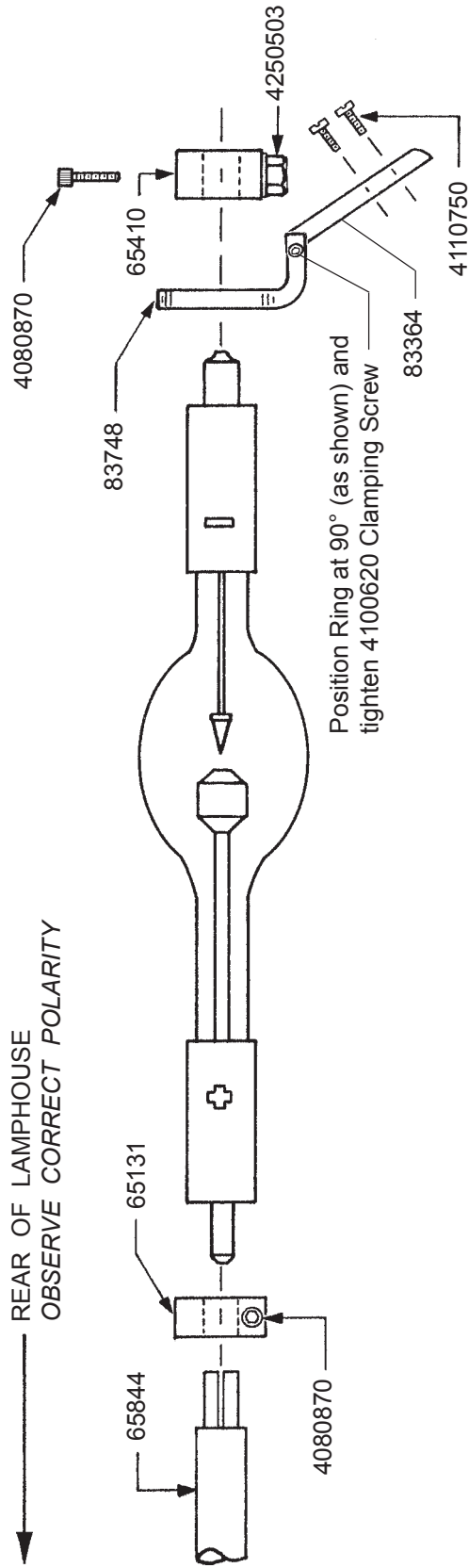
THE SOCKET HEAD SCREW which mounts the 83748 bulb support ring to the 83364 base bracket must be tightened securely enough to *clamp* the upright bulb support ring in a vertical (90°) position and prevent its tilting forward or back as the bulb is focused. The end cap of the bulb should touch only the coils of the 83410 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 will follow this path to ground and prevent bulb ignition. To avoid this, 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

- 65131 Anode (+) Contact Clamp
- 65410 Cathode (-) Contact Clamp
- 65844 Rear Bulb Support Collet, 2 kW
- 83364 Front Bulb Support Base Bracket
- 83410 Coil Spring (*inside 83748; not shown*)
- 83748 Front Bulb Support Ring
- 4080870 Clamping Screw
- 4110750 Bulb Support Mounting Screw
- 4250503 Lead Mounting Screw

NOT SHOWN

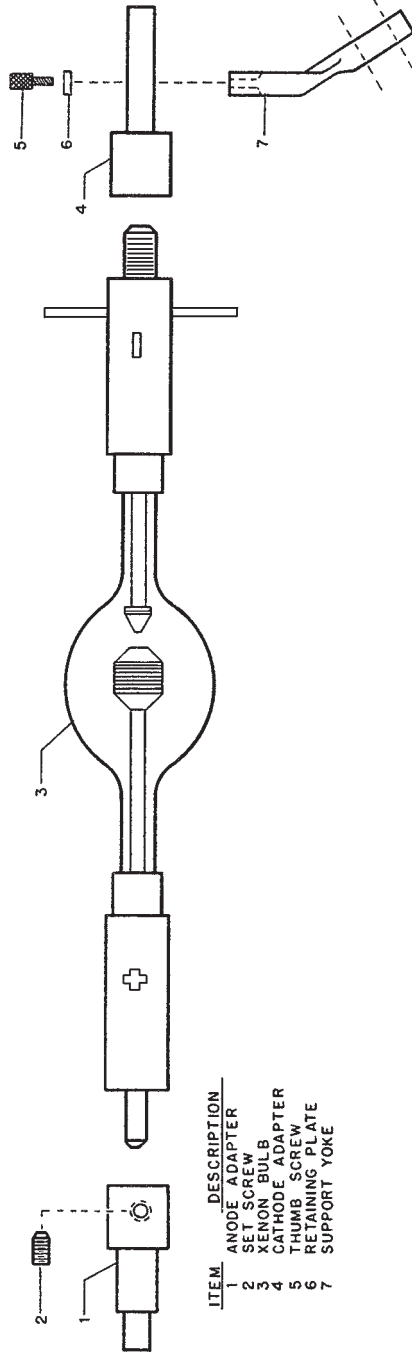
- 65948 Negative (-) Lead Assembly
- 65966 Positive (+) Lead Assembly

