

 Xenotech, Inc.

BRITELIGHT

PATTERN PROFILE PROJECTOR

*"P3"*

BL7000 SYSTEM  
OPERATING MANUAL

Issue 1.0  
208 / 230 V.AC

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## POWER INPUT CONNECTOR WIRING INSTRUCTIONS

THE INPUT POWER REQUIREMENTS FOR A 7 KW POWER SUPPLY (62-80110) ARE AS FOLLOWS:

VOLTAGE NOMINAL	208 / 230 VAC
FREQUENCY RANGE	50 / 60 HZ
INPUT CURRENT	30 AMPS
PHASE	3PH 4 WIRE
MINIMUM INPUT WIRE SIZE	12 AWG

### CONNECTIONS

#### THREE PHASE OPERATION

<u>LINE DESIGNATION</u>	<u>WIRE COLOR</u>	<u>CONNECTOR PIN</u>
PHASE A	BLACK	X
PHASE B	RED	Y
PHASE C	ORANGE	Z
SAFETY GROUND	GREEN	GREEN

# BRITELIGHT 7000 SPECIFICATIONS

## BALLAST

### MAIN POWER INPUT

INPUT VOLTAGE: 208 / 230 VAC.  
INPUT CURRENT: 30 AMPS  
PHASE: THREE 4 WIRE  
FREQUENCY: 50 / 60 HZ.

### OUTPUT

OUTPUT VOLTAGE: 40 - 50 V.DC.  
OUTPUT CURRENT: 130 -180 A.DC.  
OUTPUT RIPPLE: LESS THAN 5% P-P  
OUTPUT ADJ. RANGE:16 STEPS

## LAMPHEAD

### LAMP INPUT

LAMP VOLTAGE: 43 - 49 V.DC.  
LAMP CURRENT: 120 - 160 A.DC.  
LIGHT OUTPUT: 795 MILLION PBCP.

### COOLING FOCUS & IGNITION CIRCUIT INPUTS

INPUT VOLTAGE: 120 V.AC  
INPUT CURRENT: 5 AMPS PEAK  
PHASE: SINGLE  
FREQUENCY: 50 / 60 HZ.

### SYSTEM OPERATION TEMPERATURE RANGE

NOMINAL AMBIENT: -18° - 50° C

## OPERATING INSTRUCTIONS FOR 7 kW XENON SYSTEM

### CONNECTIONS

1. Connect lamphead cable to the (14) pin OUTPUT MS CONNECTOR located on the top of the xenon power supply cabinet.
2. Connect the AC power cable to the (4) pin twistlock AC INPUT POWER CONNECTOR located on the top of the xenon power supply.
3. Connect the power cable to the power source.
4. When the power is energized the following should occur:
  - a. The green LED indicator lights on the top of the xenon power supply should light.
  - b. Cooling fans in the xenon power supply and in the P3 should start.
  - c. The LED displays on the DMX control boards should light.

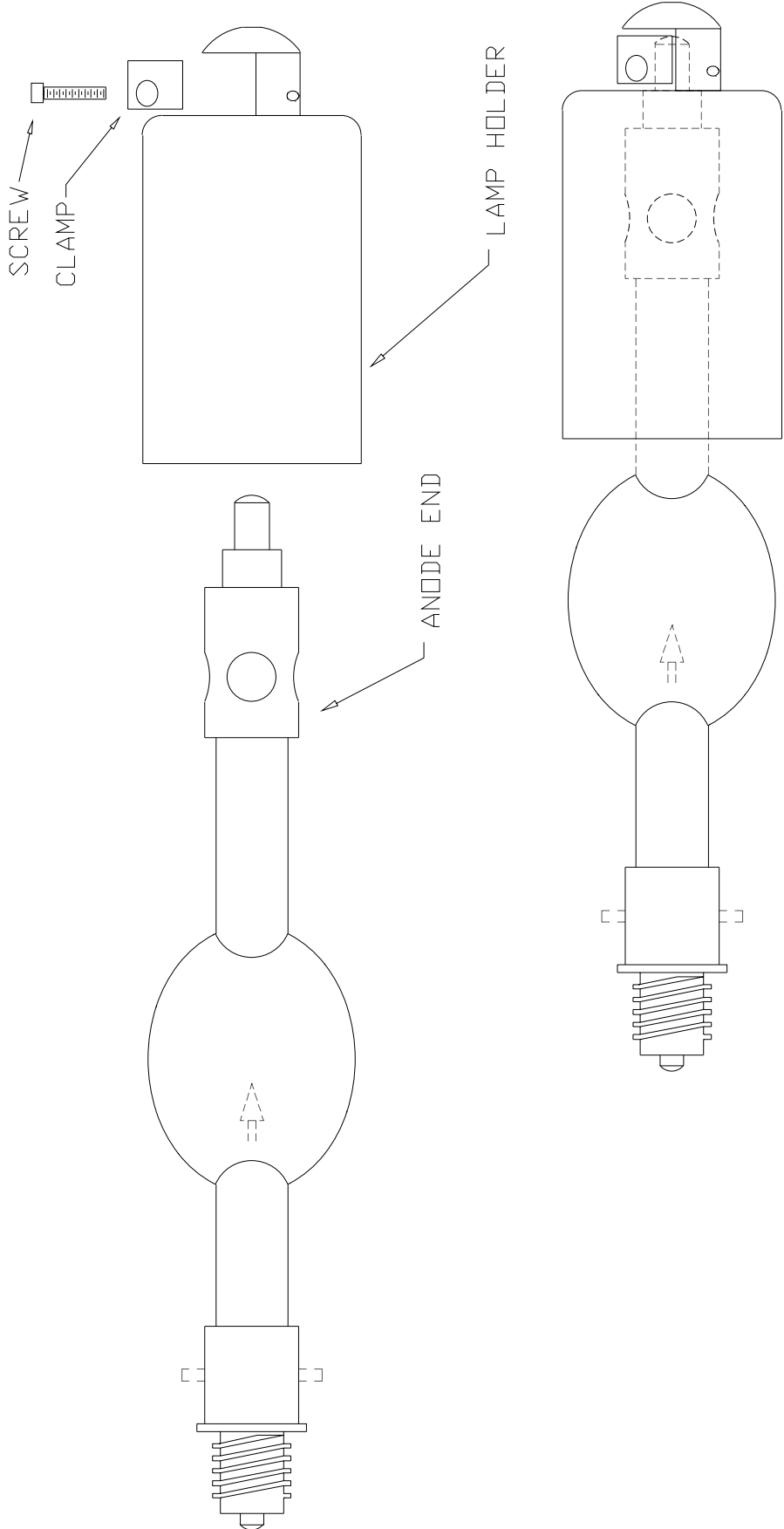
### NOTE

THERE IS A 3 - 5 SECOND DELAY AFTER THE MAIN POWER IS ENERGIZED BEFORE THE LAMP HEAD COOLING SYSTEM IS UP TO FULL PRESSURE.

### LIGHT OPERATION

Prior to operation, the xenon bulb must be installed, and DC output set to the correct level. These procedures are to be performed by a trained technician using the proper tools, protective measures, and test instruments. Bulb installation procedures follow in this manual, and a separate manual detailing operation of the xenon power supply is furnished with the unit.

This unit is designed to operate from a remote DMX controller. DMX instructions and addresses are included in a following section of this manual.



FRONT LAMP HOLDER ASSEMBLY

## **INSTRUCTIONS FOR REMOVING AND INSTALLING A TYPE TH BULB IN A BL7000 FIXTURE**

### **NOTE**

FAMILIARIZE YOURSELF WITH THE LOCATION AND IDENTIFICATION OF THE COMPONENTS OF THIS SYSTEM AND ALSO THE NORMAL OPERATION OF THE SYSTEM BEFORE ATTEMPTING ANY ADJUSTMENT OR SERVICE.

### **NOTE**

COMPLETELY READ THROUGH AND HAVE A GOOD UNDERSTANDING OF THE PROCEDURES BEFORE ATTEMPTING TO SERVICE THIS SYSTEM. FAILURE TO DO SO MAY RESULT IN FATAL INJURY OR EQUIPMENT DAMAGE.

### **WARNING**

DISCONNECT POWER SOURCE BEFORE SERVICING THIS EQUIPMENT.

### **WARNING**

A PROTECTIVE JACKET, FULL FACE SHIELD, AND PROTECTIVE GLOVES MUST BE WORN AT ALL TIMES WHEN THE LAMP HEAD IS OPENED WITH A BULB INSTALLED OR WHEN HANDLING THE XENON BULBS. SERIOUS INJURY MAY OCCUR IF PROPER SAFETY PRECAUTIONS ARE NOT OBSERVED. READ ALL ENCLOSED INSTRUCTIONS AND INFORMATION SHEETS BEFORE HANDLING THE BULB.

### **WARNING**

NEVER OPERATE A FIXTURE WITH AN EXPOSED BULB! THERE IS AN EXTREME DANGER OF SEVERE BURNS TO EXPOSED SKIN AND EYES FROM THE ULTRAVIOLET LIGHT EMITTED FROM THE EXPOSED BULB. DAMAGE CAN OCCUR IN AS LITTLE AS 30 SECONDS OF EXPOSURE. THERE IS ALSO AN ADDITIONAL DANGER FROM FLYING QUARTZ IF AN EXPOSED BULB EXPLODES!

### **EQUIPMENT REQUIRED**

1. PROTECTIVE SAFETY EQUIPMENT KIT
2. 7/16", 5/16", 3/8" OPEN END WRENCH
3. ALLEN WRENCH 5/32"
4. PHILLIPS SCREWDRIVER #2

## DISASSEMBLY PROCEDURE

### IF THERE IS NO XENON BULB INSTALLED IN THE FIXTURE

1. Remove the (8) screws located on the small sides of the front cowling using a #2 phillips screwdriver and remove the cowling.
2. Remove the (2) brass bolts connecting the short leads to the front lamp holder using a 7/16" wrench..
3. Remove the center mounting screw washer and spring from the spider using a 5/32" allen wrench while supporting the front lamp holder so that it does not fall when the screw is removed.
4. Remove the lamp holder from the fixture.
5. Disconnect the focus rod swivel joint from the spider arm using the 5/16" and 3/8" open end wrenches. Do not turn the swivel joint or focus rod.
6. To disassemble the front lamp holder remove the (2) clamp retaining screws located on the side of the lamp swivel hub using a 5/32" allen wrench and remove the clamp.

## DISASSEMBLY PROCEDURE

### IF THERE IS A XENON BULB INSTALLED IN THE FIXTURE

1. Remove the (8) screws located on the small sides of the front cowling using a #2 phillips screwdriver and remove the cowling.

#### **CAUTION**

**DO NOT PLACE ANY EXCESSIVE FORCE ON THE XENON BULB WHILE REPLACING THE PROTECTIVE WRAPPER!**

2. Wrap the bulb securely in the protective wrapper that the bulb was originally shipped in.
3. Remove the (2) brass bolts connecting the short leads to the front lamp holder using a 7/16" wrench.
4. Disconnect the focus rod swivel joint from the spider arm using the 5/16" and 3/8" open end wrenches. Do not turn the swivel joint or focus rod.
5. Remove the center mounting screw washer and spring from the spider using a 5/32" allen wrench while supporting the front lamp holder so that the globe does not drop when the mounting screw is removed.

#### **WARNING**

**DO NOT EXERT EXCESSIVE FORCE ON THE BULB WHILE UNSCREWING IT FROM THE REAR LAMP HOLDER! THE BULB SHOULD RELEASE FROM THE REAR LAMP HOLDER WITH A VERY LIGHT COUNTERCLOCKWISE ROTATION. IF THIS DOES NOT HAPPEN, SEE THE PROCEDURE FOR REMOVING A "FROZEN" BULB.**

6. Remove the bulb by lightly pushing back on the bulb to move the rear lamp holder to its rearmost position while lightly turning the bulb in a counterclockwise rotation. The bulb will release from the rear lamp holder in approximately 1½ complete turns.
7. Remove the bulb from the fixture with the front lamp holder attached and place it on a stable working surface for the removal of the front lamp holder.
8. To remove the front lamp holder from the bulb, remove the (2) clamp retaining screws located on the side of the lamp swivel hub using a 5/32" allen wrench and remove the clamp.
9. Remove the lamp holder from the bulb and place the bulb into its shipping container for safekeeping. Resecure the protective wrapper if necessary.



## ASSEMBLY PROCEDURE

### WARNING

DO NOT REMOVE THE PROTECTIVE COVER FROM THE LAMP UNTIL INSTRUCTED TO DO SO!

### WARNING

**DO EXERT ANY FORCE ON THE QUARTZ PORTIONS OF THE XENON BULB AT ANY TIME!**

### NOTE

IF THE FRONT LAMP HOLDER HAS NOT BEEN DISASSEMBLED, SEE THE LAST STEPS IN THE APPROPRIATE DISASSEMBLY INSTRUCTIONS.

