

Gerry

OPERATION MANUAL

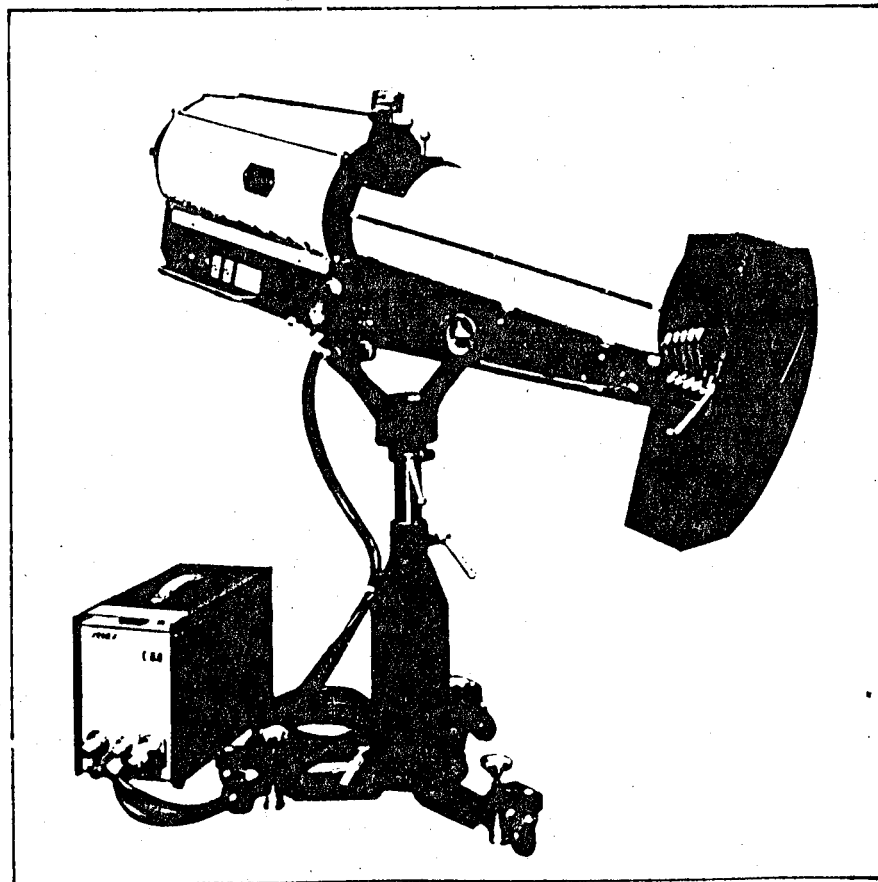
for 2005SR XENON FOLLOW SPOT LIGHT

Color Arc 2000™

(ICE CAPADES specifications, Tentative Use)

Switching Regulator

KSX-80MHXC de luxe type



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1. GENERAL

This manual gives the assembly/set up procedure and the optical alignment and adjustment of the Colortran Colorarc 2000 xenon follow spot light. Prior to operation, please peruse this operation manual.

2. SPECIFICATIONS

Input Side

- | | |
|-------------------------|--|
| 1. Supply Power Voltage | 100V system: 100/120V $\pm 10\%$
200V systme: 200/220/240V $\pm 10\%$ |
| 2. Capacity | 4000VA |
| 3. Input Current | 40 amps (20 amps) |
| 4. Number of Phase | 1 |
| 5. Frequency | 50/60Hz |

Output Side

- | | |
|--------------------|--------|
| 1. No load voltage | 100VDC |
| 2. Output Voltage | 30VDC |
| 3. Output Current | 70ADC |

3. COMPOSITION

- | | | |
|-------------------------|--------------------------|-----|
| 1. Xenon Lamp | UXL-2000PR | x 1 |
| 2. Spot Light Main Head | XPS-2005SR-C | x 1 |
| 3. Power Supply | KSX-80MHXC | x 1 |
| 4. Stand | ST2K-C2 (2 legs folding) | x 1 |
| 5. Reflector | XHM-1P-22 | x 1 |
| 6. Heat Deflector | HDF-2001 | x 1 |
| 7. Color Changer | XCC-6XD-8 (with cover) | x 1 |

4. ASSEMBLY AND SET UP

(1) Spot Head and Stand (Figs. 4 & 5)

Loosen the clamp handle(63) of the stand support arm(64). While inserting the fixing plate(62) of the spot head into the slot of the link nut(66) and the brake fibres(65) at the edge of the handle shaft, set the spot head support arm. Then mount the spot head onto the spot head retainer(67) and set the fixing plate. Clamp the spot head by means of the clamp handle(63). The SK2K-C2 stand has two folding type legs. To use this stand, fully open up the folded legs(91-2) and firmly clamp by the clamp lever(90). Loose clamping may cause breakage of the stand leg.

(2) Color Changer(Figs 4 & 13)

Insert the frame plate of the color changer into the color changer fixing groove(74) at the front edge of the spot head. Then fasten by screws.

(3) Reflector (Figs. 5 & 10)

Open the door of the spot head and loosen four reflector clamps (58) and set the reflector into the reflector frame (59) and then clamp.

(4) Heat Deflector (Figs. 5 & 11)

Fix the heat deflector to the frame (10).

(5) Xenon Lamp (Figs. 1 & 10)

The new xenon lamp, model UXL-2000PR has an integrated negative lead to enable easy lamp installation. Since this followspot is the reversed polarity lighting type, the positive cap (anode side having a larger electrode) must come to the rear and the negative cap with the integrated negative lead must come to the front side of the followspot head.

To install the xenon lamp, insert the positive cap into the lamp chuck (25) and clamp it by means of the chuck clamp nut (60). Then terminate the negative lead (13) of the xenon lamp to the DC terminal by means of the knurled nut (76) provided. Clamping of this nut must be complete. The negative lead must be kept as much as clear of any conductive substances of the followspot head to avoid HV leak.

(6) Balance Adjustment (Fig. 5)

To establish balance of the spotlight head, loosen the handle (63) for the spot head clamping and check the balance of the spot head.

If unbalanced, loosen four (4) weight clamping screws (44) and move the weight until the balance is established.

(7) Fixing of Safety Ring (Figs. 4)

The safety ring (38) serves to prevent accidental fall down of the main spot body when the stand shaft clamping handle is abruptly loosened.

As soon as operation height of the spotlight is fixed, set this safety ring (38).

5. WIRING (Fig. 2)

Wiring connection between the spotlight and the switching regulator must be made referring to the wiring diagram (Fig. 2) in this manual. Earthing is always necessary.

6. SUPPLY POWER VOLTAGE AND VOLTAGE SETTING

The de luxe type switching regulator is designed to operate on the following input voltages: 100/120/200/220/240V.

The regulator is factory preset to 240V single phase power supply.

To operate on other voltage, refer to Fig. 2.

7. PREPARATION FOR IGNITING & CONFIRMATION (Figs. 4 & 5)

- (1) Switch on the regulator power switch (3). Also switch on the power switch (32) of the spot light. By this, the power pilot lights indicate.
- (2) Confirm the correct connection of the DC power Supply lines. Confirm it by a tester at the positive and negative terminals of the xenon lamp.
- (3) Confirm the correct connection of the remote control wiring.
- (4) Confirm that the cooling fan motor of the spot light is functioning normally.

8. LIGHTING (Fig 4)

- (1) Select the stand-by switch, (34) of the spot light at the FULL side. Open the iris shutter (5) and close the cutting shutter (6).
- (2) Press the arc start push button (30). The xenon lamp will ignite.

9. ADJUSTMENT OF LAMP CURRENT (Fig. 7)

The useful range of the lamp current for the 2Kw xenon lamp is 40 -- 70 amps. Regulate the output current of the regulator by means of the output current control (5).

10. OPTICAL ALIGNMENT & ADJUSTMENT (Figs. 5 & 12)

- (1) When making optical alignment and adjustment, lamp current must be lowered to the minimum level.
- (2) The cutting shutter (6), the iris shutter (5), and the dowser (31) must be fully opened.
- (3) Open the rear door and adjust light distribution by means of the following controls: lamp right/left adjust knob (21).
- (4) In case uniform light distribution is not obtainable by the above procedure, or luminosity is extremely low, readjust with these knobs after adjustment of reflector (refer to item 18 in this manual).

11. ADJUSTMENT OF ZOOM LENS (Fig 4)

- (1) Pull the zoom lever (72) to the xenon lamp side and then focus with the focus handle (43). Then return the zoom lever (72) to the color changer side and obtain focus with the minimum spot diameter by turning the zoom adjust knob (50).

- (2) Correction of the zoom can be made by setting the zoom lever (72) at the neutral (central) position and then turning the focus adjust handle (43).
- (3) The function of the focus adjust knob is to regulate the movement ratio between the front and rear zoom lenses. The function of the focus adjust handle is to establish focus with the iris shutter, the aperture plate (effect pattern), the cutting shutter, etc.

12. REGULATION OF FULL AND HALF (STAND-BY) CURRENT (Figs. 4 & 10)

- (1) Changeover of the FULL and HALF current is made by the stand-by switch (34) of the spot light.
- (2) During operation, the switch (34) must be selected at the FULL position. When the light is completely shielded by the iris shutter, the lamp current automatically drops to the HALF current (for use with the de luxe type switching regulator).
- (3) The STAND-BY current is preselected at 40 amps (de luxe type switching regulator).