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

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

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

BULB ADAPTERS, 1000 & 1600 WATT BULBS



- | ITEM | DESCRIPTION |
|------|-----------------|
| 1 | ANODE ADAPTER |
| 2 | SET SCREW |
| 3 | XENON BULB |
| 4 | CATHODE ADAPTER |
| 5 | THUMB SCREW |
| 6 | RETAINING PLATE |
| 7 | SUPPORT YOKE |

Item No.	OSRAM 1 kW	OSRAM 1.6 kW	Hanovia 1 kW	Hanovia 1.6 kW
1	65199	65199	65259	65403
2	4100180	4100180	4100180	4100180
3	XBO1000W/HS LTIX1000W-HS	XBO1600W/HS LTIX1600W-HS	XH1000HS	XH1600HS
4	65198	65198	65198	65198
5	65152A	65152A	65152A	65152A
6	65151	65151	65151	65151
7	65117	65117	65117	65117

LTIX Bulbs (Lighting Technologies Int'l.) bulbs are interchangeable with OSRAM.

TYPE "HSC" BULBS (without Anode Pins) CANNOT BE USED IN THE XENON SUPER TROUPER

Reference only – Hanovia bulbs are no longer manufactured; other manufacturer's bulb dimensions may vary. Xenon bulb manufacturers normally supply "interchangeability" cross-reference charts.

OPERATION

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

A GLASS HEAT FILTER is supplied to reduce the temperature at the optical system and color gels. Insert the heat filter in the bracket provided on the inside of the lamphouse at the front opening. Place the filter in position *with the coated surface facing the bulb*. The coated surface is indicated by a small *XX* or other marking. This filter is a narrow strip that covers only the center portion of the beam. 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.

PLACE THE MODE SWITCH (on units so equipped) in the "MAN." position and energize the xenon power supply. The lamphouse blower will start and actuate the blower interlock switch to permit bulb ignition. This lamp blower 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 bulb supplied with the unit 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.

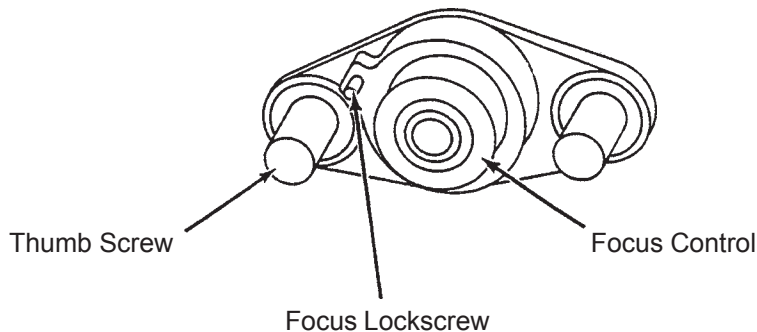
ADJUST THE POWER SUPPLY as instructed in the power supply manual for the correct operating current. The current setting must be increased in time to compensate for bulb aging, but *do not*, at any time, exceed the maximum current rating.

REMOVE THE REAR COVER PANEL (two 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 with the iris, choppers, and dimming control in the full open position. Project the spot to a wall or similar flat perpendicular surface opposite the spotlight.

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 obtain equal light balance between 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.

TO OPERATE THE SPOTLIGHT from a remote location or an automation controller, the lamphouse must be equipped with the MODE (Auto-Man.) switch. With the MODE switch in the “AUTO” position, and the LAMP switch “ON,” the lamphouse will ignite by means of a dry contact across terminals 3 and 6 at the lamphouse or power supply (See Lamphouse-Power Supply Interconnection Diagram). This type of installation is intended for use *only* if the spotlight is “locked down” as a fixed spot without an operator at the unit.

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.

THE LENS CARRIAGE FRICTION BRAKE is a nylon drag screw located on the outrider of the large lens carriage, 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 allow for a severe “down” angle. Remove the color boomerang and lens mechanism housing, loosen the nylon lock nut and adjust the screw on the friction brake to apply the desired tension. Tighten the lock nut and replace the housing and boomerang.

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 left (as viewed from the rear of the unit), the largest aperture is provided. Smaller apertures are obtained as the lever is moved to the right.

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 the iris control lever to the left (away from 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 right (toward operating side) for a smaller aperture. The iris control lever should always be returned to its extreme left position before the spot size control handle is again moved to obtain larger spots.

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.

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.

A SLOT in the lens mechanism housing, between the optical system controls and the front lens, allows insertion of special media such as frost gels. Additional frame holders (83746) may be ordered from Strong International dealers.