1. Untie the cord on the anode (+) end of the protective cover. Do not remove the cover at this time!
2. Fasten front lamp holder to the globe by placing the anode end (large electrode) of the lamp in the lamp holder and aligning the stud on the end of the lamp ferrule with the channel in the nose of the lamp holder body. Slide the lamp completely down the channel as far as it will go.
4. Replace the clamp and reinstall the (2) clamp retaining screws located on the side of the lamp swivel hub using a 5/32" allen wrench.
5. Install the bulb into the fixture by inserting the cathode (-) end of the lamp through the opening in the reflector.
6. Insert the end of the lamp ferrule into the opening in the rear lamp holder receiver block and align the threads by turning the bulb counterclockwise until the bulb threads drop into the receiver threads.

### NOTE

DO NOT OVER TIGHTEN THE LAMP IN THE RECEIVER BLOCK AS THIS MAY CAUSE THE LAMP TO "FREEZE" IN THE RECEIVER BLOCK MAKING IT DIFFICULT TO REMOVE. TIGHTEN THE LAMP JUST ENOUGH TO APPLY SPRING PRESSURE TO THE THREADS BUT NOT SO MUCH AS TO BOTTOM OUT THE LAMP FERRULE COMPLETELY AGAINST THE RECEIVER BLOCK.

7. Gently rotate the bulb clockwise until resistance is felt.
8. At this point, the bulb should be in contact with the spring plunger assemblies. Gently turn the bulb an additional 1/16-1/8 of a turn to load the threads with the spring plungers.
9. Secure the front lamp holder to the spider with the shoulder bolt, spring, and washer that was removed during disassembly.
10. Reconnect the focus rod swivel joint to the spider arm using the 5/16" and 3/8" open end wrenches. Do not turn the swivel joint or focus rod.
11. Reconnect the (2) short leads from the spider to the front lamp holder using the (2) brass bolts and washers that were removed during disassembly.

CAUTION  
LAMP COOLING

DO NOT DISCONNECT THE MAIN POWER UNTIL THE BULB HAS COMPLETELY COOLED. THE LAMP HEAD COOLING SYSTEM WILL RUN WHENEVER THE MAIN INPUT POWER LINES ARE ENERGIZED.

NOTE  
LAMP HEAD TEMPERATURE AND COOLING SYSTEM PROTECTION CIRCUIT

THE LAMP HEAD AND POWER SUPPLY ARE THERMALLY PROTECTED. THE LAMP HEAD IS ALSO PROTECTED BY AN AIR PRESSURE SWITCH . IF THE LAMP HEAD COOLING SYSTEM FAILS OR THE EQUIPMENT IS USED IN AN EXCESSIVELY HOT ENVIRONMENT ( ABOVE 50 DEG C ) THE LAMP POWER SYSTEM WILL SHUT OFF TO PREVENT EQUIPMENT DAMAGE AND THE HEAD OVER TEMP / SAFETY CIRCUIT FAULT INDICATOR (8) WILL LIGHT. WHEN THE EQUIPMENT COOLS TO A SAFE OPERATING TEMPERATURE OR WHEN THE FAULT IS CLEARED THE INDICATOR WILL GO OUT, THE MAIN POWER CONTACTOR IN THE POWER SUPPLY WILL REENERGIZE, AND THE LAMP MAY THEN BE RELIT.

NOTE  
ARC MAGNETIC STABILIZATION

THE LAMP HEAD INCORPORATES MAGNETIC STABILIZATION OF THE GLOBE ARC. THE LAMP HEAD MUST BE OPERATED IN AN UPRIGHT POSITION FOR THE STABILIZATION TO WORK PROPERLY. THE POSITION OF THE LAMP HEAD CAN BE DETERMINED BY THE POSITION OF THE TEXT ON THE SIDES OF THE LAMP HEAD WHICH SHOULD BE UPRIGHT. OPERATING THE LAMP HEAD UPSIDEDOWN MAY CAUSE MASSIVE INSTABILITY IN THE GLOBE ARC TO THE POINT OF EXTINGUISHING AND MAY CAUSE EXCESSIVE LAMP WEAR.

CAUTION  
SHOCK HAZARD

THE POWER SUPPLY CONTAINS A CAPACITOR BANK ACROSS THE OUTPUT TERMINALS THE ENERGY STORED IN THE CAPACITORS MAY BE PRESENT FOR SEVERAL MINUTES AFTER THE POWER SUPPLY IS DE-ENERGIZED.

CAUTION  
SHOCK HAZARD

DISCONNECT THE INPUT POWER CONNECTOR BEFORE SERVICING THIS EQUIPMENT. DANGEROUS VOLTAGES ARE PRESENT IN THIS EQUIPMENT.

NOTE

ANY TYPE OF ALCOHOL IS SUITABLE FOR CLEANING THE BULB EXCEPT FOR ALCOHOL THAT HAS BEEN DENATURED USING PETROLEUM PRODUCTS. THE DENATURING AGENT WILL LEAVE A RESIDUE ON THE BULB.

12. Remove the protective cover from the globe and clean the quartz portion of the bulb completely with alcohol.
13. Reinstall the front cowl using the screws that were removed during disassembly.
14. Log the hour meter reading at installation.
15. Test the lamp operation and perform the output power adjustment procedure.

## REMOVING A "FROZEN" XENON BULB

1. Replace the front lamp holder retaining bolt to support the front of the bulb while freeing the bulb from the rear lamp holder.
2. Remove the fixture rear cover by removing the (10) screws around the perimeter of the sides using a #2 phillips screwdriver and pulling the cover straight back using the rear handle.
3. Disconnect the rear panel wiring connectors from the head wiring harness then set the cover aside.
4. Remove the plenum access cover by removing the (10) screws from around the cover using a #2 phillips screwdriver and remove the cover.

### **WARNING**

**DO EXERT ANY FORCE ON THE QUARTZ PORTIONS OF THE BULB WHILE ATTEMPTING TO FREE IT FROM THE REAR LAMP HOLDER!**

5. Reach around the rear lamp holder assembly and grasp the bulb by its rear ferrule and while lightly pulling the bulb back into the receiver block; turn the bulb in a clockwise direction until the bulb begins to rotate freely.
6. Once the bulb is free, do not remove it completely from the rear lamp holder.
7. Replace the plenum cover, rear panel wiring, and fixture rear cover.
8. Return to step 5 of :

“DISASSEMBLY PROCEDURE  
IF THERE IS A XENON BULB INSTALLED IN THE FIXTURE”

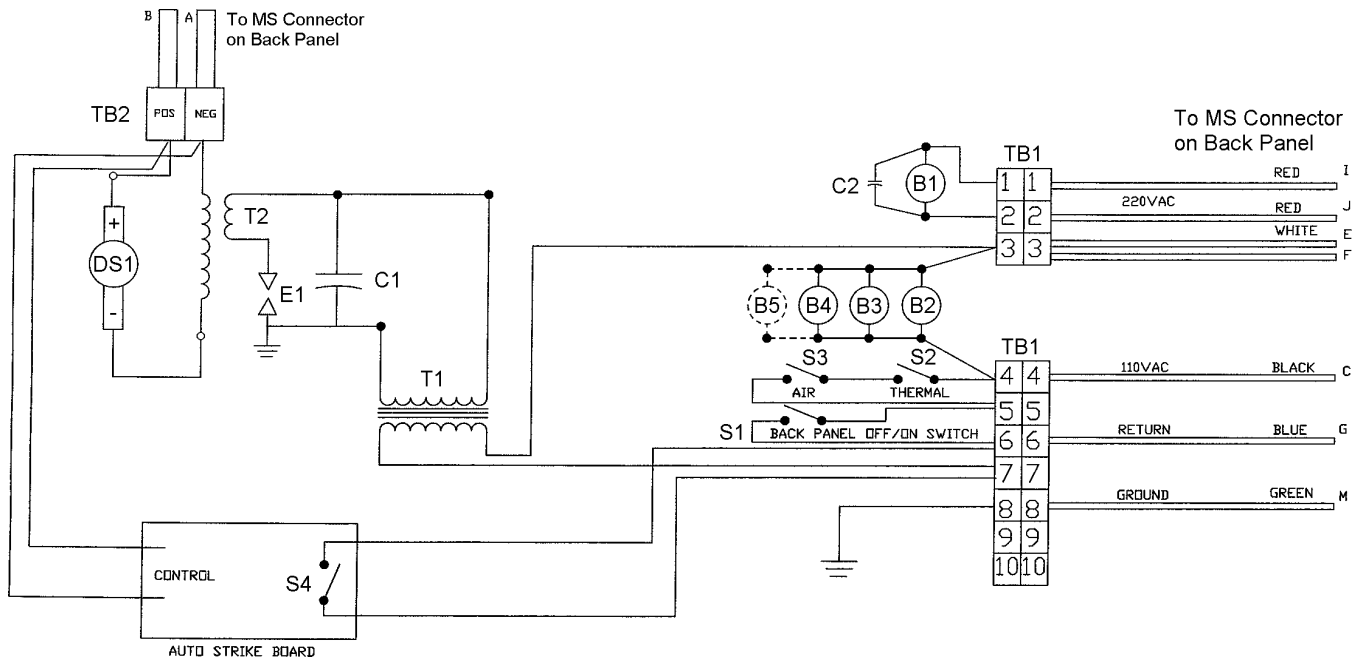
## OUTPUT POWER ADJUSTMENT PROCEDURES

### EQUIPMENT REQUIRED

- |                                  |                        |
|----------------------------------|------------------------|
| 1. Phillips screwdriver #2       | 3. Clamp-On DC Ammeter |
| 2. Flat-blade screwdriver, large | 4. Volt/Ohm Meter      |

### ADJUSTMENT INSTRUCTIONS

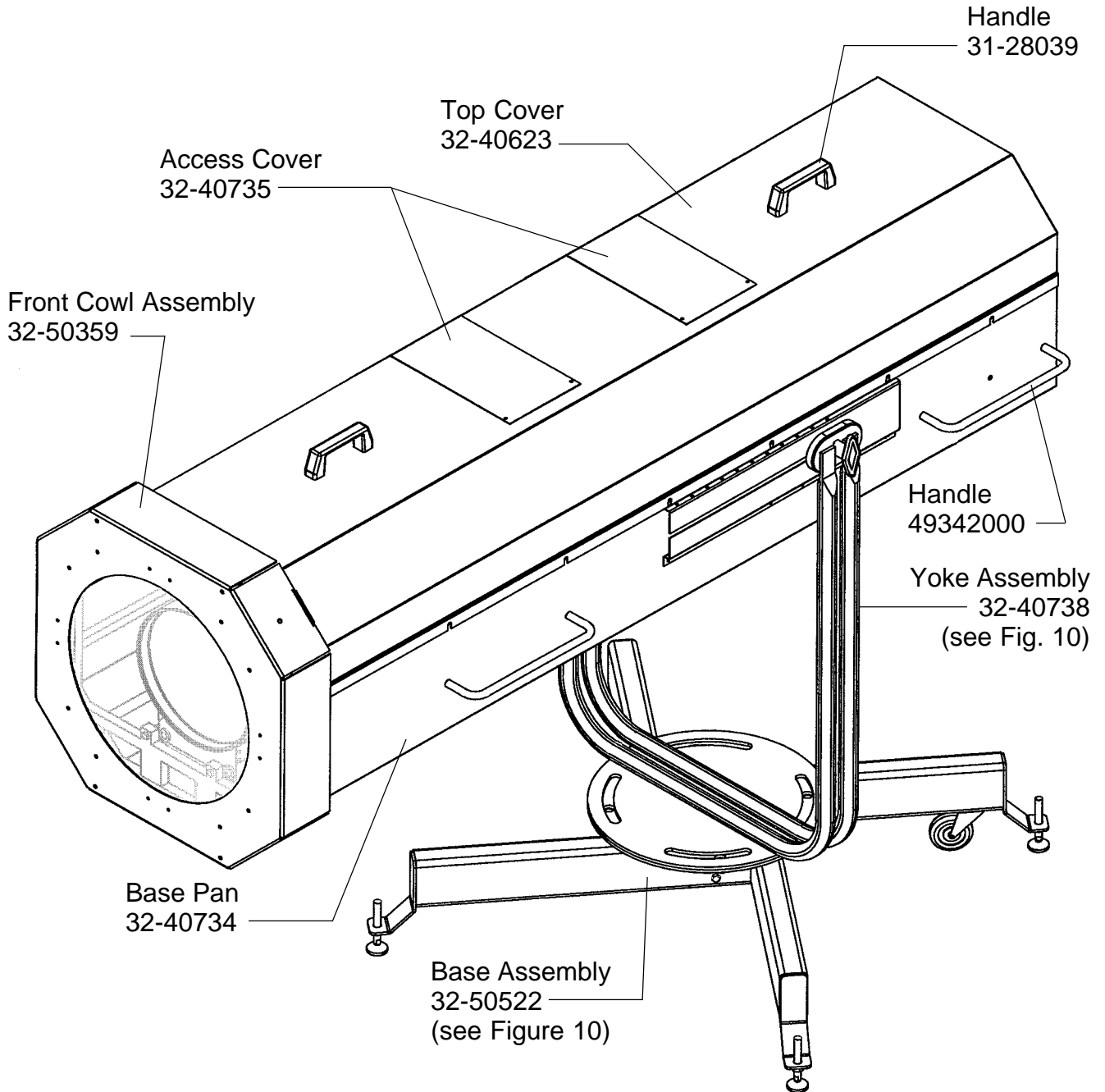
1. Remove the top cover of the P3 by loosening the (12) slot head screws and lifting the cover off.
2. Locate the heavy DC leads (red & black) connected to the MS receptacle at the bottom of the lamp head rear panel. Clamp (1) of the leads with the DC ammeter.
3. Turn on the power supply and ignite the lamp. Exercise all due caution taking readings in a "Power ON" condition!
4. Using the ammeter, measure the output current of the power supply.
5. If the power level is over 160 amperes, immediately turn off the light and decrease DC output (see Xenon Power Supply Manual)
6. If the power level is less than 140 amperes, allow the light to run at least 5 minutes before making any adjustments.
7. If the power level is at or near 150 amperes and the output current is less than 155 amperes, no adjustment is necessary.
8. Measure the DC voltage while the bulb is operating. A 7000 watt bulbs should display an arc voltage of 43-49 volts DC. A voltage reading below this level, particularly in the presence of a high current reading, may indicate a leaking bulb.
9. It is not unusual for the quartz envelope of the xenon bulb to darken after prolonged operation. To compensate for the loss of light, the DC output may be increased as the xenon bulb ages. DO NOT exceed the bulb manufacturer's maximum rated current level (usually 160 amperes). See the test documents packaged with the xenon bulb.