13. EXTINGUISHING (Figs. 4, 6 & 10)

- (1) The xenon lamp can be extinguished by switching off the power switch (32) of the spot light.
- (2) Lighting and extinguishing of the spot light during a day's performance can be made by the power switch (32) and the arc start push button. (30) of the spot light. After the performance, both the power switch (32) of the spot light and the power switch of the regulator (3) must be switched off.
- (3) Forced air cooling for the xenon lamp must be continued for 5 minutes after extinguishing.

14. COLOR CHANGER (Figs. 4 & 13)

- (1) Insert the color changer into the color changer groove (74) of the spot light.
- (2) By pressing down the lever (Fig. 13-3) of the desired color sheet frame (70), it will be set in position. Engagement of a new color sheet frame automatically releases the color sheet frame previously set. Or, release of the color sheet frame can be practised by means of the release lever (Fig. 13, 14). When two color sheet frames are set and one of the two must be released, press down the release lever while holding the lever of color sheet frame which must remain in position.

(3) Replacement of color sheet (Fig. 4 & 13)

Open the light shield cover door by removing the latch (Fig. 13-1) so that the color sheet frames are accessible.

- (4) The XCC-6XD-8 color changer assembly has been specifically designed and manufactured to ICE CAPADES customs specifications. Because of the light shield cover, weight of the color changer is doubled and for this the front balance weight has been removed and the rear counter balance weight (45) has been added. The spot head pivot has been moved to the maximum front end and for this reason, the spot head operation must be always practised with the color changer assembly.

16. ADJUSTMENT OF XENON ARC STABILIZER (Figs. 5 & 10)

The xenon arc stabilizer is necessary for maintaining stabilized xenon arc.

- (1) If the xenon arc is deviated either upward or downward under STAND-BY current lighting, regulate position of the xenon arc stabilizer magnet (27) located behind the reflector until level of xenon arc is obtained. Also check the xenon arc condition under FULL current lighting.
- (2) If the xenon arc is not stabilized under FULL current lighting, it is necessary to regulate the voltage adjust screw of the power supply for the coaxial electromagnet by means of a screw driver. Clockwise turn of the screw causes increase magnetic field of the coil of the electromagnet. Excessively strong magnetic field may sometimes cause rotation of the xenon arc. Optimum power supply voltage is DC 8V \pm 2V measured at the terminals of the coaxial electromagnet.



INCORRECT ARC CONDITION



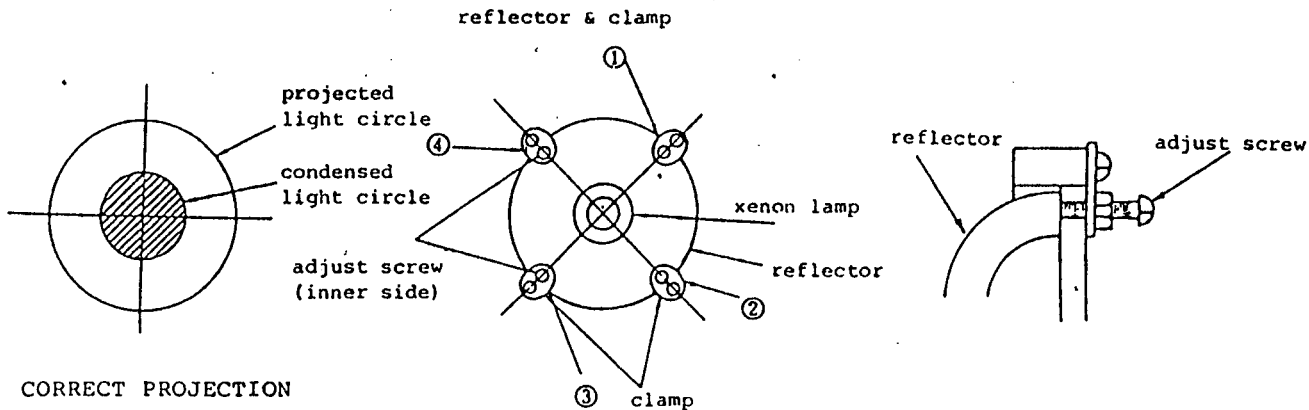
CORRECT ARC CONDITION

17. ADJUSTMENT OF REFLECTOR (Figs. 5 & 10)

This adjustment is made while operating the xenon spot light. If the center of the condensed light does not come to that of the projected spot light

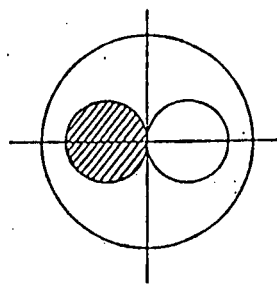
circle or uniform light distribution is not obtained (50% distribution) (brightness is deviated to either side) or luminosity is extremely low, even after the xenon lamp positioning adjustment, adjustment of the reflector is necessary in the following procedure.

The adjustment can be made by means of the reflector clamps and the adjust screws (10) (4 positions at the reflector). Once the correct reflector positioning adjustment is accomplished, there is no further need until the reflector is replaced.

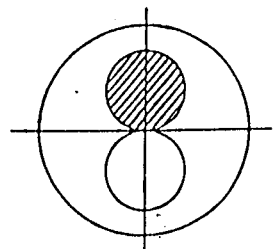


The correct light condensing is as shown above.

If correctly aligned, even when the xenon lamp is moved in the longitudinal axis (by the for/back knob (21), the condensed light circle will always stay in the center of the spot light circle. If the condensed light circle departs from the center as the xenon lamp for/back knob (21) is adjusted, the following adjustment is necessary.



LATERAL DEVIATION



VERTICAL DEVIATION

Condensed light circle deviates laterally as shown in the left.

Shaded circle push the adjust screws of positions (1) and (2).

Solid line circle push the adjust screws of positions (3) and (4).

Condensed light circle deviates vertically as shown in the left.

Shaded circle push the adjust screws of positions (2) and (3).

Solid line circle push the adjust screw of positions (1) and (4).

18. FUNCTIONS OF CONTROLS

(1) Iris Shutter (5)

The iris shutter is useful to regulate the spot diameter to desired size. Also the iris shutter can be used for complete shut off of light. The maximum opening of this shutter is factory preset to 25mm ϕ . For use with the de luxe type switching regulator, as the iris being closed to nearly zero, the microswitch (4) cuts the circuit to changeover to half (stand-by) current. Its functioning point can be adjusted by resetting of the microswitch location and the sensor arm.

(2) Cutting Shutter (6)

By using this shutter, rectangular shape light can be projected. This shape can be regulated to any desired size by this cutting shutter. For obtaining correct focus on the cutting shutter blades, it is necessary to pull the zoom lever (72) backward and obtain focus with the focus adjust handle (43).

(3) Douser (31)

The douser can be used for fade-in/fade-out lighting effect. Also, use this douser for protection of the iris shutter blades. The douser operates to shut off light when moved from the operating side (switch side) to non-operating side. (reversed direction operation of iris shutter)

(4) Zoom lever stoppers

The zoom lever stoppers (80) are provided on the slot for the zoom lever. To change the stopper position, loosen the set screw.

(5) Zoom Adjust Knob

Moving ratio between the front and rear zoom lenses must be varied to match with projection throw. As soon as the projection throw is fixed, establish focus at all zooming lever positions with this knob.

(6) Focus Adjust Handle (43)

Necessary focus with the iris shutter, the cutting shutter, the effect aperture plate, etc. is obtained by this handle. Where necessary, soft focus lighting effect is also possible with this handle.

(7) Xenon Lamp Support (82)

This support is necessary when the spot light must be transported with the xenon lamp installed in the spot light. The Y shape support must make a light contact with the xenon lamp cap after the optical alignment has been completed. When the xenon lamp position must be readjusted (right/left, or up/down), the Y shape support must once be detached from the xenon lamp cap.

(8) Effect Aperture Plate Slot (79)

Effect aperture plates having various aperture shapes, such as star, triangle, rectangular, etc. can be inserted from this slot. To obtain focus on the effect aperture plate, pull the zoom lever (72) backward and then adjust focus with the focus adjust handle (43).

19. MAINTENANCE, CHECK AND CAUTIONS FOR OPERATION

- (1) Always keep the reflector, the xenon lamp and the lenses clean.

If soiled by dusts, oil, etc. clean with an alcohol impregnated soft cloth.

- (2) Balance of the spot light can be obtained by moving the balance weight plate (45). For this loosen the wing nut (44). After the balance adjustment, the wing nut must be firmly clamped to fix the plate.

- (3) After operation, the handle shaft (63) must be firmly clamped to fix the spot light body.

- (4) Cautions for use of iris shutter

When fading out the light by using the iris shutter (5), remaining light must immediately be shielded by means of the cutting shutter (6).

Otherwise, xenon light may burn the blades of the iris shutter.

20. STORING

- (1) When the spot light must be stored for a prolonged period of time, the xenon lamp must be removed from the spot light and separately stored at a safe place.
- (2) To operate the spot light after storing, provide identical cares and checks to that practised at the initial operation.