OPERATION OF COLOR BOOMERANG

THE COLOR BOOMERANG is equipped with six color filters and provision has been made for installation of an optional ultraviolet filter. The ultraviolet filter may be purchased as an accessory (Order No. 51829) and is easily mounted to the front of the boomerang. Additional filter holders (51928 & 51376) can be supplied by your Strong International 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 the filter release arm up or engage another color, thus releasing the previous color automatically.

TO REPLACE A FILTER HOLDER, open the hinged top of the color disc housing and lift out the desired filter holder.

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.

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 envelope. Any dirt or other foreign material must be removed immediately. CAUTION: Observe all safety procedures when working around the exposed bulb.

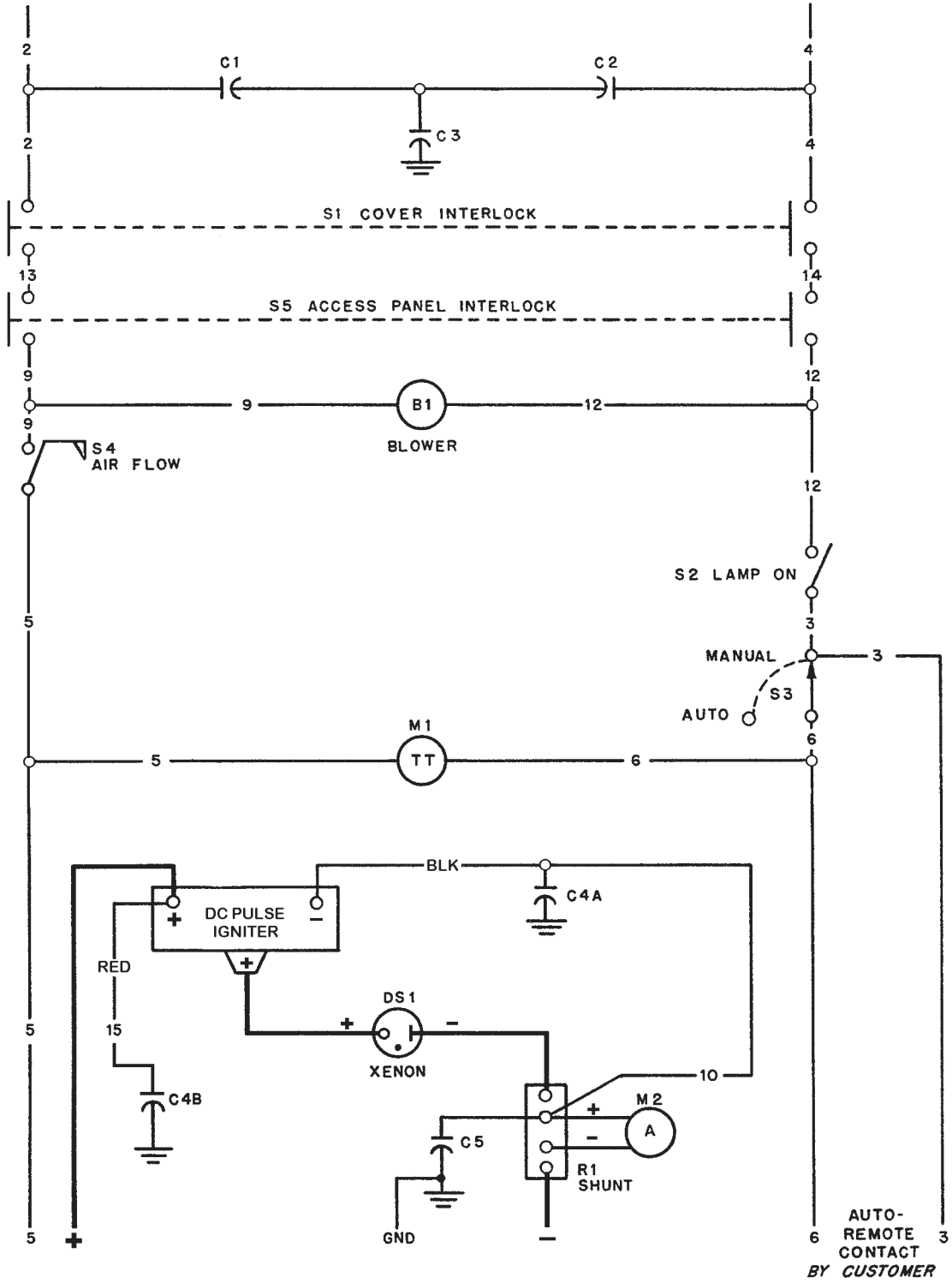
THE INSIDE OF THE LAMPHOUSE and the blower should be cleaned periodically, depending on the dust conditions at each installation. The blower requires cleaning to remove dust build up which accumulates over a period of time. Keep the air inlet grille clean to permit free air flow.

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, the end of the Buhl lens tube with the FL marking ring must be toward the iris when replaced in its barrel. The ISCO 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 a 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



Rev. 3/05