**PARTS LIST**

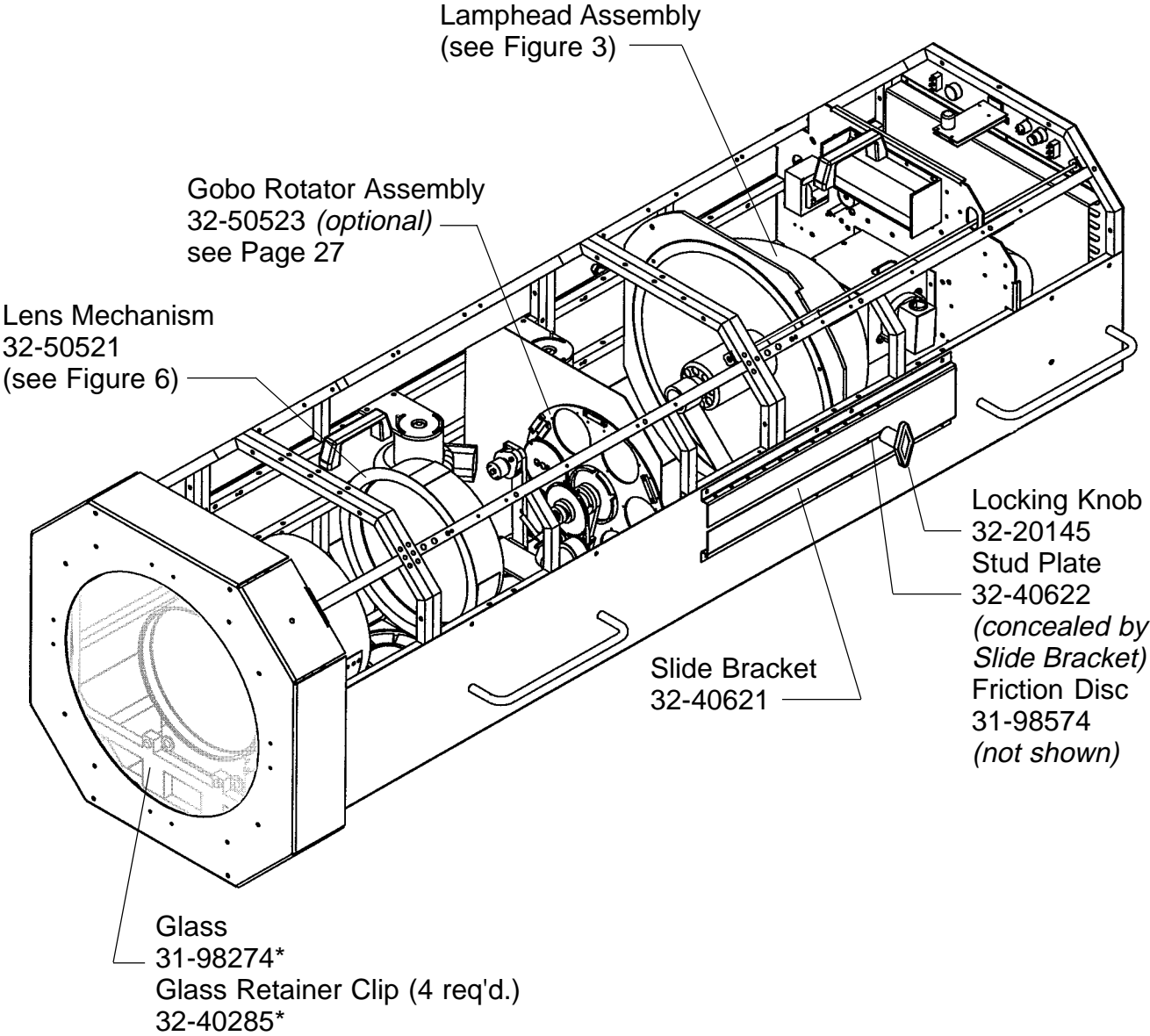
Ref. Desig.	Part No.	Description
B1	31-03039	Blower, Squirrelcage; 220 V.AC, 50/60 Hz.
B2,3	71220000	Blower, Muffin; 110 V.AC, 50/60 Hz.
B4,5	44191000	Blower, Squirrelcage; 110 V.AC, 50/60 Hz.
		NOTE: B5 <i>Optional</i>
C1	39110000	Capacitor, 24 pf, 20k VDC
C2	31-08177	Capacitor, Motor Start; 4 $\mu$ f
DS1	31-30243	Xenon Bulb, 7 kW; LTIX-7000W-XT
E1	31-61018	Spark Gap
S1	91-61005	Switch, ON-OFF
S2	31-61007	Thermal Switch
S3	31-61078	Switch, Air Pressure
S4	40913000	Auto Strike PC Board Assembly
T1	32-50231	High Voltage Transformer
T2	32-50053	RF Coil
TB1	31-62011	Terminal, (10 req'd.)
-	31-62012	End Block, Terminal Strip
TB2	31-62025	Terminal Board, (2) Position

FIGURE 1



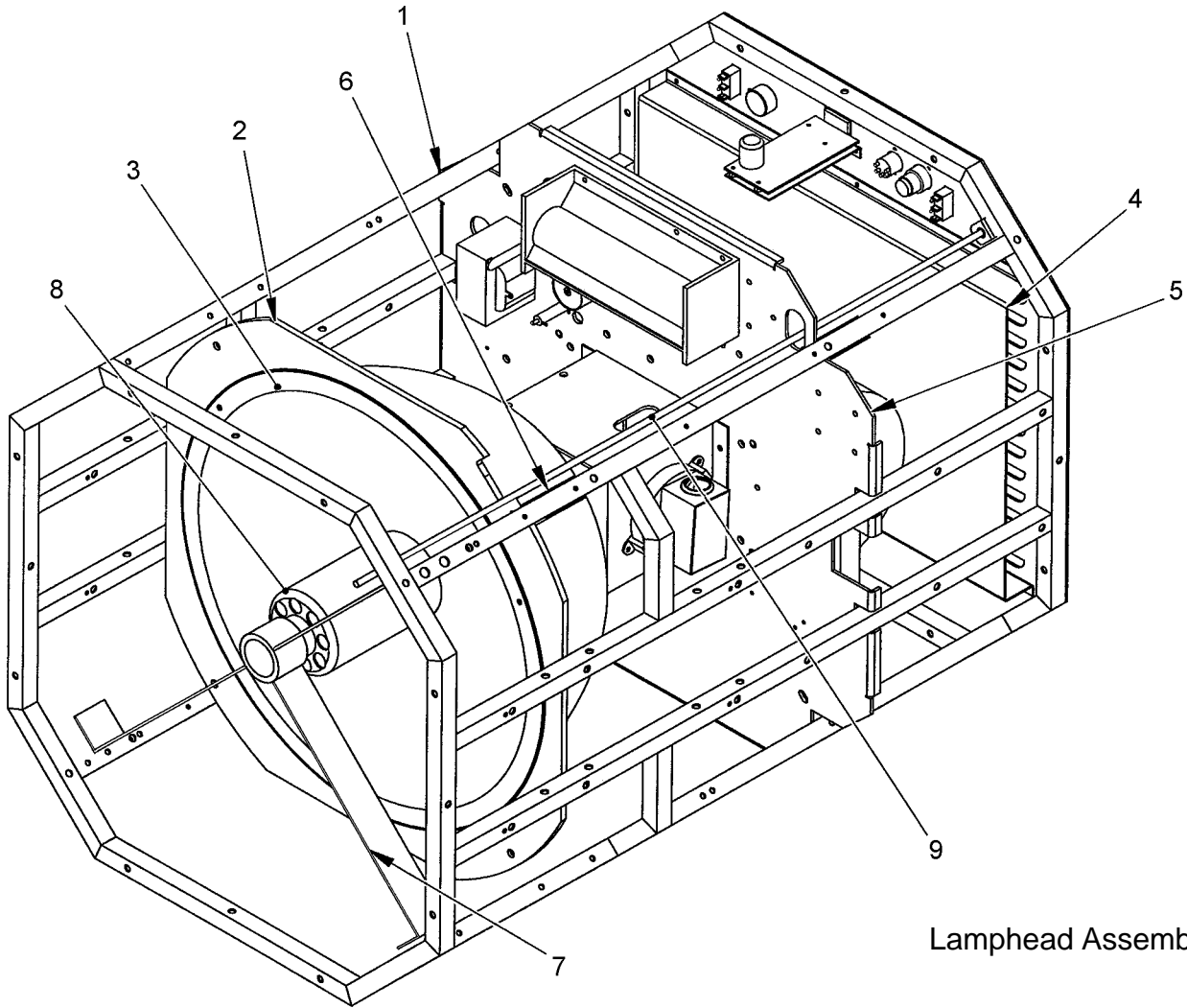
**NOTE:** After transporting the P3 unit to its desired position, lower all (4) leveling feet to shift *all* weight from Casters. Caster brakes alone may be inadequate to prevent unintended movement.

FIGURE 2



\* included with 32-50359 (Fig. 1)

**FIGURE 3**



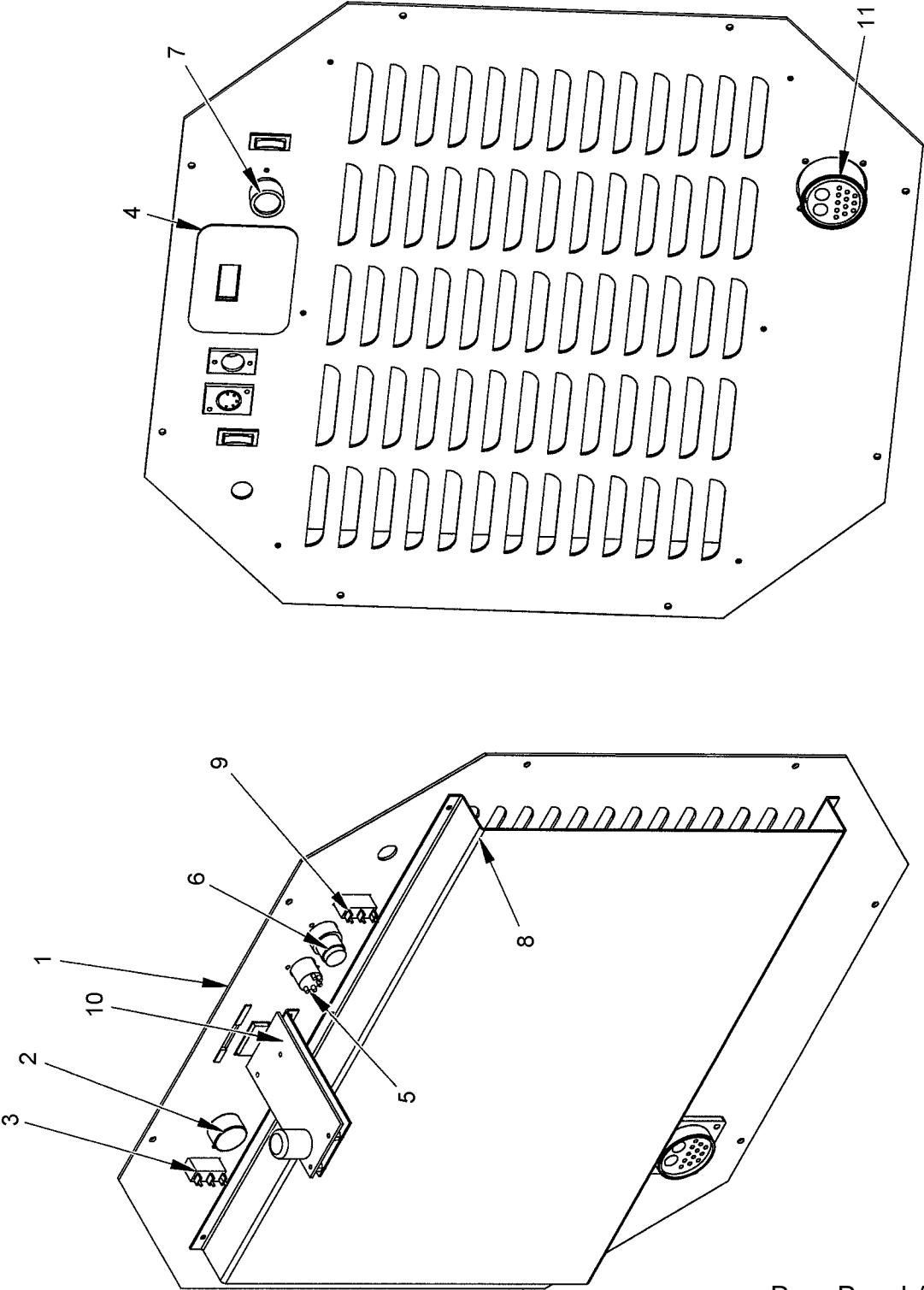
**Lamphead Assembly**

**PARTS LIST**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	32-40601	Frame, Welded Assembly
2	32-20236	Reflector Mount
3	31-98983	Reflector
-		Mounting Screw
4	32-50538	Back Panel Assembly (see Figure 4)
5	32-50540	Bulkhead Assembly (see Figure 5)
6	31-98679	Clip (2 req'd.)
7	32-50401	Front Bulb Support Spyder
-		Spyder Mounting Screw
-	31-61007	Thermal Switch (S2), not shown
-		Switch Mounting Screw
8	32-50052	Front Lamp Holder Assembly
-	31-30243	Xenon Bulb, 7 kW (not shown)
9	32-50252	Bulb Focus Rod