21. HANDLING OF XENON LAMP

- (1) The xenon lamp must always be contained in the protective plastic envelope provided until it is installed into the spot light.
- (2) Avoid touching the xenon lamp quartz wall. Reducing agents such as sodium adhering to the fingers may be transferred to the quartz causing devitrification. If accidentally soiled, immediately clean the quartz by alcohol.
- (3) The larger electrode side is anode. If the xenon lamp is installed in the incorrect polarity (Note that this is reversed polarity lighting type xenon spot light and the positive cap must come rear side), the electrodes will fuse in a short period of time after starting.
- (4) The xenon lamp must be operated not exceeding the specified rated operating current. The rated current of the UXL-2000PR is 70 amps.
- (5) The UXL-2000PR xenon lamp requires forced air cooling. Do not operate the spot light if the cooling fan motor is out of operation.

hazardous to human eyes. Do not watch the xenon light without protective glasses, etc.

- (7) For safety purpose, wear a protective mask and gloves when installing or removing the xenon lamp.
- (8) If the terminations are loose, it may cause overheating because of high current load. The clamp nut and the lamp chuck of the xenon lamp must be firmly clamped.
- (9) After a prolonged hours of use, when the anyone of the following symptoms is observed, life of the xenon lamp in use is considered terminated. Immediately replace with a new xenon lamp.
 - a. Owing to consumption of a tip of the electrode, projected light gives flickers.
 - b. Owing to vaporization of the electrodes, inner surface of the lamp quartz wall is blackened and luminosity is lowered.
 - c. Owing to consumption of a tip of the negative electrode, the lamp voltage goes up exceeding the specified maximum rating.
 - d. At igniting, the xenon lamp does not easily start even if sparks are established between the electrodes.

22. HANDLING OF REFLECTOR AND LENSES

The surface of the reflector and the lenses must always be kept clean. For cleaning, use alcohol. During cleaning practice, the power switch must be switched off.

23. HOUR METER

The hour meter which is installed on the non-operating side or left hand side (viewed from the rear end) of the followspot indicates aggregate elapsed hour of xenon lamp operation. The meter is activated only when the xenon lamp is lit under operating lamp current. The frequency selector is integrated in the meter which is accessible by opening of the rear under cover of the followspot. Factory selected frequency (60Hz or 50Hz) is shown on the shipping carton box.

24. CAUTION (IMPORTANT)

The xenon lamp is a high pressure discharge lamp. Therefore deliberate cautions are necessary for handling of the xenon lamp.

- (1) The plastic protective envelope must be used until the xenon lamp is installed into the followspot light.
- (2) Use protective gloves and a face mask when handling the xenon lamp.
- (3) Do not open the spot light door immediately after extinguishing of

TROUBLESHOOTINGS AND MEASURES

SYMPTOMS	CAUSES	CHECK POINTS	MEASURES
no discharge	no impression of supply voltage	check for power switch.	switch on power switch.
		check for fuse.	if blown replace (use specified fuse).
	no operation of switching regulator	check for power switch of switching regulator.	switch on power switch. (cooling fan motors of switching regulator and follow spot light come to operation).
		check for correct setting of voltage selector (matched to single phase mains). check for fuse of switching regulator.	set to correct selector position (refer to Fig. 2). if blown, replace. (use specified fuse) (refer to Fig. 7)
	door switch of spot light is OFF.	check door switch position.	completely close door to switch on.
	ignitor does not function (when normal, high frequency pulse noise of Bz.z.z... can be heard when arc start push button is pressed)	check whether ac100v is impressed on high voltage unit of ignitor.	if ac100v is impressed, high voltage unit is out of order. replace.
	insufficient contacts of electrical circuit	check all terminal connections.	correct.
ignitor operates normally but xenon lamp does not ignite.	open circuit voltage of DC100v is not impressed on (+) (-) terminals	failure of components of switching regulator check fuses of switching regulator.	replace defective components.
	life termination of xenon lamp.	high frequency pulse voltage spark is established between lamp electrodes.	install new xenon lamp.
	output current is regulated too low.	elevate output current.	turn current adjustor clockwise to increase current (use a screw driver).
	insufficient termination of output dc cables or insufficient contact at xenon lamp.	check and confirm.	repair.

PARTS LIST

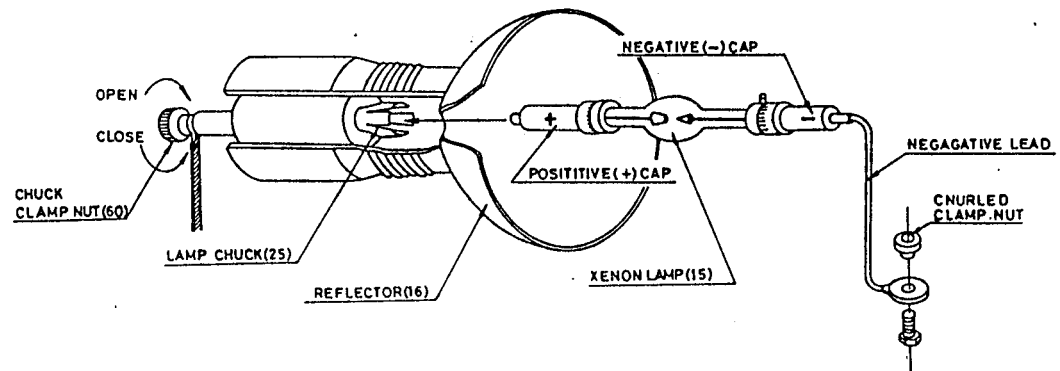
<u>index</u>	<u>nomenclature</u>	<u>parts no.</u>	<u>figure no.</u>
1	zoom lens (front) 8"ø-26"EF	SR-1A	5, 12
2	zoom guide shaft	" -2	5
3	zoom lens (rear) 3"ø 78mmEF (achromated)(pyrex)	" -3C	5, 12
4	micro switch, AM1501	" -4	5, 12
5	iris shutter, XI-12P ₃ (25mmø)	" -5	4, 5, 12
6	cutting shutter	" -6	4, 5, 12
7	spring	" -7	5
8	light shield plate	" -8	5
9	correction lens, 3"ø-8"EF	" -9	5, 11
10	heat deflector, 100 x 120, HDF-2001	" -10	5, 11
11	view glass	" -11	5
12	heat plate	" -12	5
13	negative (-) lead terminal assembly	" -13	5, 10
14	ignitor bakelite plate	" -14	5, 10
15	xenon lamp, UXL-2000PR, w/neg. lead and nut	" -15	5, 10
16	reflector, 220 x 45 x 450, XHM-1P-22	" -16	5, 10
17	arc stabilizer electromagnet coil	" -17	5, 10
18	spring	" -18	5
19	spring	" -19	5
20	xenon bulb right/left adjust knob	" -20	5, 11
21	xenon bulb for/back adjust knob	" -21	5, 11
22	positive (+) lead	" -22	5
23	xenon bulb up/down adjust knob	" -23	5, 11
25	chuck assembly	" -25A	5
26	cooling fan motor, C-20BF	" -26	5
27	arc stabilizer magnet	" -27	5, 10
28	power pilot lamp, sato 10E	" -28	4
29	cooling fan motor C-20BF	" -29	5
30	arc start push button, ABN110	" -30	4, 10
31	douser(reversed direction operation)	" -31C	4
32	power switch, WD1211	" -32	4, 10
33	door switch	" -33	4
34	full/half switch, WD1211	" -34	4, 10
35	Tesla coil	" -35	5
36	hour meter	" -36	4
37	towel rack	" -37A	4
38	stand stopper ring	" -38	4
39	wire guide pulley	" -39	5
40	power supply for coaxial electromagnet	" -40	5, 7
41	zoom wire spring	" -41	5
42	zoom pulley with stopper wheel	" -42A	5
43	focus adjust handle	" -43	4, 5
45	rear counter balance weight	" -45C	5

<u>index</u>	<u>nomenclature</u>	<u>parts no.</u>	<u>figure no.</u>
46	zoom wire	SR-46	5
47	zoom nylon stopper	" -47	5
48	guide pulley	" -48	5
49	guide pulley	" -49	5
50	zoom adjust knob	" -50A	4
51	pilot lamp (full/half)	" -51	5
54	stand clamping knob	" -54	4, 5
55	castor	" -55	4, 5
58	reflector clamp	" -58	5, 10
59	reflector frame	" -59	5, 10
60	chuck fastening nut	" -60	5, 11
61	6-P terminal board for operation circuit	" -61C	5
62	spot head fixing plate	" -62	4
63	handle assembly (new type)	" -63A	5
64	support arm with hanger hooks	" -64H	4
65	brake fibre(2 pcs.)	" -65B	4
66	link nut assembly(2 pcs.)	" -66	4
67	spot head pivot retainer	" -67	4
68	color sheet frame retainer	" -68	4, 13
70	color changer sheet frame, no.1/3 aluminum no.4/6 steel	" -70C 1/6	4
71	lamphouse door(71-R, right. 71-L, left)	" -71R/L	4
72	zoom lever shaft	" -72	4
74	color changer groove	" -74	4, 12
75	color changer assembly with light shield cover	" -75C	4
76	2-P DC terminal board	" -76C	5
77	relay AC100V	" -77	4
78	ignitor, SS-80GRX	" -78A	5
79	effect aperture plate slot	" -79	5
80	zoom lever stopper	" -80	4
81	stopper plate	" -81	4
82	xeonon lamp support assembly	" -82	5
84	light shield	" -84	4
85	zoom lens(front) frame and lens clips	" -85	5
86	spot head front nose cover	" -86	4
87	lamphouse top cover	" -87	4
88	lamphouse duct	" -88	4
89	lamphouse rear door, with hex recess clamp bolt	" -89C	4
90	stand leg clamp lever, 2 pcs.	" -90	5
91	stand legs, 91-1 fixed, 91-2 movable	" -91-1/2	5
92	stand column	" -92	4
93	stand pipe clamp lever	" -93	5
94	stand pipe/arm clamp bolt	" -94	4
95	wire hook and bolt	" -95	4
96	terminal assembly (DC and control cable)	" -96	4
97	hook for DC cable at stand	" -97	4
98	hook band for DC and control cables	" -98	4
99	douser micro switch	" -99	5

XENON LAMP INSTALLATION (FIG. 1)

The new xenon lamp, model UXL-2000PR has an integrated negative lead as illustrated below. This xenon lamp can be installed into the 2KW reversed polarity lighting type xenon followspot head with the following procedure.

