

INSTRUCTION MANUAL

SUPER TROUPERETTE

FOLLOW SPOTLIGHT
Type 45050

Issue 12-85



STRONG INTERNATIONAL

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PREFACE

THE STRONG SUPER TROUPERETTE is a 115 V.AC follow spotlight using a 400 watt Osram HTI lamp module as the light source. The lamphouse, optical system, lamp igniter assembly, and HTI power supply are contained in a single head assembly. A base, yoke, and height adjustable stand complete the installation.

THE HTI LAMP MODULE includes a short arc discharge lamp and an elliptical dichroic reflector. The lamp module has a life expectancy of 250 hours. Forced air cooling, required for correct operation, is supplied by a blower mounted to the base of the lamphouse.

THE OPTICAL SYSTEM consists of a masking aperture (chopper), iris assembly, variable focus lens mechanism, and a self-cancelling color boomerang. A focus knob at the front of the optical system permits fine focus of the spot edge.

THE SPOTLIGHT may be transported with the lamp module installed, assuming the lamp has cooled to room temperature and reasonable care in handling the unit is exercised.

IF AT ANY TIME you have a suggestion, or desire aid in securing anticipated results, write directly to STRONG INTERNATIONAL, 4350 McKinley Street, Omaha, Nebraska 68112.

RECEIVING AND INSTALLATION

THE SUPER TROUPERETTE is shipped in sections that must be assembled.

FASTEN THE THREE STAND LEGS to the end of the outer stand tube using the (6) sets of cap screws, lockwashers, and hexnuts packed in the accessory kit.

INSERT THE CASTERS in the holes provided in each leg only if the the spotlight is intended for portable use. If the spotlight is to remain in a fixed position, the casters should NOT be inserted, and the base should be secured to the floor.

TO ADJUST THE HEIGHT OF THE YOKE, loosen the height adjustment clamp and raise or lower the inner tube as desired. The height range from floor to optical center is 43 to 60 inches.

MOUNT THE SPOTLIGHT to the base by tightening the height adjustment clamp, and lowering the lamp saddle into the slots in the yoke. The side of the yoke with the friction plate must be on the right (operator) side of the unit. Make certain the friction washer discs are between the metal friction surfaces of the saddle and yoke.

THE VERTICAL TILT CLAMPING KNOB may be tightened or loosened to provide the proper degree of drag desired by the individual operator.

UNSCREW the (2) knobs from the optical system control levers, remove the (8) screws mounting the spotlight housing to the base pan, and dismount the housing. Locate the glass strip heat filter packed in the accessory kit. One surface of the heat filter is marked XX; install the filter in the slot provided in front of the lamp module with the marked surface facing the lamp module. Do not operate the spotlight without this filter in place. Replace the spotlight housing.

CONNECT THE AC POWER CORD to a grounded, three wire 115 V.AC receptacle.

IGNITE THE HTI LAMP MODULE by turning the switching circuit breaker ON. The lamp module requires a two or three minute warming period to reach maximum brightness.

LAMP MODULE INSTALLATION

THE SUPER TROUPERETTE is delivered with the HTI lamp module installed. The expected life of the HTI module is 250 hours, and it is advisable to have a spare module (Strong Part No. 45901) available.

TO REPLACE THE LAMP MODULE, turn off the spotlight and permit the module to cool to room temperature. Disconnect the power cord from the AC receptacle. Dismount the spotlight housing by removing the (2) knobs from the optical system control levers and the (8) mounting screws from the base pan, and lifting the housing from the base pan.

DISCONNECT THE LAMP MODULE by separating the (2) insulated connectors on wires 9 and 10. Note the position of the lamp module in the mounting plate; the high voltage lead (#9) from the base of the module must be at the 10:00 o'clock position (as viewed from the rear).

LOOSEN the (2) screws retaining the module mounting clamps and rotate the clamps clear of the insulating ring. Dismount the old lamp module.

EXERCISE EXTREME CARE not to fingermark the reflector of the HTI lamp module. Fingerprints can burn into the reflector and cause overheating.