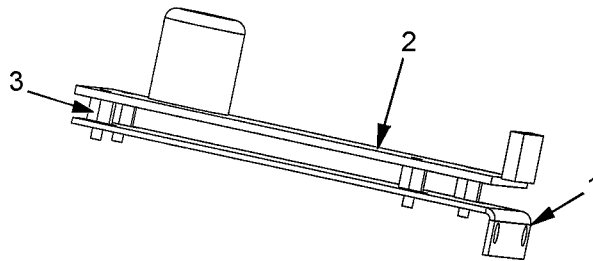
FIGURE 4



Rear Panel Assembly

**PARTS LIST**  
**Figure 4**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	32-50538	Back Panel Assembly (items 2-11)
2	32-70350	Potentiometer Assembly
3	91-61005	Switch (S1)
4	31-98889	Overlay
5	32-70123	XLR Assembly
6	32-70124	XLR Assembly
7	11-28021	Knob
8	32-40049	Air Baffle Plate
9	91-61008	DMX Switch
10	32-70357	DMX Relay Assembly
11	32-70356	MS Connector & Cable Assembly



**32-70357 DMX ASSEMBLY**

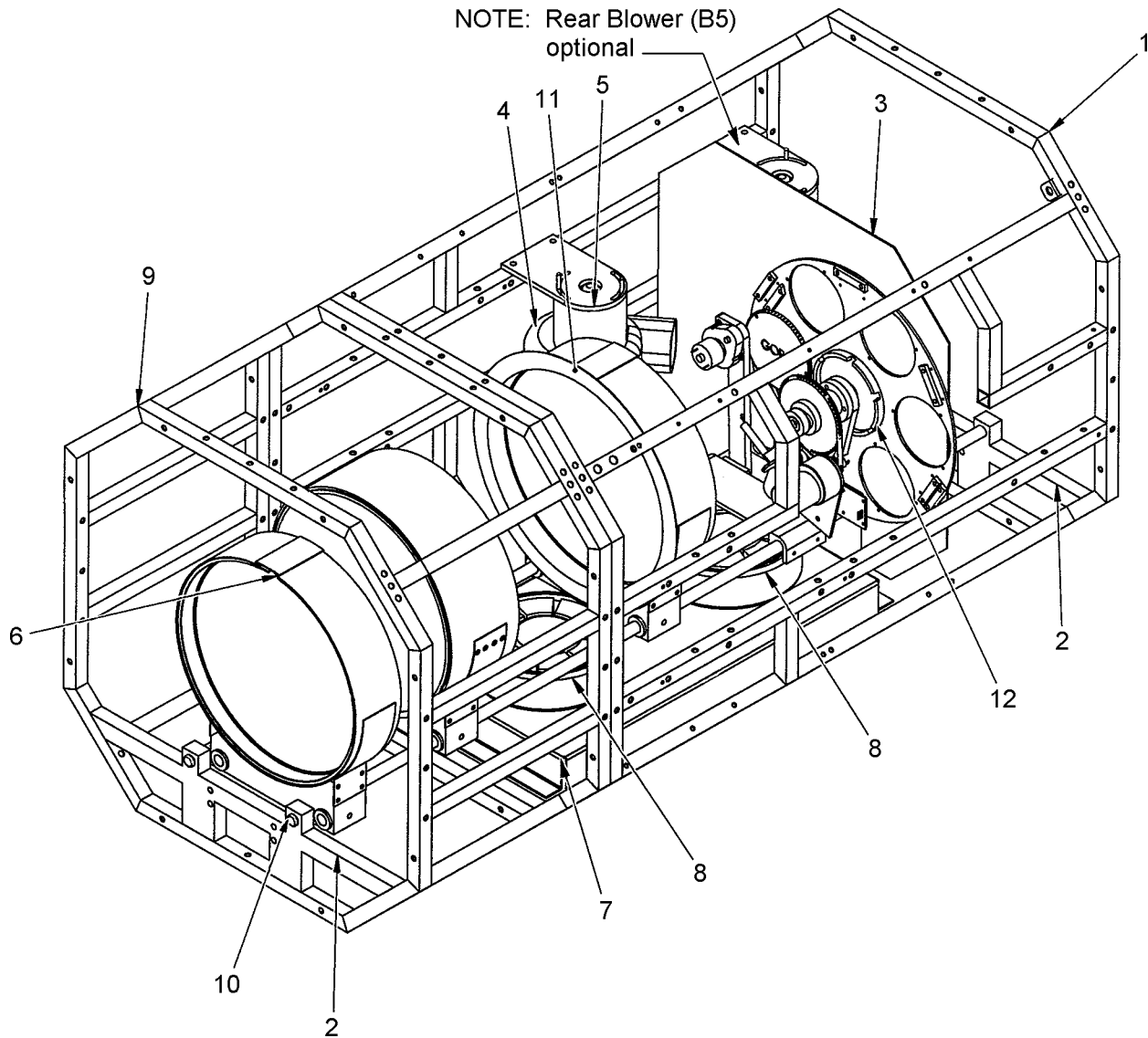
<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	23-40365	DMX Mount
2	32-70348	DMX Board
3	31-98745	Stand-Off, 4-40 x 1/4" (4 req'd.)



**PARTS LIST**  
**Figure 5**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	32-40740	Bulkhead Plate
2	31-22010	Blower Gasket
3	31-02039	Squirrelcage Blower (B1), 230 V.AC, 50/60 Hz.
-		Mounting Screw
4	31-62025	Terminal Board (TB2)
-		Mounting Screw
5	32-50053	RF Coil (T2)
-		Mounting Screw
6	32-50231	High Voltage Transformer (T1)
-		Mounting Screw
7	39110000	Ignition Capacitor (C1); 24 pf, 20k VDC
8	31-62011	Terminal (10 req'd.) for TB1
-	31-62012	Terminal Strip End Block
-		Mounting Screw
9	31-08077	Motor Start Capacitor (C2), 4µf
10	32-70347	Gobo Rotator Control PC Board (optional)
11	32-70346	Transformer (optional; with Item 10)
12	40913000	Auto Strike PC Board Assembly (S4)
13	32-50050	Bulb Receiver, Threaded
13a	31-98076	Receiver Support Bracket (2 req'd.)
-	32-50346	Bulb Receiver Assembly (Items 13 & 13a)
14	31-61018	Spark Gap (E1)
15	31-98182	Shock Mount Bushing (4 req'd.)
16	32-40294	Insulated Cover Plate (2 req'd.)
16a	32-40438	Plenum
17	31-61078	Pressure Switch (S3)
-	41-51915	Switch Mounting Screw, 8-32 x 3/8" Pan Head
17a	32-40285	Air Pressure Hose
17b	31-20001	Hose Barb (2 req'd.)
-	32-50344	Air Plenum Assembly (Items 16, 16a,17)

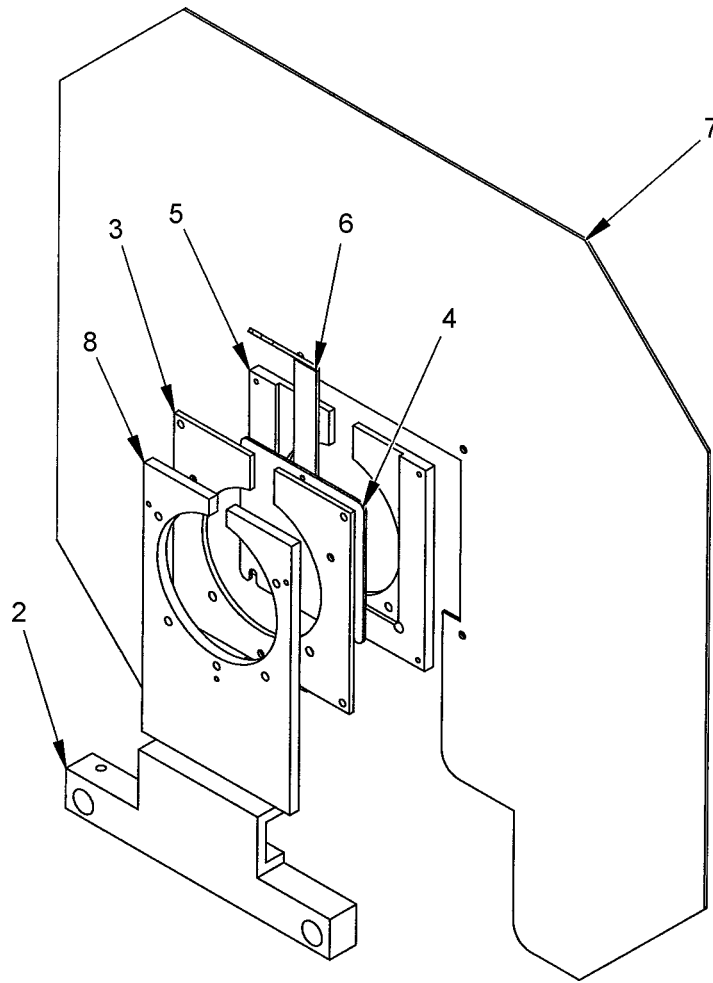
FIGURE 6



**PARTS LIST**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	32-40602	Frame, Welded Assembly
2	32-20241	Mounting Bracket, Rails (2 req'd.)
3	32-50520	Gobo Mount (see Figure 7)
4	44191000	Squirrelcage Blower (B4; B5 optional)
5	32-20232	Blower Mounting Plate (2 req'd.)
6	32-50521	Front (Positive) Lens Assembly (see Figure 8)
7	32-40614	Blower Mount
8	71220000	Blower (B2,3; 2 req'd.)
9	32-40600	Frame Extension, Welded Assembly
10	32-20400	Rail (2 req'd.)
11	32-50536	Rear (Negative) Lens Assembly (see Figure 9)
12	32-50523	Gobo Rotator Assembly (optional)

**FIGURE 7**

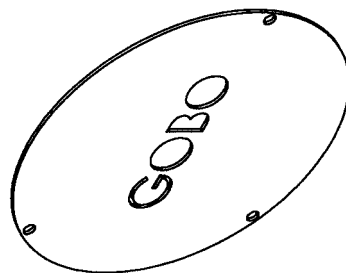
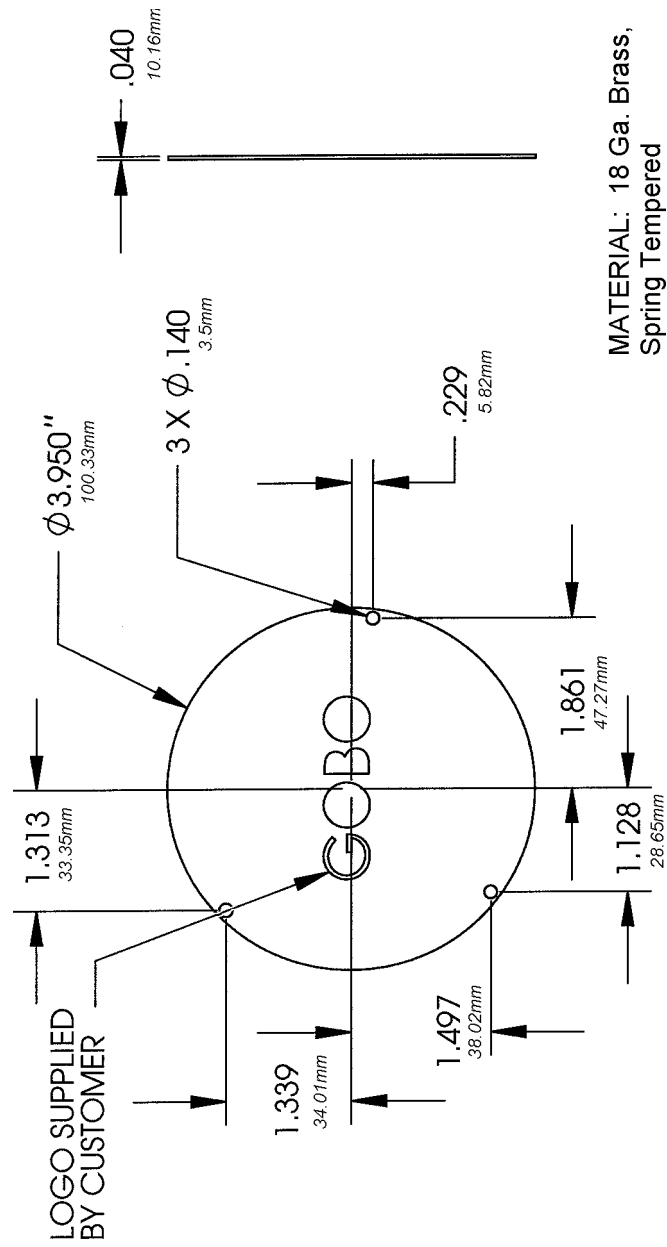