1. The anode(positive) cap(a larger electrode side) must come to the rear side and the negative cap (a thinner electrode side) must come to the front side of the followspot head.
2. Insert the positive cap of xenon lamp into the chuck and clamp by means of the chuck fastening nut(60).
3. Terminate the neagtive lead(integrated to the UXL-2000PR xenon lamp) to the DC terminal of the followspot head and clamp it by means of the knurled nut. This nut is supplied together with the UXL-2000PR xenon lamp.



CAUTIONS

- (1) The negative lead must be as much as clear of any conductive surfaces of the followspot head. If too closely located, owing to HV leakage, the lamp may not be ignited.
- (2) The termination must be firm. Loose termination (insufficient clamping) with the knurled nut may cause overheating and lead to trouble.
- (3) The chuck clamp nut(60) must be firmly clamped. Loose clamping causes overheat resulting in failure of the xenon lamp and the lamp chuck assembly(25).

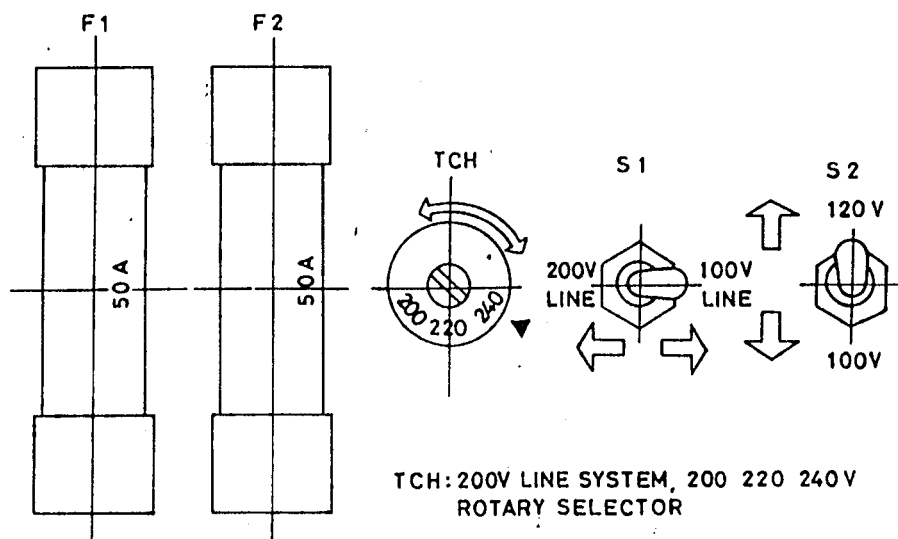
VOLTAGE SELECTOR OF SWITCHIN REGULATOR (Fig. 2)

Setting of Input Voltage

Open the front panel of the regulator and set to the correct input voltage in the following procedure.

(Inside this front panel, spare fuse wires and pilot lamps are attached.)

(Caution: During input voltage selection procedure, the mains switch at the power board must be switched off.)



Procedure

1. Confirm the supply voltage.

90 --- 130v.

Throw the S1 into the "100V LINE" side(right side).

180 -- 260v.

Throw the S1 into the "200V LINE" side(left side).

2. "100V LINE" selected.

Select the S2 at an appropriate position, 120v or 100v.

"200V LINE" selected.

Set the rotary selector switch TCH to an appropriate position.

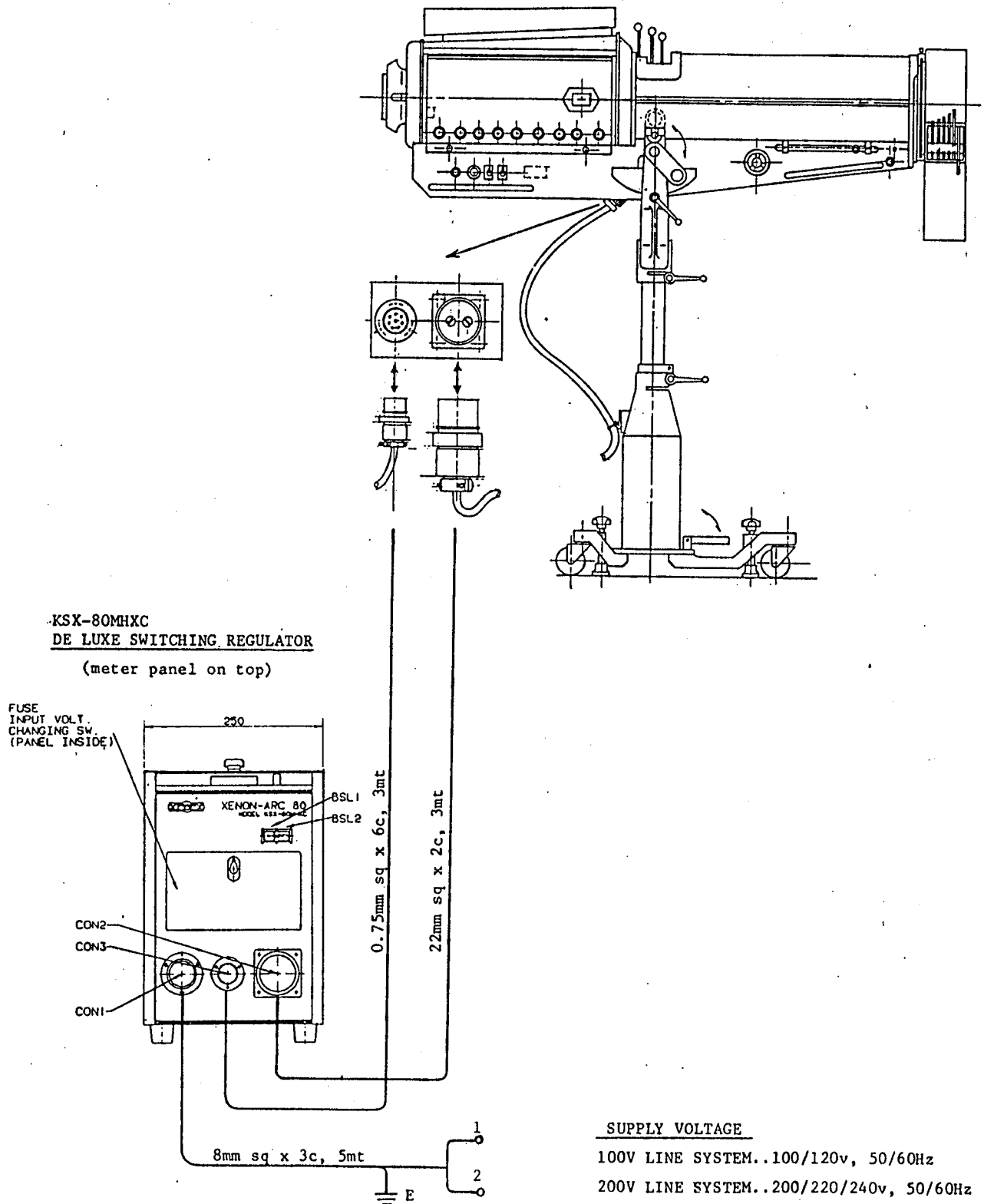
CAUTION

1. Permissible input voltage fluctuation to the selected voltage is $\pm 10\%$.
2. The S2 and the TCH are independent. When "100V LINE" is selected, there is no need to control the TCH. Likewise, when "200V LINE" is selected, there is no need to control the S2.
3. To control the TCH, use a screw driver and select the desired voltage by setting it to the \blacktriangle mark.
4. If, by error, 200V(180--260v) power is impressed while "100V LINE" is preselected, an integrated alarming buzzer gives warning and operation is not possible. In such case, immediately cut off mains power supply and select "200V LINE" by the S1 and then set to an appropriate input voltage by the TCH.