INSERT the replacement lamp module into the mounting plate, and seat the insulating ring on the (4) mounting feet. Rotate the module to position the high voltage lead (#9) at the 10:00 o'clock position. Replace the mounting clamps and tighten the screws. Connect igniter leads 9 and 10 to lamp module leads 9 and 10. *Carefully dress these leads away from metal lamphouse components; a short circuit to ground will severely damage the HTI power supply.*

CONNECT THE POWER CORD to the AC receptacle and ignite the lamp module. HTI lamp modules are factory pre-aligned to their insulating rings, but because of manufacturing tolerances, some variations may exist between modules. If the projected spot is not centered and projecting a flat field, loosen the (2) thumbscrews retaining the module mounting plate and adjust the position of the module to project the desired spot. CAUTION: EXERCISE EXTREME CAUTION when adjusting the module position. DO NOT TOUCH ANY PORTION OF THE LAMP MODULE. The lamp module operates at extremely high voltage and temperature.

AFTER COMPLETING THE INSTALLATION PROCEDURE, re-install the spotlight housing.

PERIODICALLY clean the blower intake grille and the exhaust stack to insure unobstructed air flow. Maintain correct blower operation, and do not operate the spotlight with a defective or disconnected blower.

THE HTI LAMP MODULE ignites better when cold. After extinguishing the lamp, allow at least one minute cooling before attempting re-ignition.

TO PROLONG lamp module life, avoid repeated re-ignitions. Allow the lamp to burn throughout the spotlight's duty cycle, dousing out with the shutter blades as required.

THE SPOTLIGHT may be transported with the lamp module installed, but reasonable care should be exercised not to subject the unit to jarring or shocks.

OPERATION OF COLOR BOOMERANG

THE COLOR BOOMERANG is equipped with (6) color filter discs containing the following colors in order from rear to front: (1) Amber, (2) Flesh Pink, (3) Medium Pink, (4) Light Magenta, (5) Special Lavender, and (6) Special Steel Blue.

THE SIX COLOR DISC LEVERS are mounted in the cover plate casting directly in front of the iris lever.

A HEAT FILTER is mounted in a fixed position at the rear of the boomerang assembly. This filter is installed to prolong gel life.

TO FURTHER PROLONG gel life, use only Roscolux filters. Do not operate the spotlight without the glass strip heat filter in front of the lamp module in position.

TO INSERT A COLOR DISC in the light beam, move the proper color disc lever to the left until the catch engages. Selection of a second color will cancel the first, and remove it from the light beam.

PRESSING THE RELEASE BUTTON, located to the right of the color disc levers, will remove all color discs from the light beam.

TO REMOVE A COLOR DISC ASSEMBLY, remove the knobs from the optical system control levers, and remove the (2) screws mounting the top cover casting. Lift the top cover casting from the housing, together with the boomerang assembly. The (2) split rivets holding the color disc assembly can now be removed and a new color disc installed. Only the six above mentioned color discs are supplied with the boomerang; additional color filters can be purchased from any theatrical supply retailer.

ONE AUXILIARY COLOR FRAME is provided for use when any special filters are desired. A filter cut to 9-1/4" x 9-1/2" will fit inside the frame. Additional auxiliary color frames are available through any authorized Strong International Dealer; order 51233 (frame) and 51234 (plate).

TO INSERT THE AUXILIARY COLOR FRAME, slip it into the spring filter holder clip at the extreme front of the optical system housing.

ANGULAR ADJUSTMENT OF MASKING SHUTTER BLADES

AN UNBALANCED CONDITION will occur when the optical system housing removed; therefore, the vertical tilt locking knob should be tightened. Position the large lens by sliding the spot size control handle to the extreme forward position. Remove the knobs from the optical system control levers, and unscrew the spot size control handle. Remove all screws securing the housing to the base pan and lift off the housing.