**PARTS LIST**

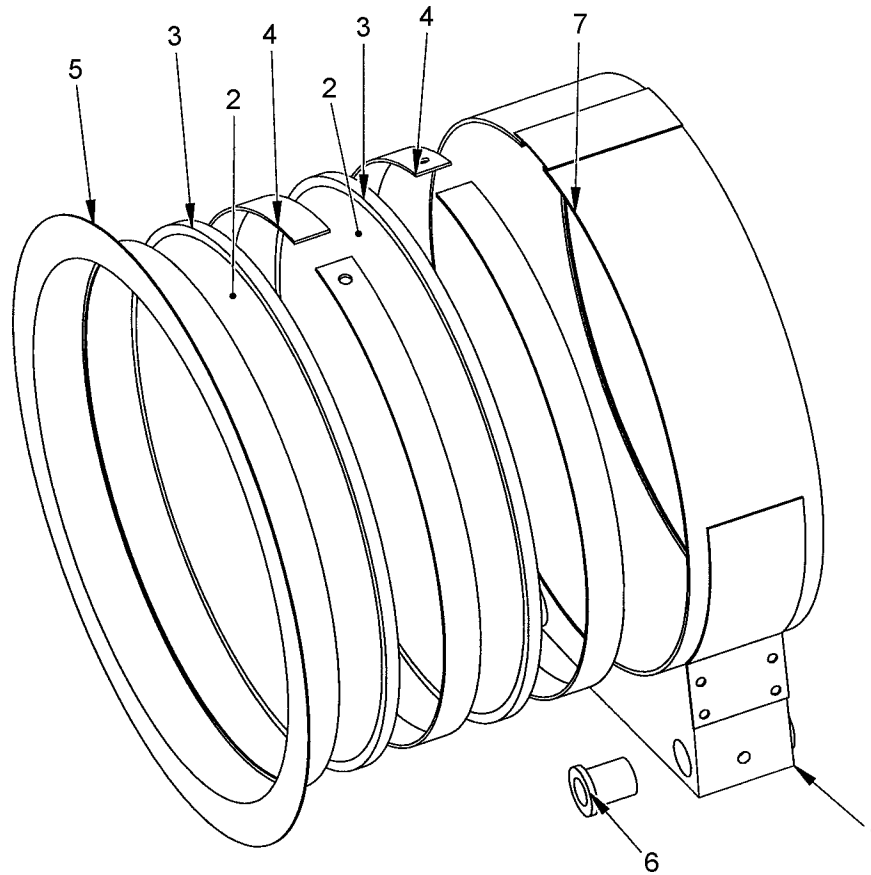
<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	32-50520	Gobo Mount Assembly (Items 2-8)
2	32-20239	Bracket, Gobo Mount
3	32-40605	Back Plate
4	32-40606	Gobo (see Figure 7a)
5	32-20240	Front Plate
6	32-40604	Pull Finger
7	32-40603	Light Shield
8	32-00044	Lens Mount

Gobo Mount Assembly

FIGURE 7a



**FIGURE 8**



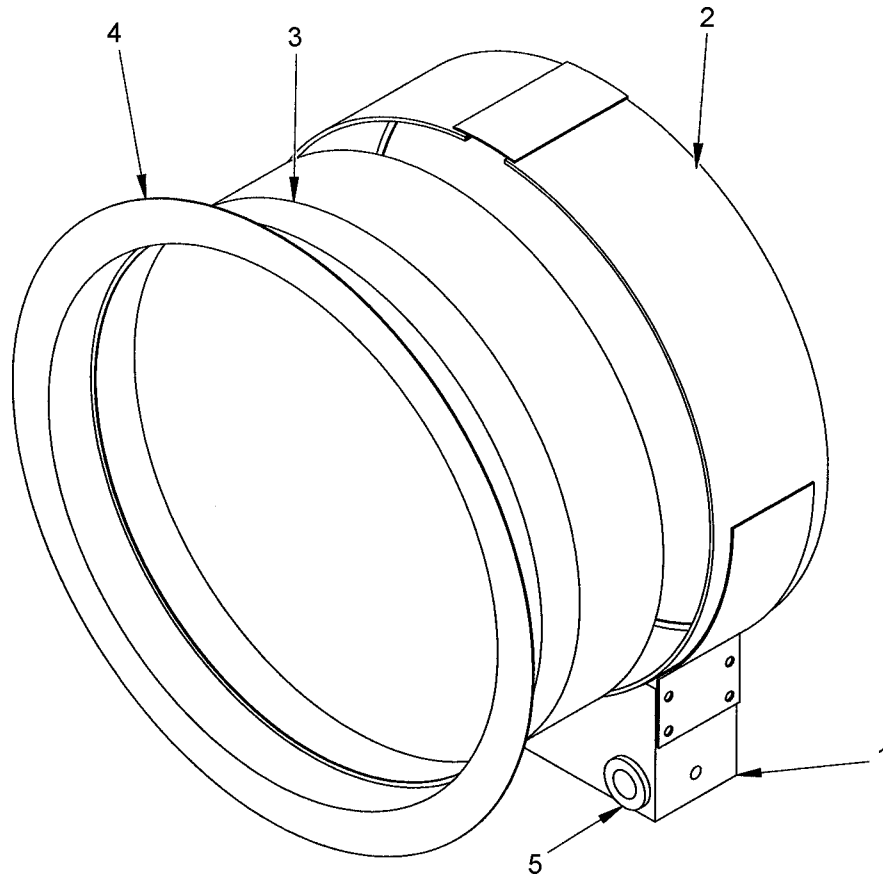
**Front Lens Assembly**

**PARTS LIST**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	32-20247	Lens Holder Base
2	51408000	Lens (2 req'd.)
3	51418000	Rubber Edge
4	32-40607	Spacer (2 req'd.)
5	51417000	Lens Retainer
6	31-07018	Bushing (4 req'd.)
7	32-40610	Lens Ring, Welded Assembly



**FIGURE 9**

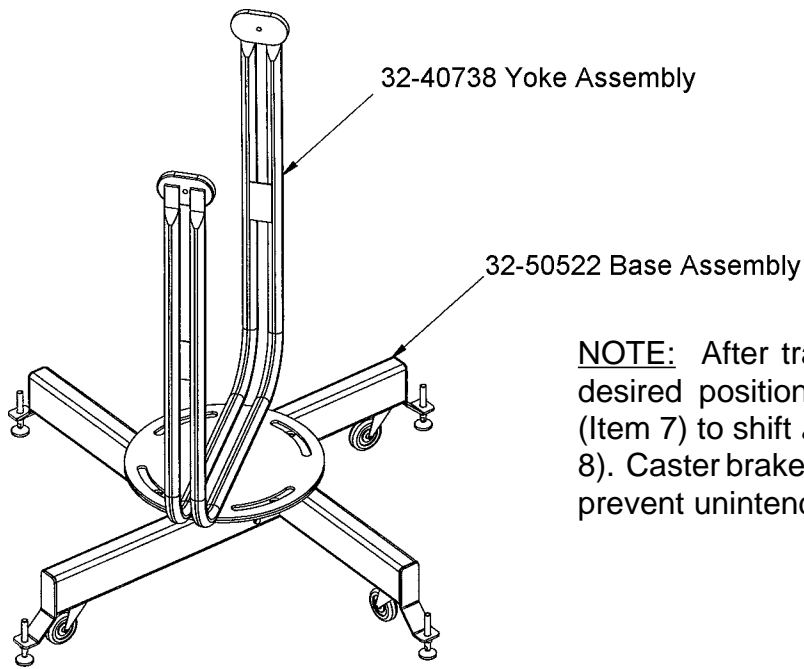


**Negative Lens Assembly**

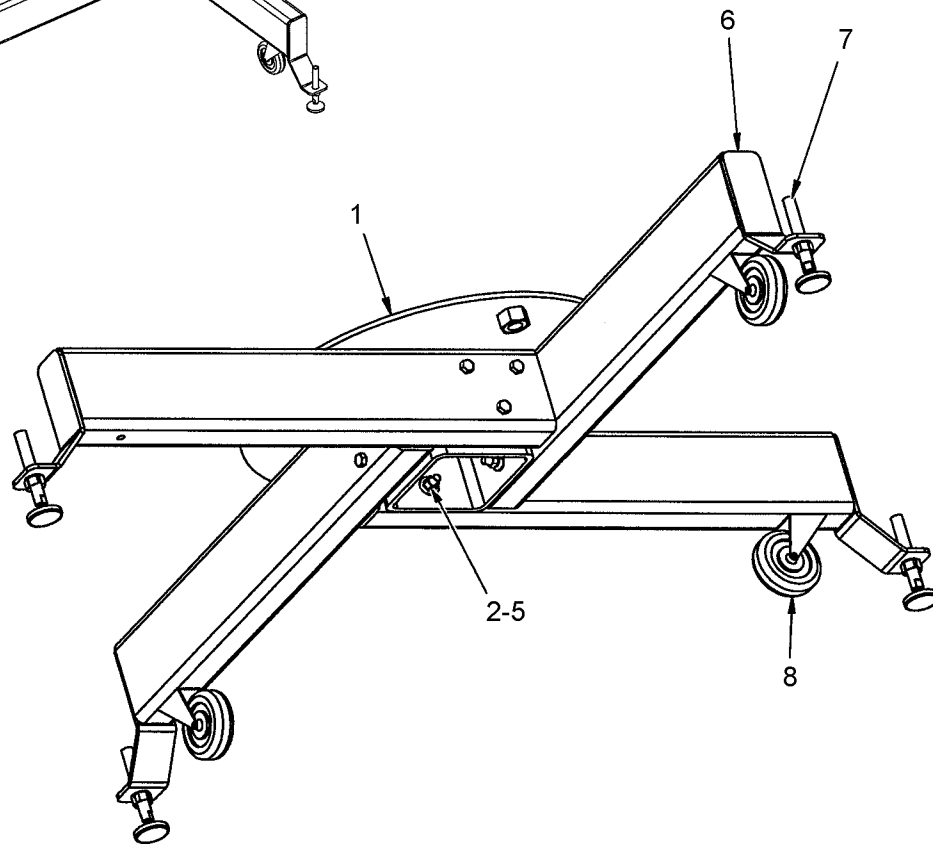
**PARTS LIST**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	32-20247	Lens Holder Base
2	32-40610	Lens Ring, Welded Assembly
3	31-98139	Negative Lens
4	51417000	Lens Retainer
5	31-07018	Bushing (4 req'd.)

**FIGURE 10**



**NOTE:** After transporting the P3 unit to its desired position, lower all (4) leveling feet (Item 7) to shift *all* weight from Casters (Item 8). Caster brakes alone may be inadequate to prevent unintended movement.