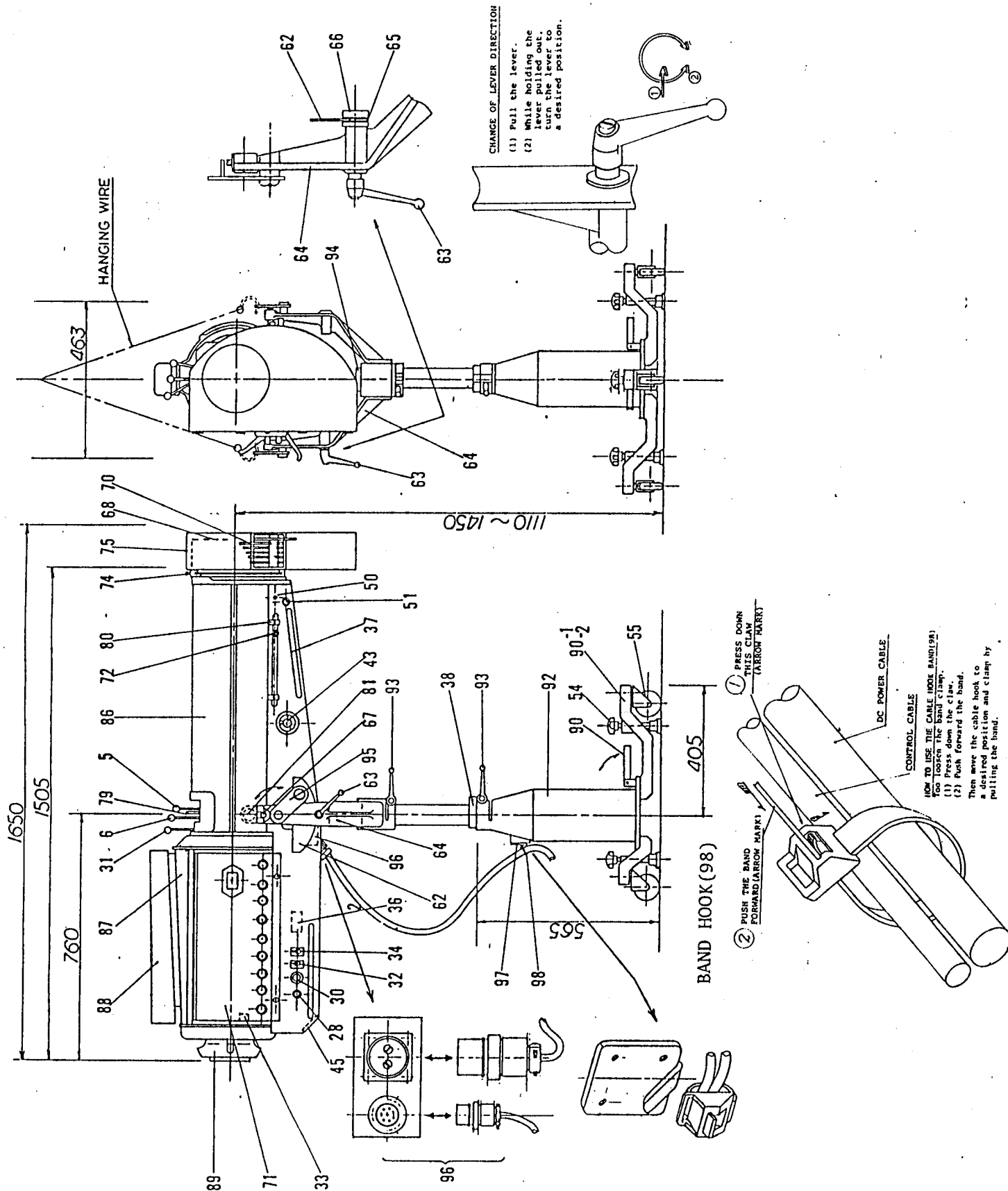
2005SR-C 2KW XENON FOLLOW SPOT LIGHT (Fig. 3)

HOOK-UP DIAGRAM

2005SR-C FOLLOW SPOT

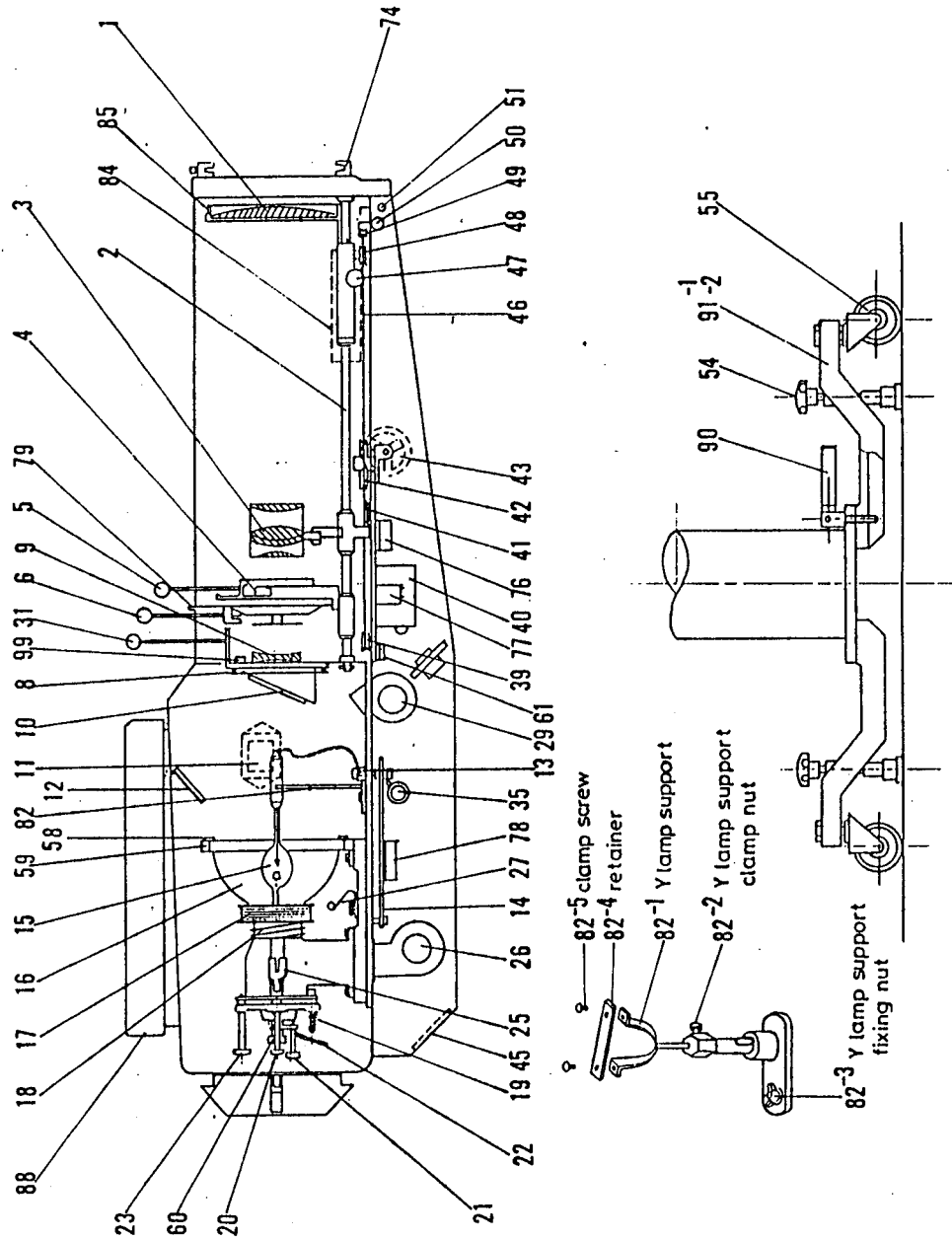


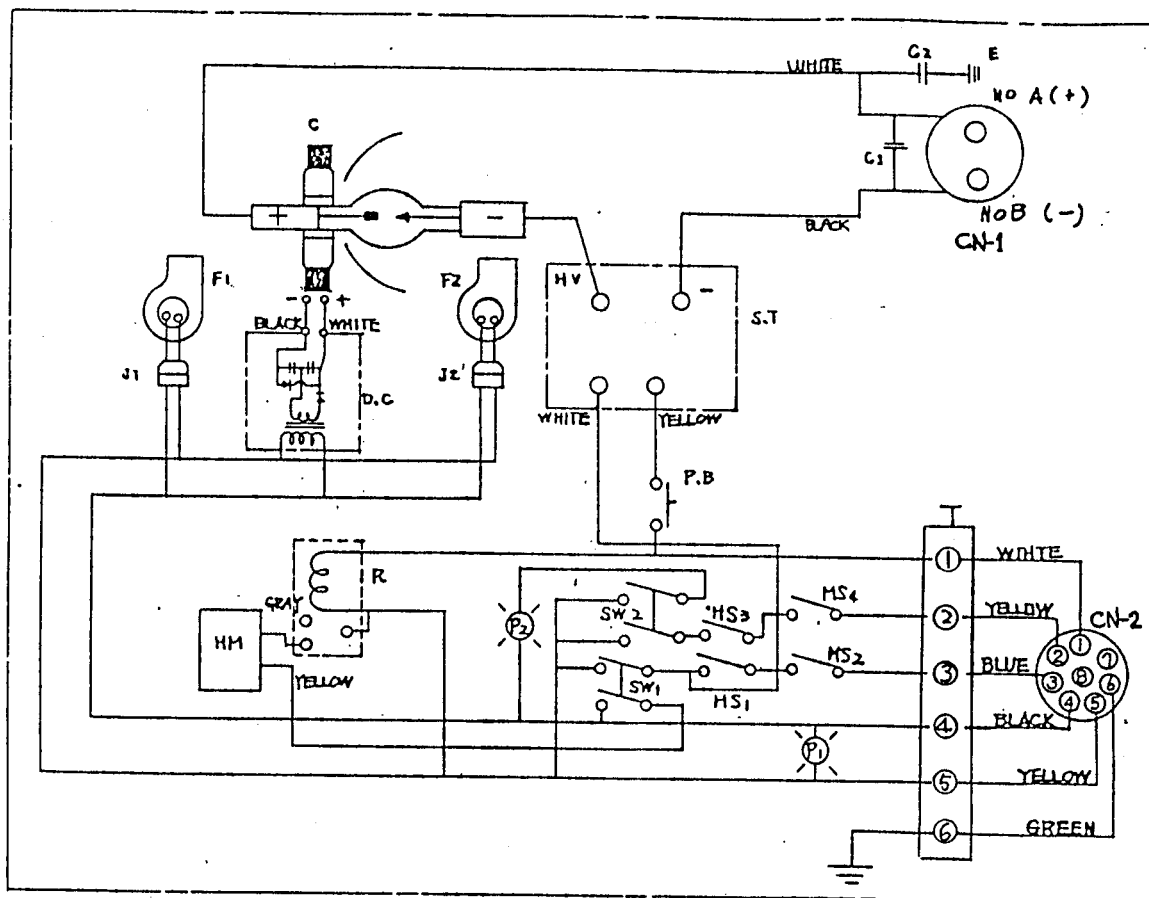
005SR-C 2KW XENON FOLLOW SPOT LIGHT (Fig. 4)