ADJUST THE ANGULARITY of the masking shutter (chopper) blades to compensate for the projection angle. NOTE: This adjustment is required only when the spotlight is to be operated permanently from a fixed location. Loosen the screws holding each of the masking shutter blades; angle the bottom blade so it lies parallel with the footlights, and tighten the lower screw. Operate the masking shutter control lever to close the shutter blades, causing the upper blade to align to the lower blade. Tighten the upper blade locking screw. Check the setting by igniting the lamp module and projecting a narrow strip spot to the stage.

OPERATION OF OPTICAL SYSTEM

THE SPOT SIZE CONTROL HANDLE is located on the right side of the spotlight housing just above the base pan. A variation of spot sizes in a ratio of 5 to 1 can be obtained by moving the spot size control handle from the extreme rear (flood) to the extreme front (spot).

THE APERTURE SELECTOR (Iris) is the front lever projecting through the top of the lamphouse cover plate assembly. When this lever is to the extreme left (as viewed from the rear of the spotlight), the largest aperture is obtained. Smaller apertures are obtained as the handle is moved to the right.

THE SPOT FOCUSING CONTROL is located on the side of the optical system base pan, toward the front, and is used to adjust the the optical system for the length of throw. When making an adjustment, the aperture selector (iris) lever should be to the right, and the spot size control handle to the extreme forward position. Rotate the spot focusing control until the sharpest white light is obtained on the projected spot. This will give a nominal focus and optimum performance for small spot and flood.

THE MAXIMUM FLOOD SPOT is obtained with the aperture selector (iris) lever to the extreme left, and the spot size control handle as far as possible to the rear. NOTE: A slight adjustment of the spot focusing control can be done if desired when projecting a flood spot.

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 large aperture.

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 aperture selector (iris) lever to the right for a smaller aperture. The aperture selector 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 AND DOUSER (chopper) lever is the rear lever projecting through the top of the lamphouse cover plate. The masking shutter (chopper) blades are operated by this lever to shape the projected spot to a rectangle, strip spot, or douse the spot for blackout.

THE MASKING SHUTTER BLADES are open when the masking shutter control lever is to the extreme right. Varying degrees of masking to complete cutoff are obtained by moving the lever to the left.

HANDLING THE SPOTLIGHT

GENERALLY THE BEST POSITION for operation is to stand at the center of the spotlight on the right-hand side, although and of tilt and the size of the porthole may alter the position for the most convenient and effortless operation. One hand should be kept on the spot size control handle, as the spot can thus be both directed and changed in size instantly. The other hand is generally used for operating the optical system and boomerang controls, and steadying the spotlight. The vertical tilt locking knob, located on the lamp saddle assembly, can be set to provide the required amount of friction on the spotlight swing to suit the individual operator.

A FRICTION BRAKE, on the outrider of the large lens carriage, may be set to apply more or less drag on the operation of the spot size control handle. The brake screw is accessible through the opening in the optical system exposed by removing the boomerang.