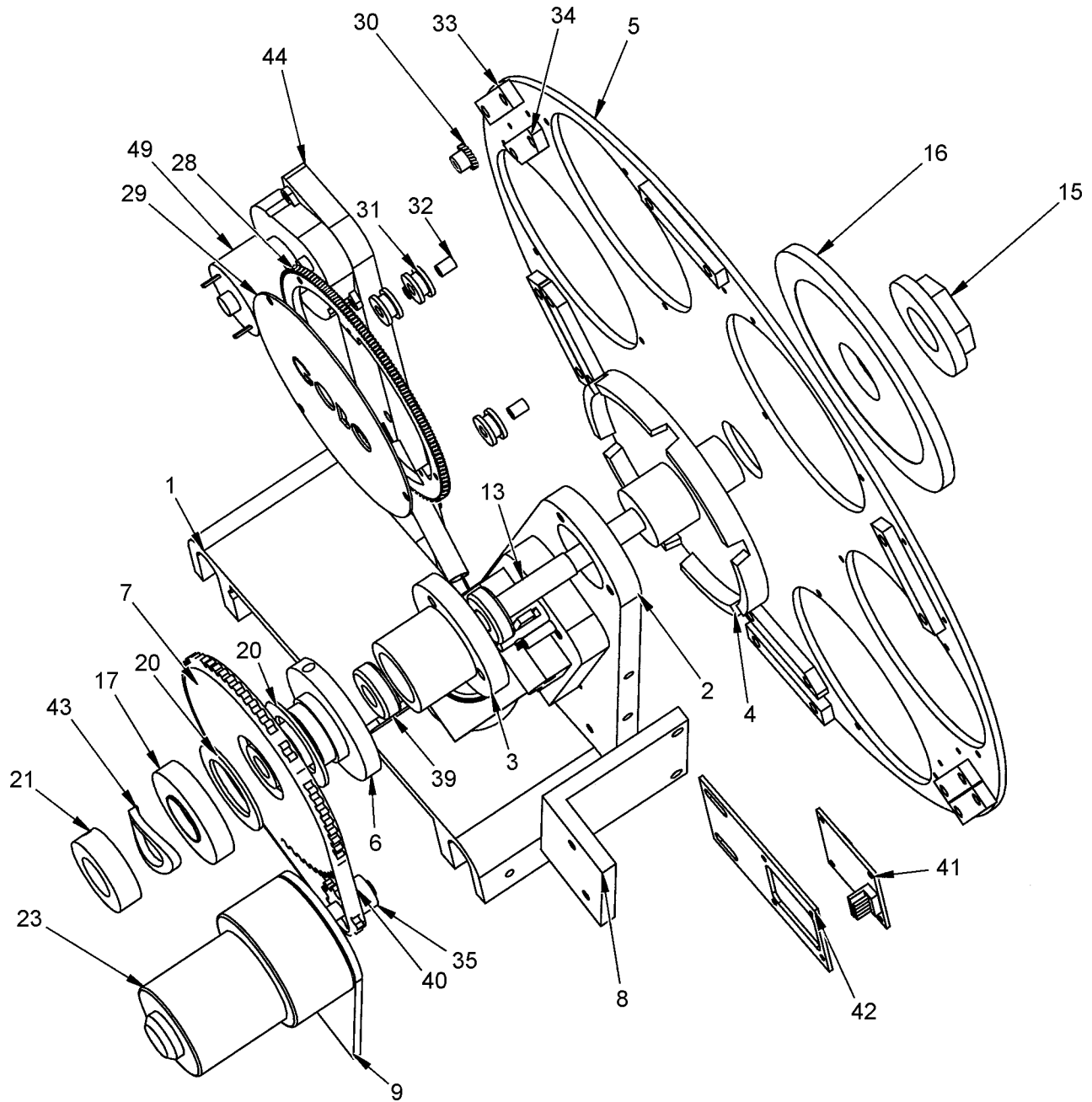


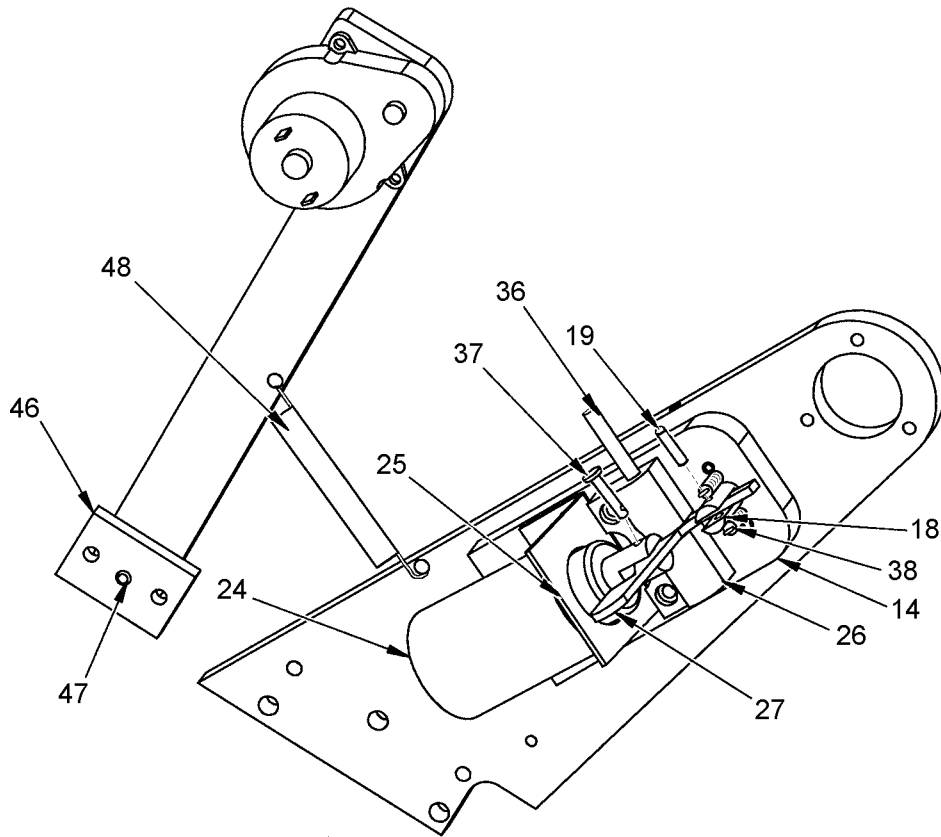
**PARTS LIST**

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	32-40612	LowBoy Plate Assembly
2	01406000	Hex Nut, 5/16-18 (12 req'd.)
3	00877000	Lockwasher, 5/16" (12 req'd.)
4	41-70005	Flatwasher, 5/16" (12 req'd.)
5	41-51993	Screw, 5/16-18 x 3" Hex Head (12 req'd.)
6	32-40733	Base Leg, Welded Assembly (4 req'd.)
7	71184000	Leveling Foot (4 req'd.)
8	11-09011	Caster, with Brake

**GOBO ROTATOR**  
Assembly No. 32-50523

The optional Gobo Rotator Assembly allows motorized and remote control over the selection and bidirectional spin of any of (6) pre-loaded gobo patterns. A DMX Control Module is included with the Gobo Rotator, and DMX "In" and DMX "out" connectors are available on the lamphead back panel. Detailed instructions regarding Gobo Rotator operation and DMX control follow the Parts List and Wiring Diagrams.

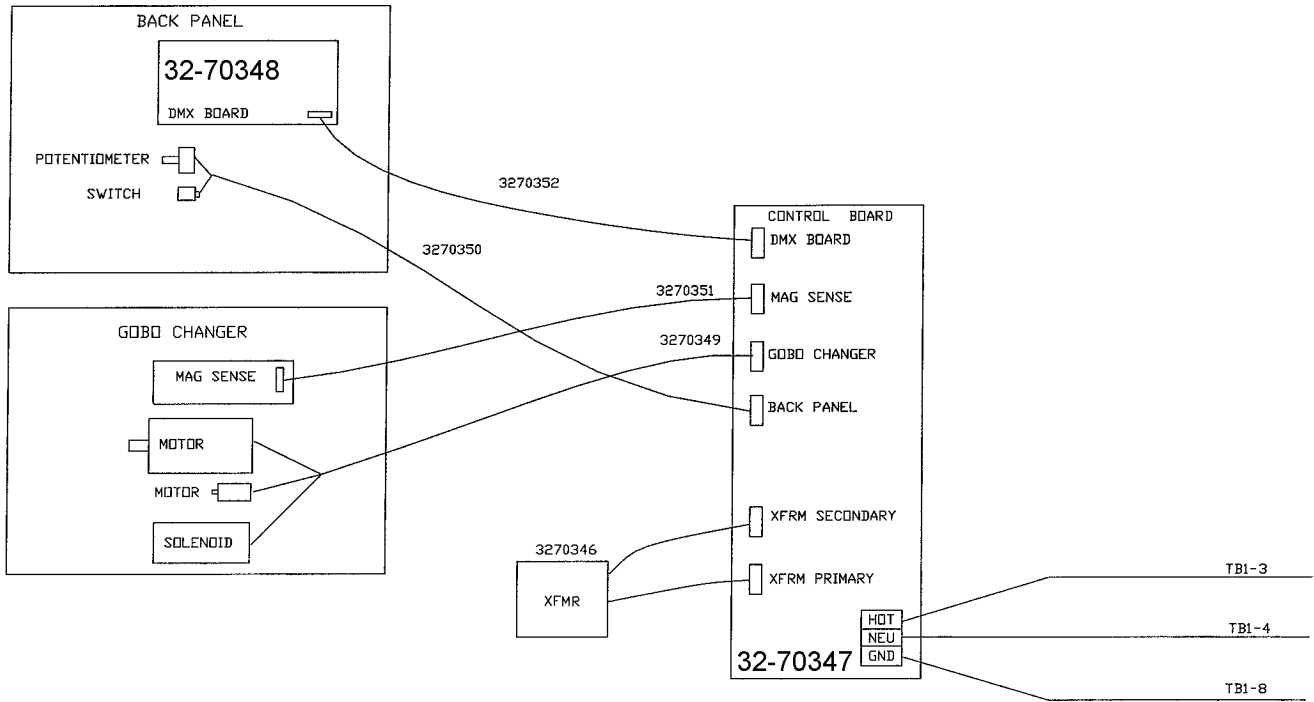


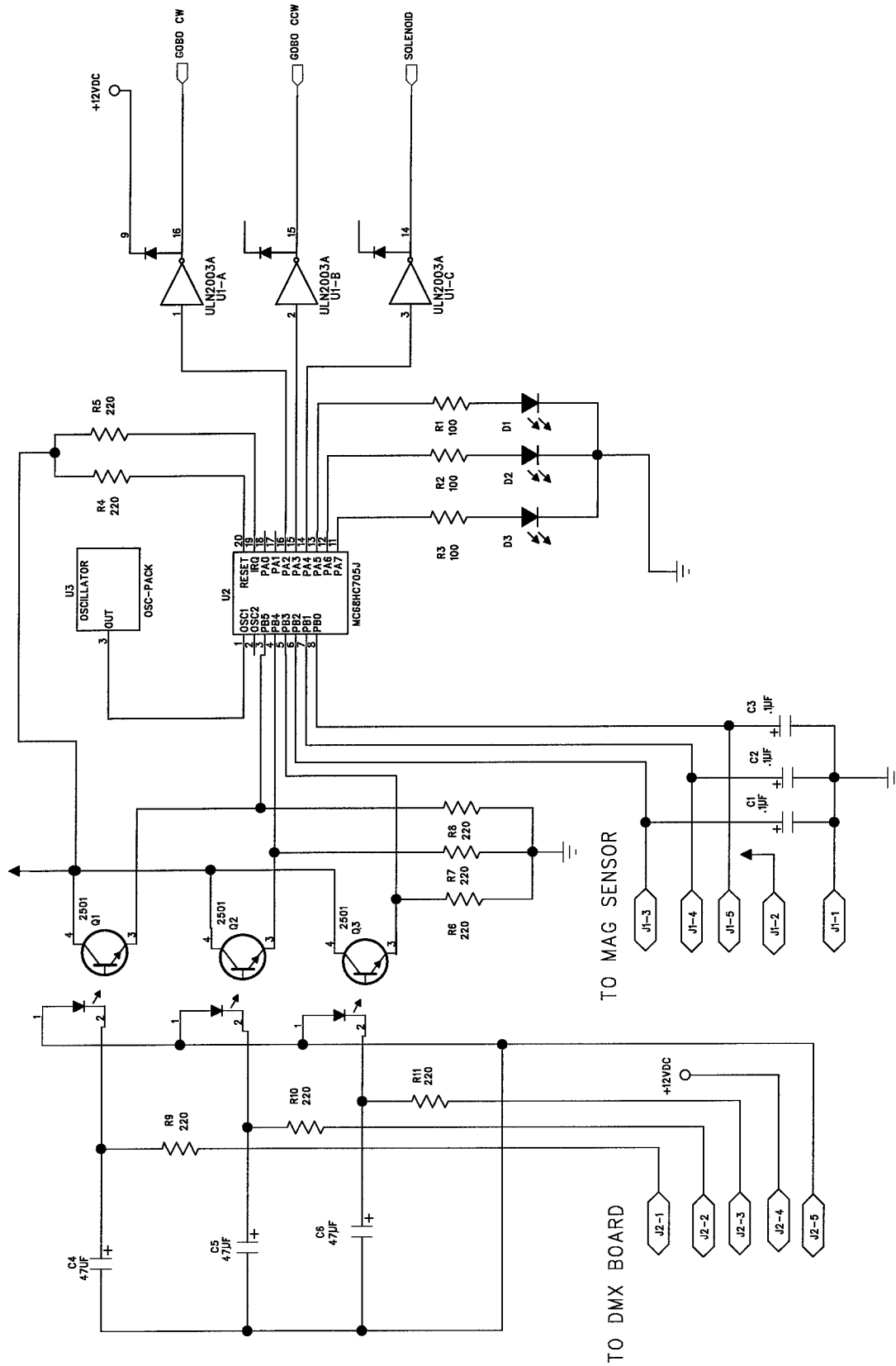


### PARTS LIST

Item	Part No.	Description	Item	Part No.	Description
1	32-20248	Rail Mount Bracket	27	52-40220	Lock Lever
2	32-20245	Arm	28	32-20414	Gobo Gear
3	32-20249	Bearing Hub	29	31-98140	Gobo (ref.)
4	32-20401	Lock Hub	30	82-20371	Gear
5	32-40732	Mounting Plate	31	32-20415	Roller
6	32-20402	Sprocket Hub	32	32-20416	Guide (3 req'd.)
7	32-20419	Sprocket, (48) Tooth	33	51-61017	Magnet (8 req'd.)
8	32-20403	Angle Bracket	34	32-20417	Magnet (3 req'd.)
9	32-20404	Motor Mount	35	31-59026	Sprocket, (10) Tooth
13	32-20407	Main Shaft	36	21-37014	Dowel Pin
14	32-20409	Solenoid Mount	37	51-98254	Clevis Pin
15	32-20410	Stop Nut	38	51-58057	Expansion Spring (2 req'd.)
16	32-20412	Gobo Washer	39	21-04023	Bearing (2 req'd.)
17	32-20411	Thrust Collar	40	21-98301	Roller Chain
18	51-37030	Lock Pin	41	32-70327	Magnet Sensor PC Board
19	52-20616	Pin	42	32-20418	PC Board Mount
20	32-20420	Washer (2 req'd.)	43	31-70004	Spring Washer
21	32-20413	Collar Nut	44	32-00088	Pivot Arm
23	51-33030	Gear Motor, Rotation	46	32-00087	Pivot Block
24	32-70355	Solenoid	47	41-51530	Shoulder Bolt
25	52-40276	Solenoid Bracket	48	91-58003	Expansion Spring
26	52-20757	Lock Mount	49	32-70354	Spin Motor