2005SR-C XENON FOLLOW SPOT LIGHT

COMPONENTS LAYOUT, Fig, 5

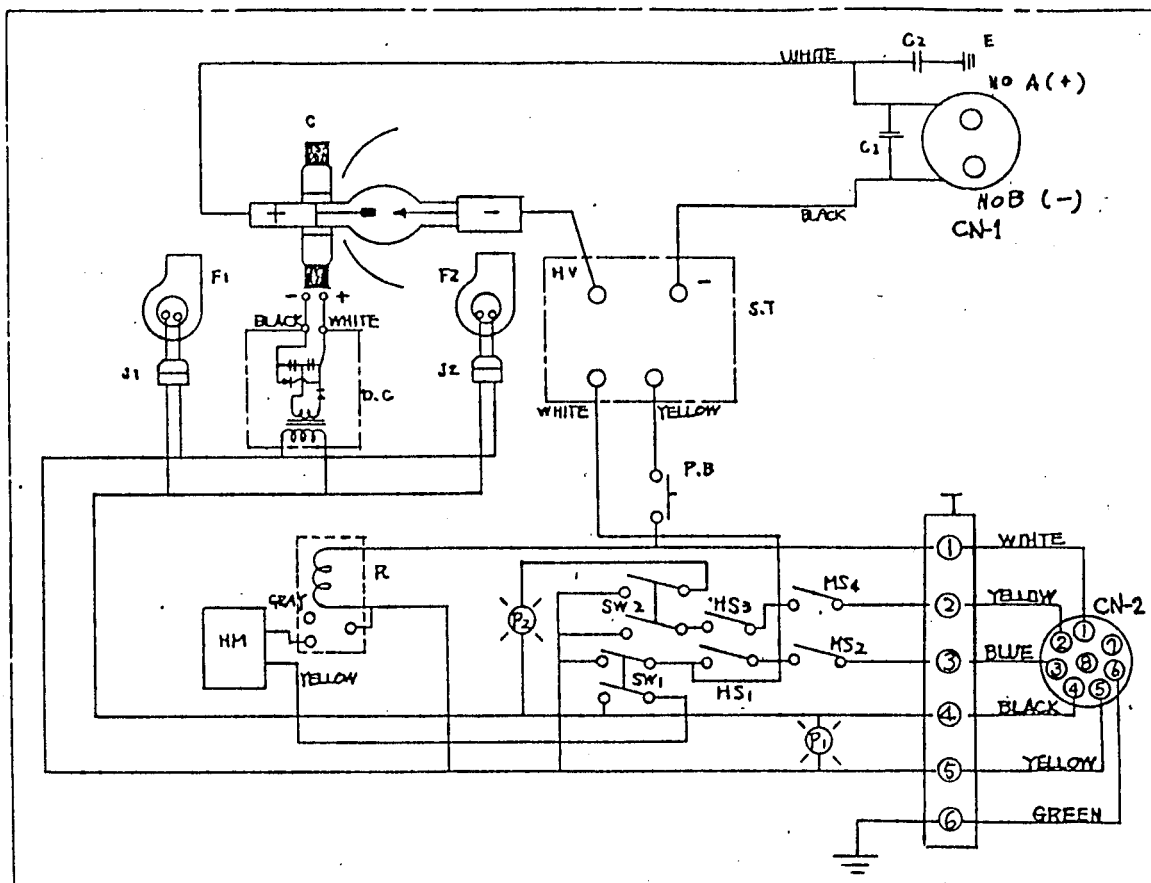




PARTS LIST

INDEX	NOMENCLATURE	RATING	Q'TY	MANUFACTURER	REMARK
CN ₁	CONNECTOR, DC POWER, FEMALE	NCS-502R-500V-80A	1	NANABOSHI	
CN ₂	CONNECTOR, CONTROL, FEMALE	NCS-308R-250V-10A	1	NANABOSHI	
S.T	IGNITOR	SS-80GRX	1	SANSHA ELECTRIC	
D.C	POWER SUPPLY FOR COAXIAL ELECTROMAGNET		1	SANEI DENKI K.K.	
F ₁	COOLING FAN	C-20BF AC100V 50/160Hz 0.36/0.29A	1	KYOEI TSUSHIN K.K.	
F ₂		C-20BF AC100V 50/60Hz 0.36/0.29A	1		
R	RELAY	HCL-TM-AC100V	1	MATSUSHITA DENKO	UL APPROVED
H.M	HOOR METER	AC100V 50/60Hz KTH-1101R	1	TATEISHI ELECTRIC	
SW ₁	POWER SWITCH	WD-1211 250VAC 10A	1	MATSUSHITA DENKO	UL APPROVED
SW ₂	FULL/HALF SWITCH	WD-1211 250VAC 10A	1		
P.B	ARC START PUSH BUTTON SWITCH	ABW-110 110VAC 5A	1	IZUMI DENKI	
MS 1	DOOR SWITCH	AH71545 250VAC 15A	1	MATSUSHITA DENKO	UL APPROVED
MS 2	DOOR SWITCH	AH71545 250VAC	1		
MS 3	MICRO SWITCH FOR IRIS SHUTTER(FULL/HALF)	AM1501 250VAC 10A	1		
MS 4	MICRO SWITCH FOR DOUSER	AH71545 250VAC 15A	1		
P ₁	POWER PILOT LAMP BRACKET	B-340	1	SATO PARTS	LAMP(2000V)E10-28
P ₂	FULL/HALF PILOT LAMP BRACKET	B-340	1		LAMP(2000V)E10-28
T	6-P TERMINAL BOARD	T10-6P 250V 10A	1	KASUGA DENKI	
C	ARC STABILIZER COAXIAL ELECTROMAGNET COIL		1	SANEI DENKI K.K.	
J ₁	COOLING FAN CONNECTOR	AC125V 15A	1	DAIWA DENKI	
J ₂		AC125V 15A	1		
C ₁	BYPATH CONDENSER	0.01mf 1500V	1	MURATA SEISAKUSHO	
C ₂		0.01mf 1500V	1		

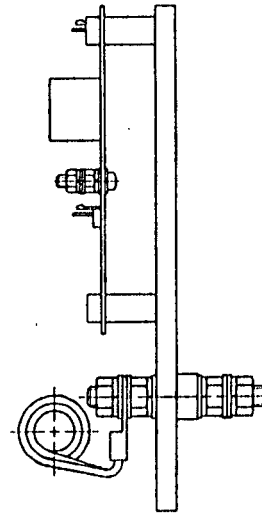
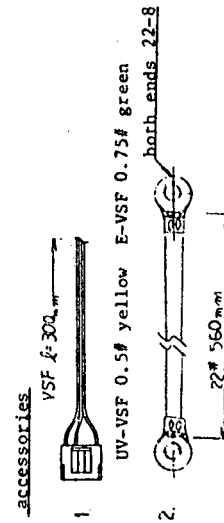
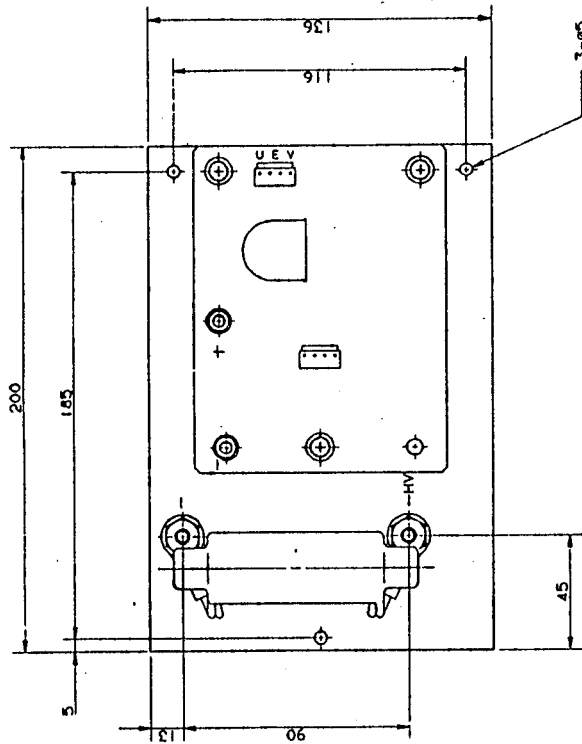
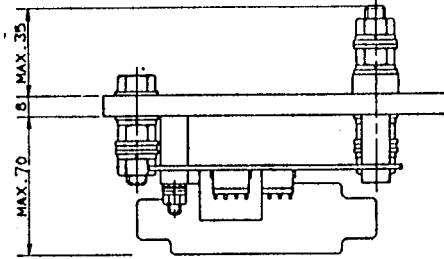
2005SR CIRCUIT DIAGRAM