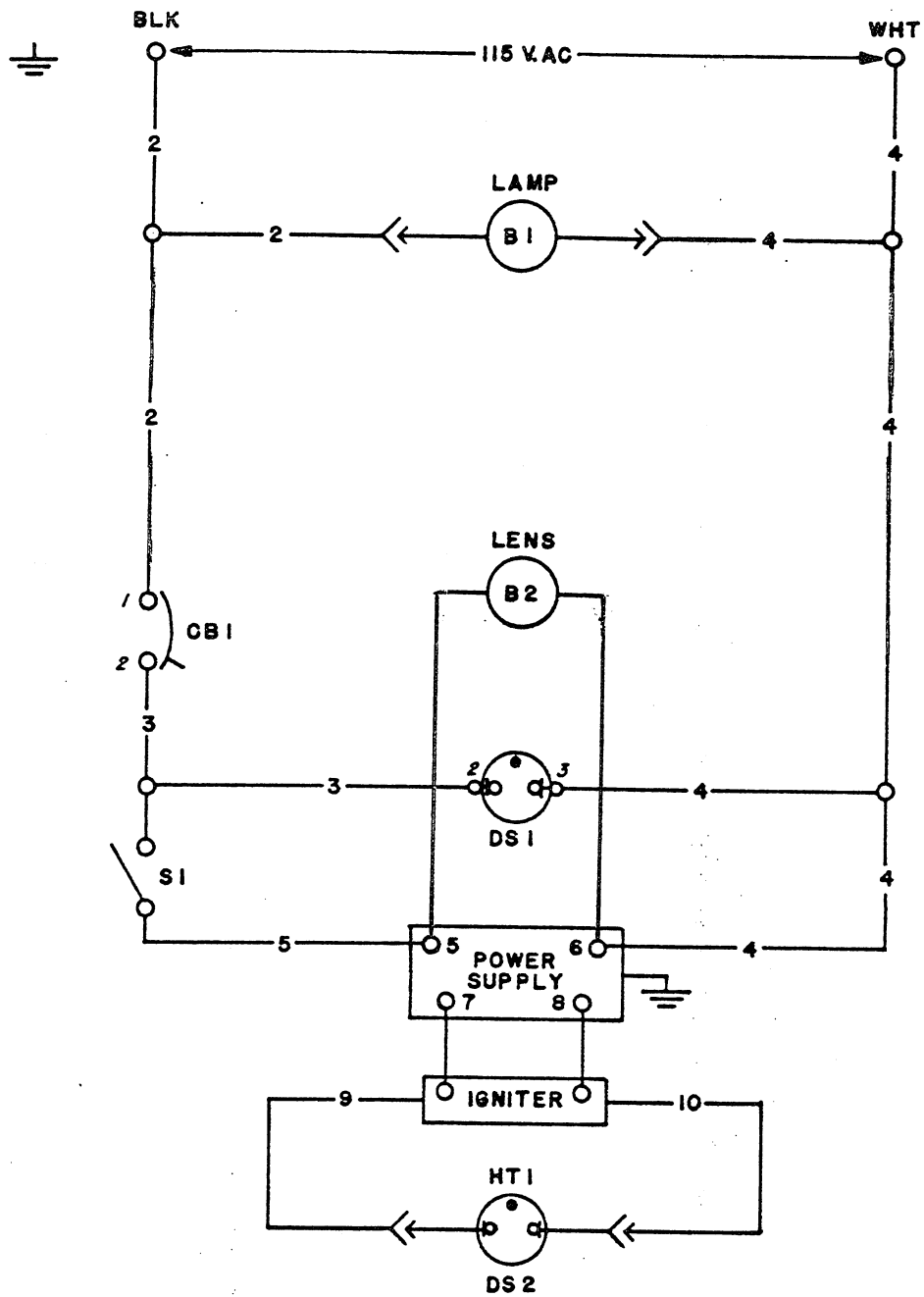
MAINTENANCE

VERY LITTLE MAINTENANCE is required to keep the spotlight in good working order. No lubrication is required.

TO CLEAN THE SMALL LENS, remove the color boomerang assembly, and using a good grade of professional lens cleaning solution and lens tissue, gently wipe both sides of the lens until the surfaces are clean.

THE BACK SURFACE of the large lens can be readily cleaned by using the same access hole as above with the large lens carriage in the extreme rear position.

TO CLEAN THE FRONT SURFACE of the large lens, slide the lens carriage to the full forward position. The front surface is then easily accessible through the front of the housing.