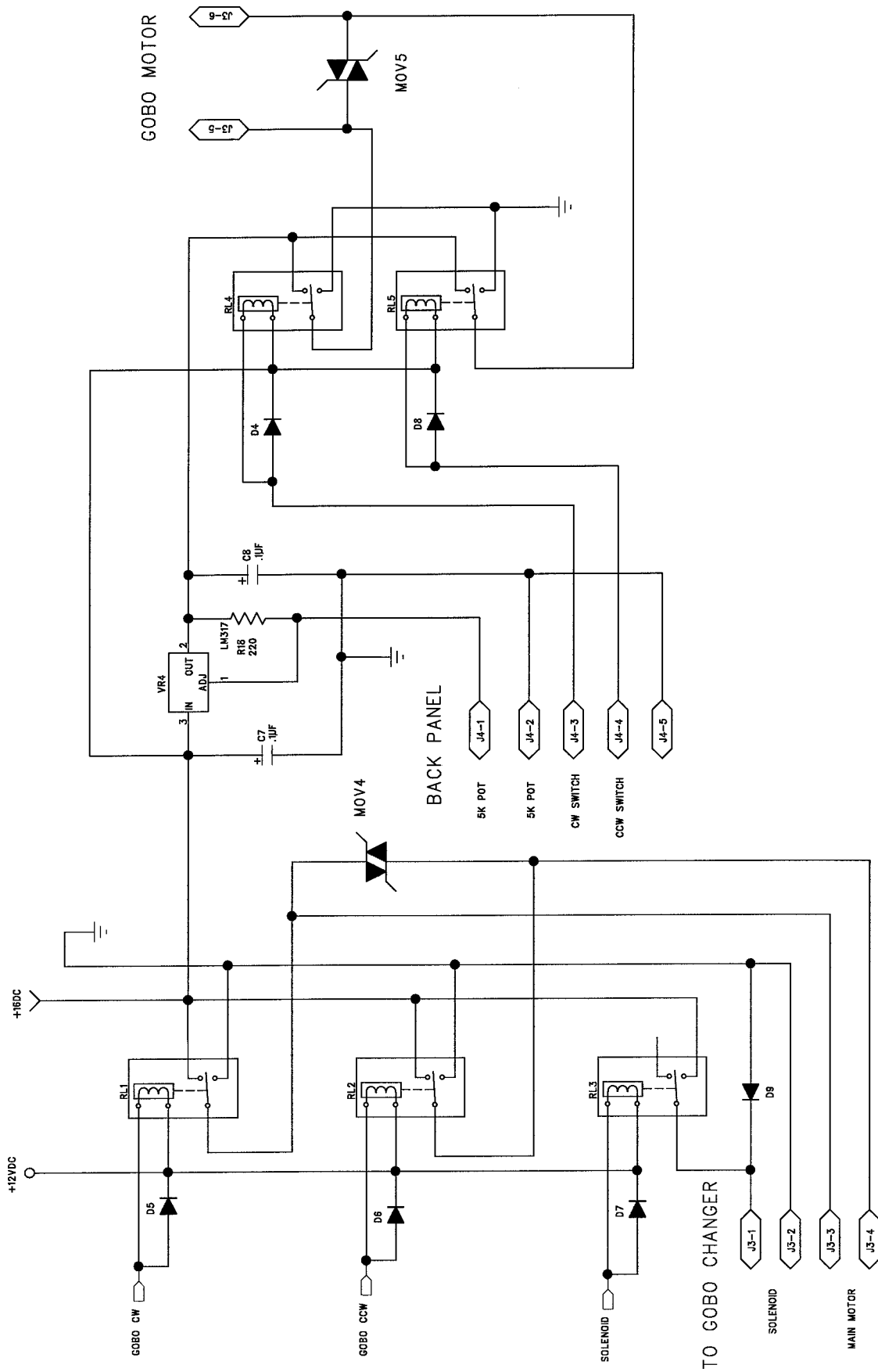
**GOBO ROTATOR with DMX CONTROL  
COMPONENT LAYOUT  
& Harness Routing**