PARTS LIST

INDEX	NOMENCLATURE	RATING	Q'TY	MANUFACTURER	REMARK
CN1	CONNECTOR, DC POWER, FEMALE	NCS-502R-500V-80A	1	NANABOSHI	
CN2	CONNECTOR, CONTROL, FEMALE	NCS-308R-250V-10A	1	NANABOSHI	
S.T	IGNITOR	SS-80GRX	1	SANSHA ELECTRIC	
D.C	POWER SUPPLY FOR COAXIAL ELECTROMAGNET		1	SANEI DENKI K.K.	
F1	COOLING FAN	C-20BF AC100V 50/60Hz 0.36/0.29A	1	KYOEI TSUSHIN K.K.	
F2		C-20BF AC100V 50/60Hz 0.36/0.29A	1		
R	RELAY	HCL-TM-AC100V	1	MATSUSHITA DENKO	UL APPROVED
H.M	HOUR METER	AC100V 50/60Hz KTH-1101R	1	TATEISHI ELECTRIC	
SW1	POWER SWITCH	WD-1211 250VAC 10A	1	MATSUSHITA DENKO	UL APPROVED
SW2	FULL/HALF SWITCH	WD-1211 250VAC 10A	1		
P.B	ARC START PUSH BUTTON SWITCH	ABW-110 110VAC 5A	1	IZUMI DENKI	
MS 1	DOOR SWITCH	AH71545 250VAC 15A	1	MATSUSHITA DENKO	UL APPROVED
MS 2	DOOR SWITCH	AH71545 250VAC	1		
MS 3	MICRO SWITCH FOR IRIS SHUTTER(FULL/HALF)	AM1501 250VAC 10A	1		
MS 4	MICRO SWITCH FOR DOUSER	AH71545 250VAC 15A	1		
P1	POWER PILOT LAMP BRACKET	B-340	1	SATO PARTS	LAMP (2000V) E10-28
P2	FULL/HALF PILOT LAMP BRACKET	B-340	1		LAMP (2000V) E10-28
T	6-P TERMINAL BOARD	T10-6P 250V 10A	1	KASUGA DENKI	
C	ARC STABILIZER COAXIAL ELECTROMAGNET COIL		1	SANEI DENKI K.K.	
J1	COOLING FAN CONNECTOR	AC125V 15A	1	DAIWA DENKI	
J2		AC125V 15A	1		
C1	BYPATH CONDENSER	0.01mf 1500V	1	MURATA SEISAKUSHO	

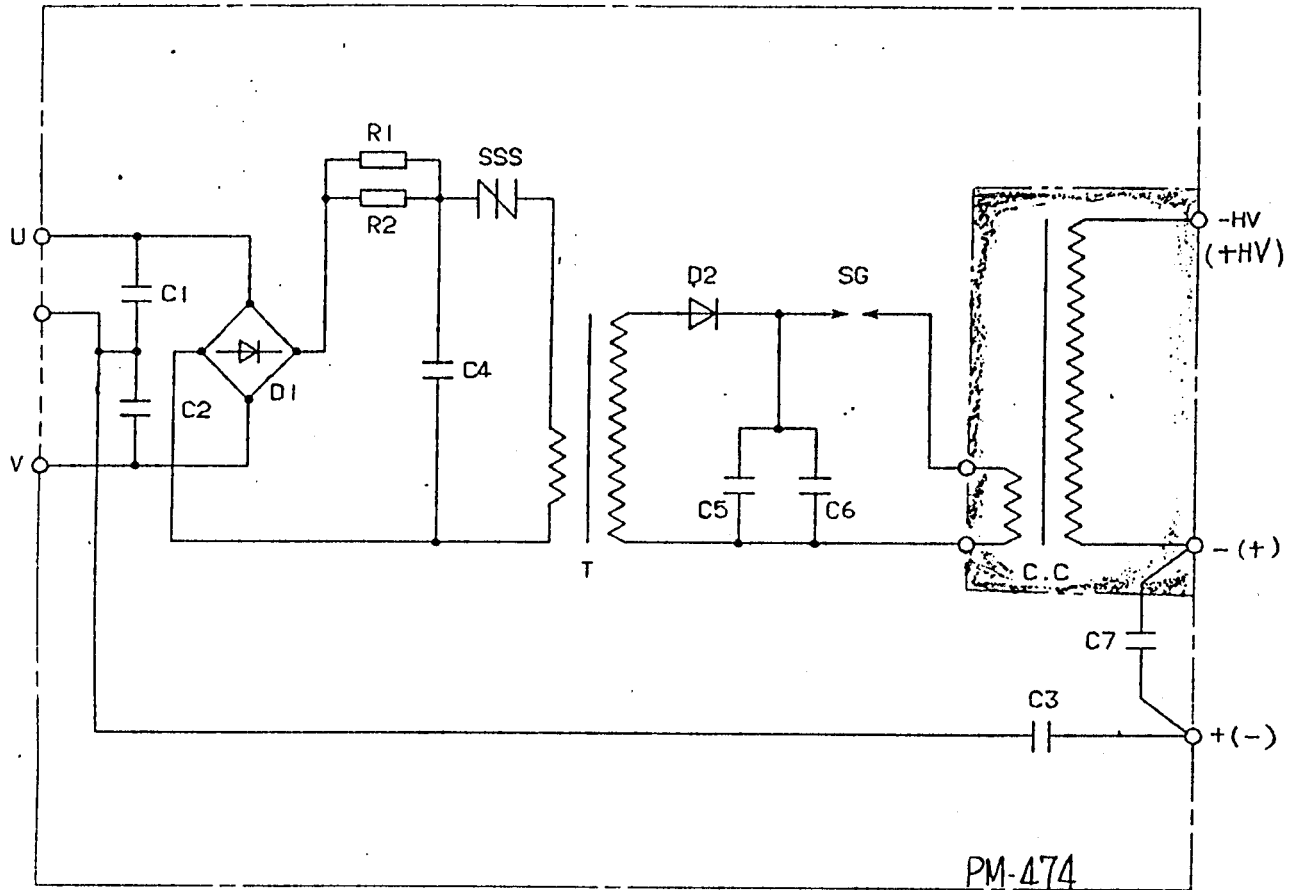
SS-80GRX HIGH VOLTAGE UNIT (XENON IGNITOR)



terminal size
-HV ----- M6
+ ----- M5

記号	年月日	改訂記号	印

SS-80GRX IGNITOR CIRCUIT DIAGRAM



PARTS LIST

<u>INDEX</u>	<u>NOMENCLATURE</u>	<u>RATING</u>	<u>QTY.</u>
D1	DIODE	RB-154	1
D2	DIODE	ESJA 31-24	1
SSS	SCR	KIV-10	1
C1,2,3	CAPACITOR	DE7100F 222MVA1	3
C4	CAPACITOR	ECQ-E2105KZ	1
C5,6	CAPACITOR	ECK D4C122MD	2
C7	CAPACITOR	ECQ-E10104MV	1
R1,2	RESISTOR	ERC-3ANJ 102 3W 1K	2
T	HIGH TENSION TRANSFORMER	ETG6L3A	1
C.C	COUPLING COIL	S FIA-7482	1
SG	SPARK GAP	T-16 RED CONTACT TW 1.6øx15	2
	OUTPUT TERMINAL	M5X20 BRASS	3
	INPUT TERMINAL	B-4P-VH	2
	MOUNTING SUPPORT	NB-400, NA-420	3