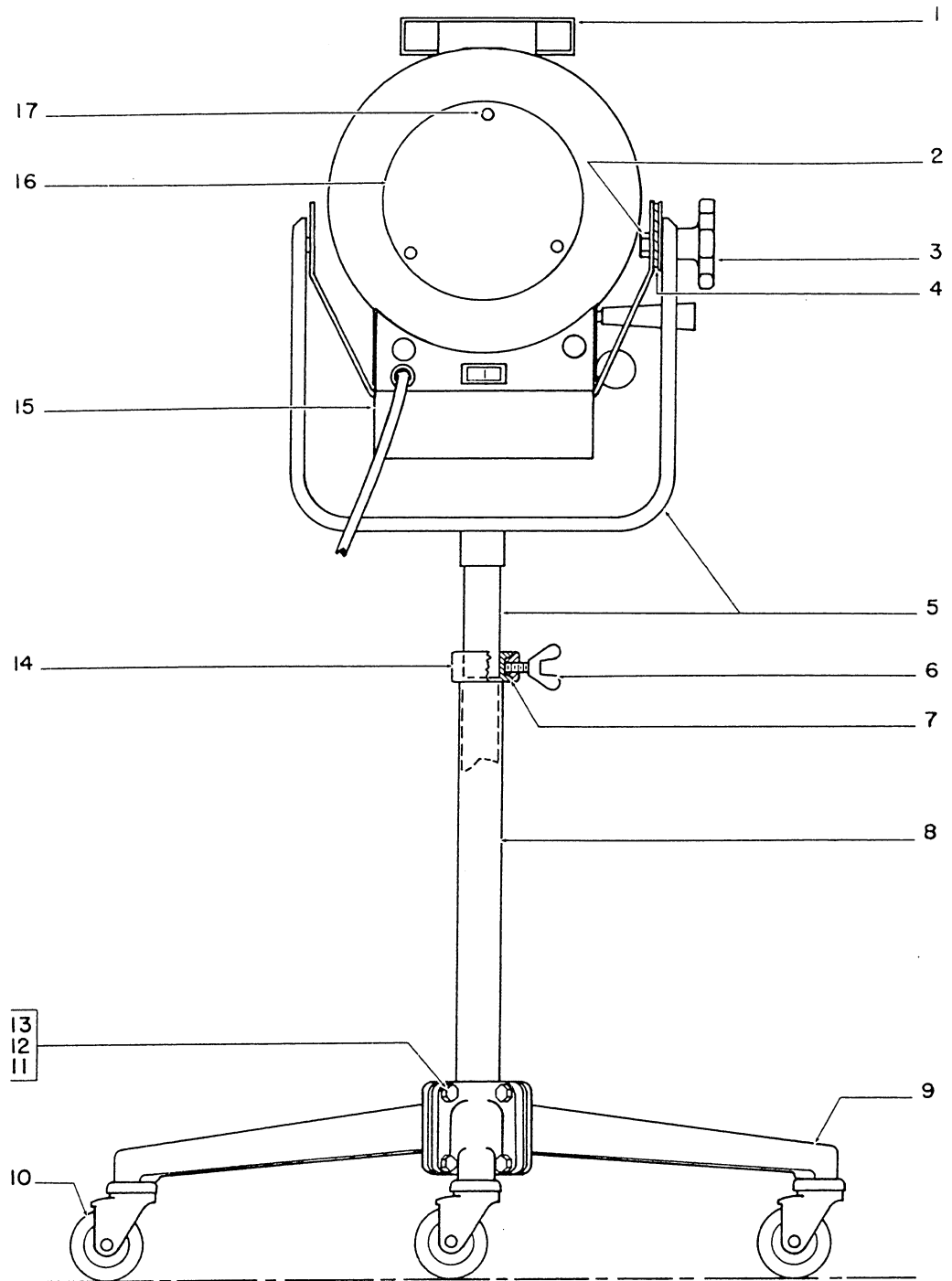
SUPER TROUPERETTE WIRING DIAGRAM

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<u>Ref.</u> <u>Desig.</u>	<u>Part No.</u>	<u>Description</u>
B1,2	45227	Blower, 115 V.AC, 50/60 Hz.
B1,2	81872	Blower, 220 V.AC, 50/60 Hz. (45050-02 only)
CB1	71206	Circuit Breaker, Lighted (DS1), 10 Amp.
DS1	71206	Circuit Breaker, Lighted (CB1), 10 Amp.
DS2	45901	HTI Lamp Module
	71261	Connector, Female
	71262	Connector, Male
-	45242	AC Power Cord & Plug
-	48443P	HTI Power Supply
-	48443I	HTI Igniter Ass'y.
S1	80168	Rear Cover Interlock Switch

Circled Numbers Indicate Terminal Positions.