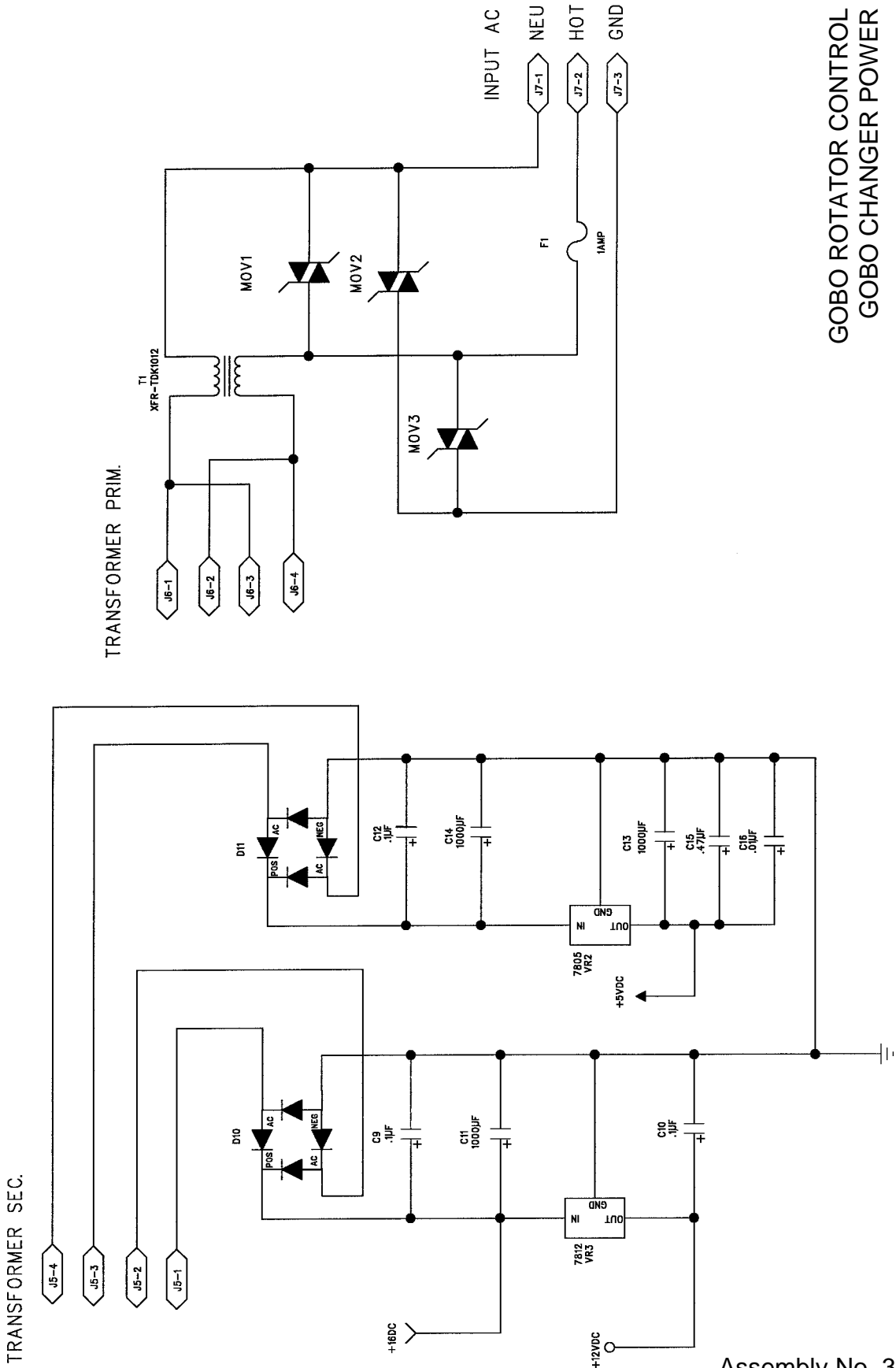
GOBO ROTATOR CONTROL  
WIRING DIAGRAM

Assembly No. 32-70347  
Drawing 1 of 3



GOBO ROTATOR CONTROL  
GOBO CHANGER RELAY

Assembly No. 32-70347  
Drawing 2 of 3

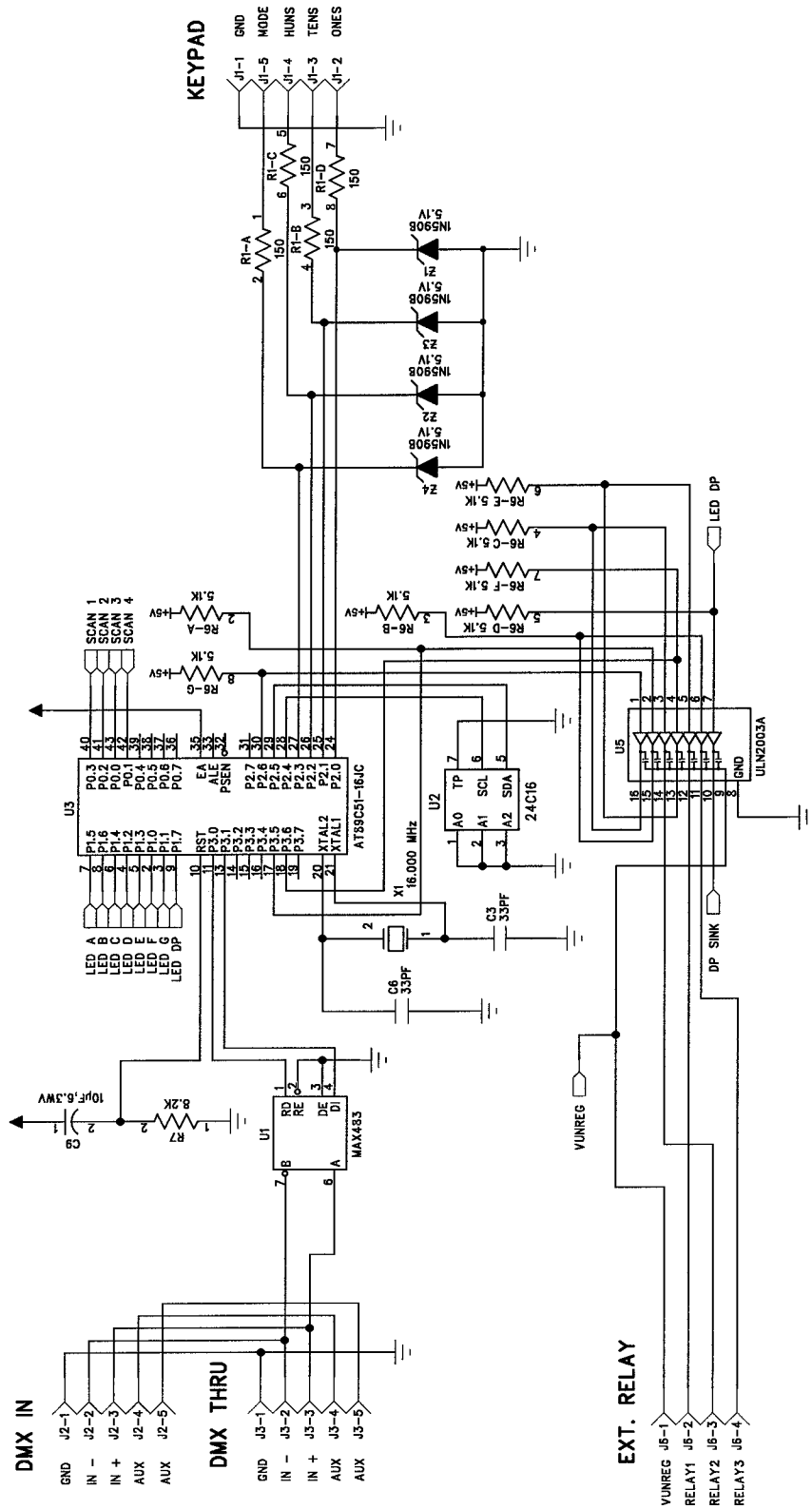


GOBO ROTATOR CONTROL  
GOBO CHANGER POWER

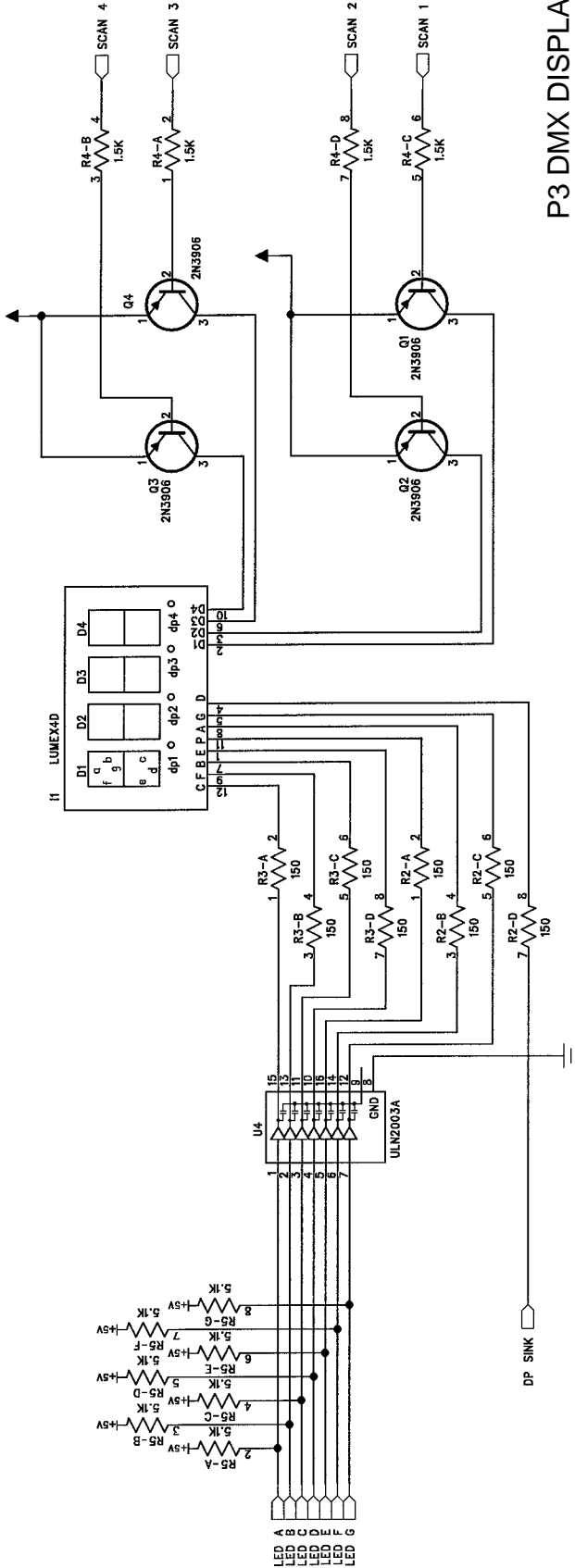
Assembly No. 32-70347  
Drawing 3 of 3



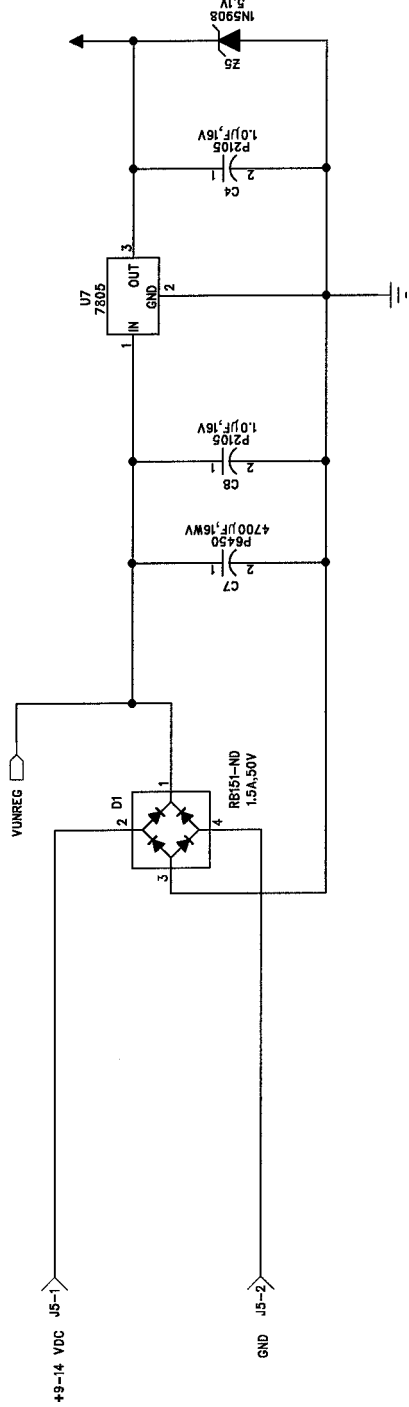
P3 DMX PROCESSOR



Assembly No. 32-70348  
Drawing 1 of 3



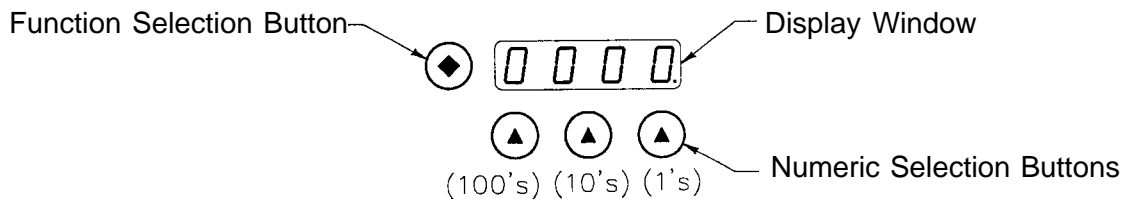
P3 DMX DISPLAY  
 Assembly No. 32-70348  
 Drawing 2 of 3



P3 DMX POWER SUPPLY  
 Assembly No. 32-70348  
 Drawing 3 of 3

## FUNCTION DISPLAY & RELATED BUTTONS

The P3 has (2) displays on the rear panel; the left display for ON/OFF and the right display for Gobo Selection. The displays and related buttons serve to track lamp life in hours and perform DMX functions. Whenever the fixture is turned ON, the display will remain active for approximately 5 minutes. This time will extend to approximately 5 minutes after the *last function or selection input* is made to the fixture (after it first turned ON) and additional control interfacing is necessary. After approximately 5 minutes, the display will extinguish and remain in a "sleep" mode. The fixture will remain like this until the selection button is depressed once. If it is necessary to see the displays (read lamp hours or to change the fixture address), press the FUNCTION SELECTION BUTTON and the display will reactivate. After the initial 5 minutes the fixture is ON, the displays will remain active for 30 seconds *after the last function or selection button is depressed* before returning to the "sleep" mode.



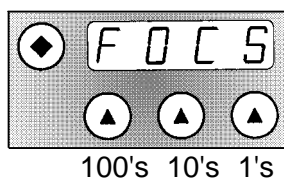
### Manual Operational Mode

The manual operation will allow the fixture to be used in a conventional manner where power to the fixture is manually switched ON for "stand alone" use. This is done by pressing the power switch/ circuit breaker on the xenon power supply to the ON position.

1. Plug the power cord into a power source and push the power switch/ circuit breaker to the ON position.
2. The display will energize and show the TIMER mode - select ADDRESS mode by depressing the FUNCTION SELECTION BUTTON (diamond). The display should read *FOCS* or *GOB1*.
3. The fixture displays are initially preset at the factory to the address "*FOCS*" or "*GOB1*" when it arrives. If this address is not displayed, press the NUMERIC SELECTION BUTTONS (triangles) until the display reads "*FOCS*" or "*GOB1*."
4. Press the Numeric Selection Buttons indicated below to perform MANUAL functions.

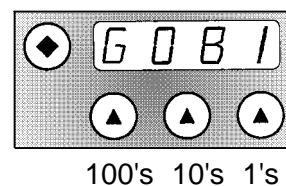
NOTE: The NUMERIC SELECTION BUTTONS scroll with ascending numbers, from "0" to "9" before recycling to "0."

Left Display Window for *Manual Mode*



- 100's Lamp ON/OFF (toggle)
- 10's Gobo CLOCKWISE
- 1's Gobo COUNTERCLOCKWISE

Right Display Window for *Manual Mode*



Press "1's" button to select another gobo. Illustration shows "Gobo 1" selected; pressing "1's" button once will select "Gobo 2."

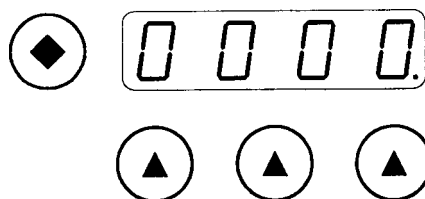
## LAMP HOUR METER MODE

The display can be changed to a resetable hour meter that keeps a memory of total elapsed lamp hours while ignited. This feature is useful in determining when a lamp should be replaced. Output and performance will dramatically decrease while the possibility of lamp failure will increase if the lamp is allowed to operate past its maximum rated life.

The HOUR METER mode will *always* display 4 digits, between "0000" and "6535" (*unlike the DMX ADDRESS mode that will display an "A" character followed by 3 digits*). The timer can reach a maximum "6535" hours, and will rollover to "0000" when it is exceeded.

1. Plug the power cord into a power source and push the power switch/ circuit breaker to the ON position.
2. The display will energize and show the HOUR METER mode. The display will show 4 digits total, "0000" to "6535". The fixtures should arrive from the factory preset at "0000" when the HOUR METER mode is active.
3. To reset the HOUR METER to "0000", depress all three NUMERIC SELECTION BUTTONS (triangles) together and hold for approximately 5 seconds or until the display shows "0000".

The display (when active) will show a moving decimal point when the HOUR METER mode is active and the lamp is operating. The decimal point will float across the bottom of the display from the left to right. This indicates the relay within the fixture is closed and the lamp is ON.



Display Window for *Lamp Hour Meter* Mode (Example Display)

## DMX OPERATION MODE

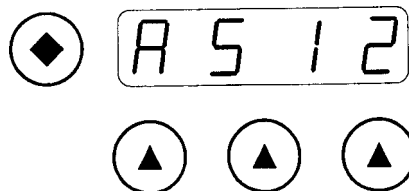
In DMX operation, the fixture will be used in an installation where it is desirable to control several fixtures and related accessories with the use of sophisticated lighting programs or equipment (DMX source). This is most suitable for applications where all aspects of lighting are to be fully digitally programmed and executed. Typical installations require fixtures and related accessories to be "addressed" so that they may be controlled with a DMX source.

1. Energize the xenon power supply and the P3.
2. The left and right displays will energize and show the TIMER mode - select ADDRESS mode by depressing each FUNCTION SELECTION BUTTON (diamond button). The display should read "A" followed by three digits.
3. Press the NUMERIC SELECTION BUTTONS (triangles) until the display reads "A" followed by the DESIRED FIXTURE ADDRESS. NOTE: After setting the address on the first unit, the second unit must have an address that is (2) units higher than the first (i.e. right 1&3, left 2&4).
4. Plug the DMX cable from the DMX source into the INPUT port on the rear cover of the fixture.
5. When DMX 512 signals are detected (DMX level above 80%/ 204 - 255), a relay within the fixture will close and the lamp will ignite. The display will also show a decimal point between the "A" character and the first "0" digit when DMX is detected.
6. When signals from the DMX source are detected (DMX level below 20%/ 000 - 051) the fixture relay will open and the lamp will extinguish, but the fixture will remain ON.

In most applications where DMX operation is utilized, it is common to "daisy-chain" or link several other fixtures and accessories together. This eliminates the need to connect individual cables from the DMX source to each item.

7. Plug DMX cable into the DMX OUT port on the rear cover of the fixture.

Connect opposite end into next desired DMX accessory or fixture. The fixture will monitor incoming signals, process those to which it is addressed, and pass all other signals through (use terminator at last fixture).



Display Window for *DMX* Mode (Example Display)

### P3 DMX CONTROL

Channels can be set to start at any address.

Channel 1 "Lamp ON/OFF"	Channel 2 "Rotation Direction"	Channel 3 "Gobo Select"
00h-32h    Lamp OFF	00h-18h    Off	00h-20h    No. 1
CDh-FFh    Lamp ON	19h-65h    CCW	2Ch-#Ah    No. 2
	66h-98h    Off	5Fh-6Dh    No. 3
	99h-E4h    CW	92h-A0h    No. 4
	E5h-FFh    Off	C5h-D2h    No. 5
		E7h-FFh    No. 6