FIGURE 1



PARTS LIST
FIGURE 1

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	46994	Vent Stack
2	45152	Saddle Clamp Screw
3	45153	Vertical Tilt Locking Knob
4	45151	Friction Washer (2 req'd)
5	45905	Yoke & Inner Tube Welded Ass'y.
6	1339	Wing Screw, 3/8-16 x 3/4"
7	45160	Clamping Lug
8	45157	Outer Tube
9	45156	Stand Leg
10	34014A	Caster
11	617	Screw, 5/16-18 x 1-3/4" Hex Hd.
12	883	Split Lockwasher, 5/16"
13	808	Hexnut, 5/16-18
14	45159	Clamping Collar
15	45910	Blower & Igniter Cover
	1311	Screw, 8-32 x 3/8" Pan Hd.
16	45280	Name Plate/Back Cover
17	45270	Plunger
	45271	Grommet

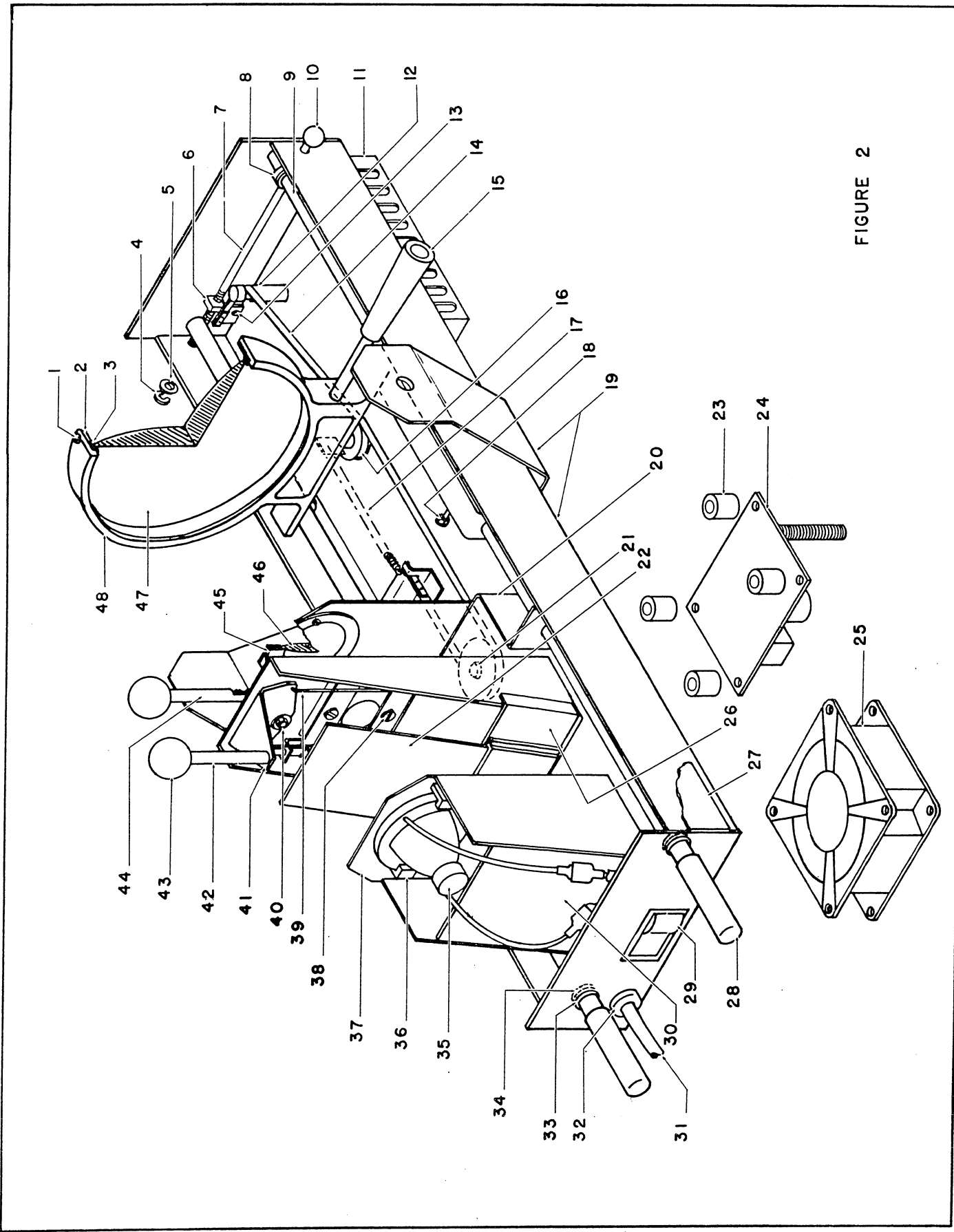


FIGURE 2

PARTS LIST
FIGURE 2

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	1304	Screw, 8-32 x 5/16" Pan Hd.
	886	Lockwasher, #8
2	51493	Lens Retaining Ring
3	51492	Rubber Lens Gasket
4	45204	Snap Ring
5	831	Flatwasher, #10
6	51133	Lens Focus Adjusting Block
7	45208	Lens Focus Adjusting Shaft
8	51114	Stop Collar
	783	Set Screw, 10-32 x 1/4"
9	45283	Slide Rod
10	48103	Lens Focus Knob
11	48443P	HTI Power Supply
	1305	Screw, 6-32 x 1/4" Pan Hd.
12	45224	Lens Focus Stud
	541	Screw, 1/4-20 x 1/2" Pan Hd.
13	1305	Screw, 6-32 x 1/4" Pan Hd.
14	51992	Lens Positioning Ribbon Ass'y.
15	51509	Handle, Spot Size Control
	51508	Shaft
16	51158	Pulley, Small
	51160	Pulley Stud
17	51162	Lens Ribbon Spring
18	1752	Lens Brake Screw, 1/4-20 x 1" Hex Hd. (Nylon)
	1754	Locknut, 1/4-20 (Nylon)
19	45912	Base Pan & Saddle Welded Ass'y.
20	45909	Small Lens Carriage
21	51160	Pulley Stud
	51157	Pulley, Large
22	65122	Glass Heat Filter
23	-	Insulator (included with Igniter, Item 24)
24	48443I	Igniter Ass'y.
25	45227	Blower, 115 V.AC, 50/60 Hz.
	45225	Blower Cord
26	45908	Heat Filter Bracket
		Screw,
27	45911	Lamp & Optical System Housing
	1801	Screw, 10-32 x 3/8" Slotted Hex Hd.

PARTS LIST
Fig. 2 (con't)

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
28	45150A	Handle Grip
29	71206	Switching Circuit Breaker
30	45904	Air Duct
	1473	Screw, 6-32 x 1/2" Pan Hd.
31	45242	AC Power Cord & Plug
32	23163	Strain Relief Bushing
33	91219	Snap Ring
34	46137	Snap Ring
35	45901	HTI Lamp Module
	71261	Connector, Male
	71262	Connector, Female
36	45318	Mounting Clamp
	953	Screw, 4-40 x 3/8" Rd. Hd.
37	45282	Lamp Module Mounting Plate
	1695	Wing Screw, 10-24 x 3/8"
38	253A	Screw, 8-32 x 3/16" Fil. Hd.
	47978	Masking Blade, Lower
	47979	Masking Blade, Upper
39	51497	Masking Blade Pull Rod, Long
	51498	Masking Blade Pull Rod, Short
40	1406	Flexloc Hexnut, 5/16-18
	843A	Friction Washer
	853	Flatwasher, 5/16"
41	51488	Bracket, Masking Control Lever
42	51155	Masking Control Lever
	805	Hexnut, 1/4-20
43	10048A	Knob
44	51228	Iris Control Lever
	51979	Iris Ass'y.
	179	Screw, 6-32 x 1/4" Fil. Hd.
	51978	Friction Spring, Iris
	51229	Friction Pad, Iris
	183	Iris Mounting Screw
45	45254	Lens Retaining Ring
	179	Screw, 6-32 x 1/4" Fil. Hd.
	793	Hexnut, 6-32
	892	Lockwasher, #6
46	45294	Small Lens
47	51102	Large Lens
48	51876	Large Lens Carriage