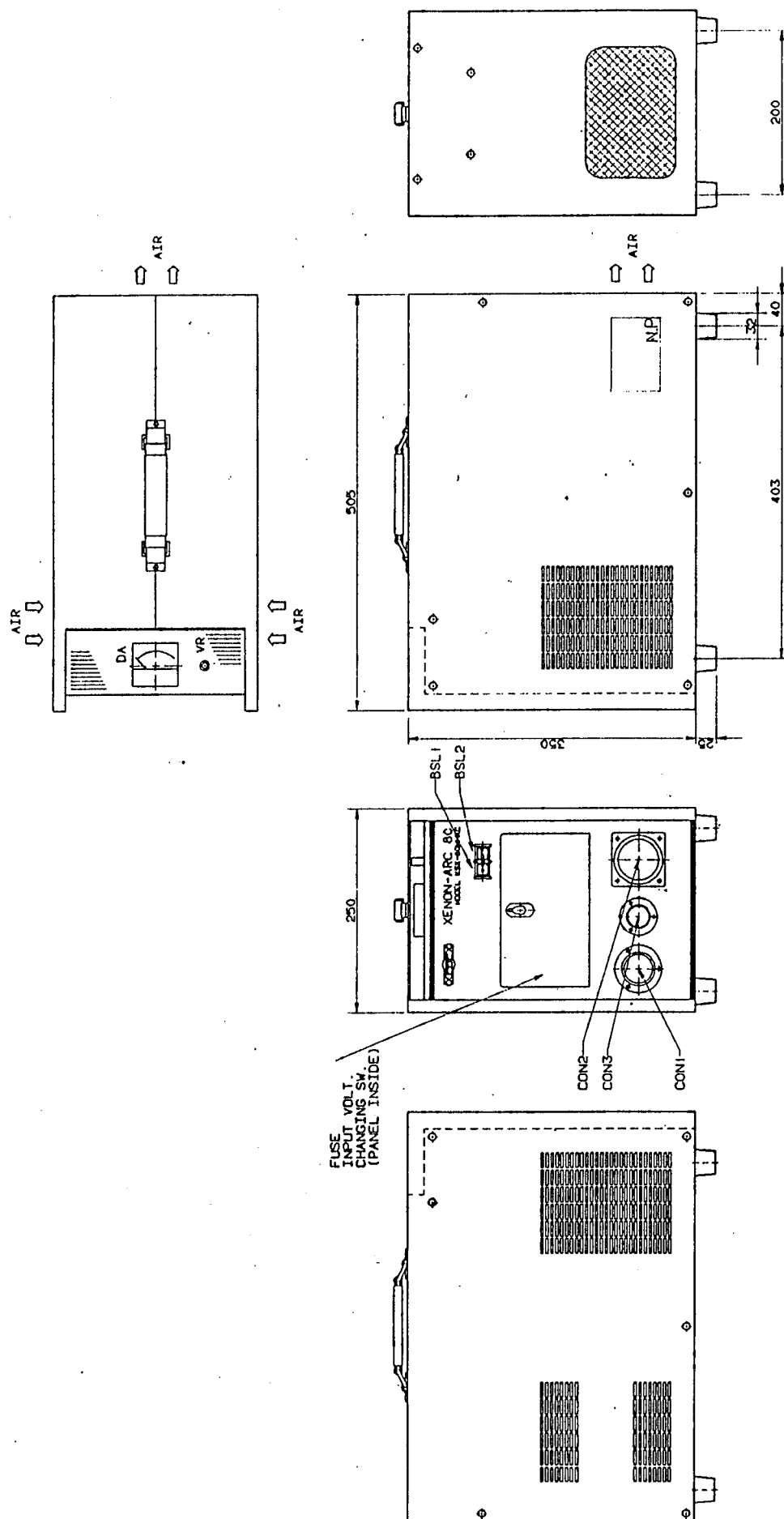


FIG. 7

SWITCHING REGULATOR POWER SUPPLY

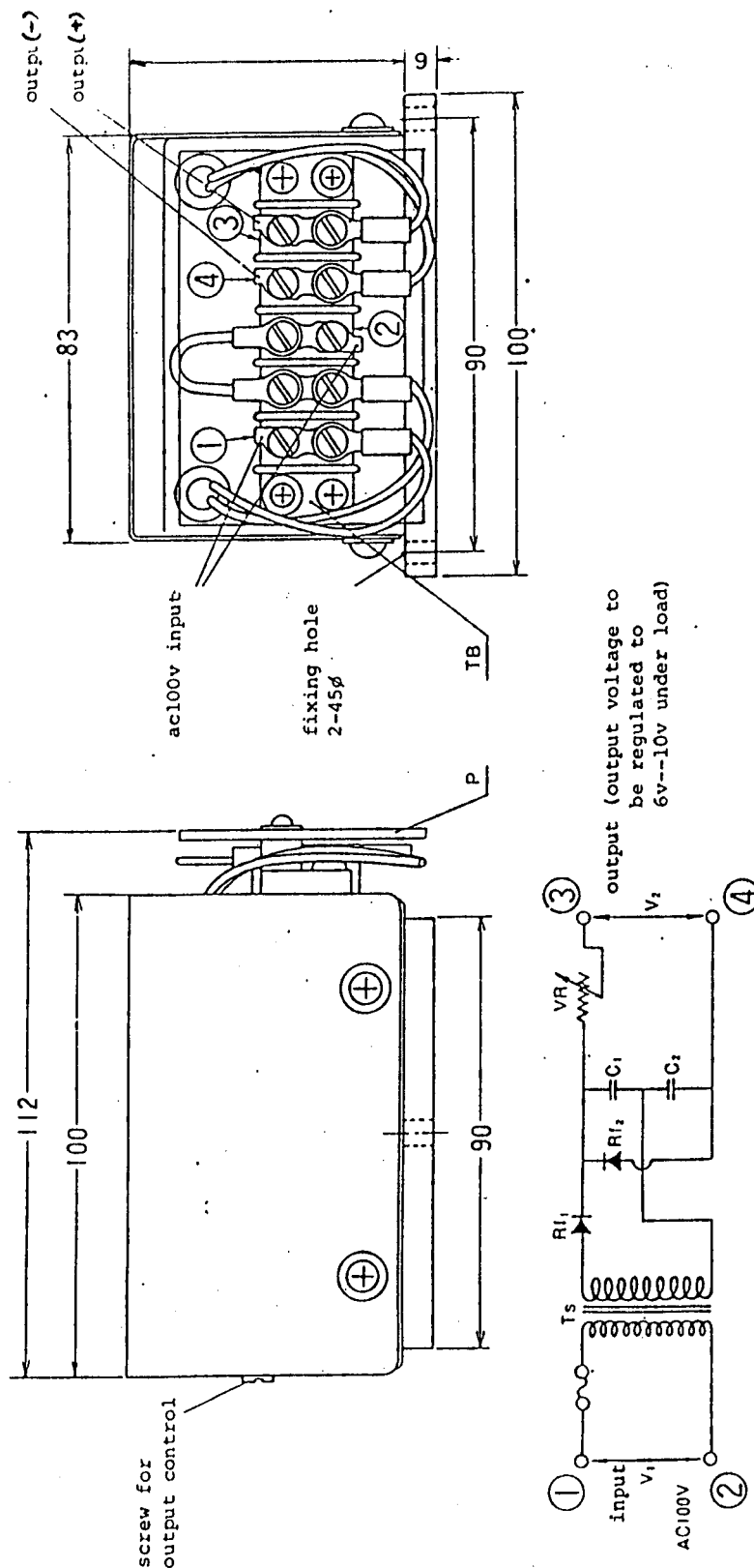
MODEL KSX-80MHXC

De Luxe Type, Meter Panel on Top

KSX-80MHXS SWITCHING REGULATOR, PARTS LIST

<u>INDEX</u>	<u>NOMENCLATURE</u>	<u>MODEL/RATING</u>	<u>Q'TY</u>	<u>MANUFACTURER</u>	<u>REMARKS</u>
F1.2	fuse	AAC-50R	2	ASAHI DENKI	
DA	DC ammeter	DCF-5 100A/60MV	1	TOYO KEIKI	
SH	shunt	A - TYPE 100A/60MV	1	YAMADA DENKI	
S1	switch	S-42 4PDT	1	NIHON KAIHEIKI	
S2	switch	S-2B 1PDT	1	"	100V SYSTEM SELECT
BSL1	self-illuminating push button switch	LB15SKS1, ON	1	"	OPERATION
BSL2	self-illuminating push button switch	LB15SKS1, OFF	1	"	POWER ON
TCH	voltage system selector	SJ-2875	1	SHOWA MUSEN	200V SYSTEM SELECT
MC	magnetic switch	G2J-4412T AC100V	1	TATEISHI DENKI	
THS	thermal switch	OHD-90B 90 OFF	1	TOHOKU KINZOKU	
VR	variable resistor	RV24YN15SB 0.3W 10K Ω	1	TOKYO COSMOS	
R1	resistor	GG 20W 10 Ω	1	NIHON TEIKOKI	
R2-3	resistor	ERG-3ANJ 103 3W 10K Ω	2	MATSUSHITA DENSHI BUHIN	
R4-7,12	resistor	GZG 20W 10 Ω	5	NIHON TEIKOKI	
R8	resistor	ERG-3ANJ 103 3W 10K Ω	1	MATSUSHITA DENSHI BUHIN	
R9-10	resistor	ERG-3ANJ 100 3W 10 Ω	2	"	
R11	resistor	GG 40W 20 Ω	1	NIHON TEIKOKI	
C1-2	capacitor	DE7100F222MVR1 250V .0022 μ F	2	MURATA SEISAKUSHO	
C3	capacitor	ECQE 6104MZ DC 630V 0.1 μ F	1	MATSUSHITA DENSAN	
C4-7,21	capacitor	ECWH6H562JD DC 600V .0056 μ F	5	MATSUSHITA DENSHI BUHIN	
C8	capacitor	3CWF29405JR5	1	"	
C9-10	capacitor	ECWH6H562JD DC 600V .0056 μ F	2	"	
C11	capacitor	ECEGA20Y102F 200V 1000 μ F	1	"	
C12-13	capacitor	DE7100F222MVA1 250V .0022 μ F	2	MURATA SEISAKUSHO	
C14	capacitor	ECQE 6104MZ DC 630V 0.1 μ F	1	MATSUSHITA DENSAN	
C15-20	capacitor	ECEGA2DY222F 200V 2200 μ F	6	MATSUSHITA DENSHI BUHIN	
Q1.2	transistor	QM50DY-H	2	"	
D1.2	diode	S25VB60 VRM 600V	2	MITSUBISHI DENKI	
D3.4	diode	40C1S30	2	SHIN DENGEN	
TRIAC	triac	SSG45C60	1	SANKEN	
FAN	cooling fan	HS4506 AC100V	1	SANSHA DENKI	
T1	transformer	SF1A-6874	1	TOHBISHI	
T2	transformer	SF1A-7452	1	SANSHA DENKI	
T3	transformer	SF1A-7471	1	"	
L1	reactor	SF1A-6947	1	"	
P.C1	PCB	PM-467	1	"	
P.C2	PCB	PM-472	1	"	
P.C3	PCB	PM-483	1	"	
CON1	connector	HS35RC-3	1	HIROSE DENKI	INPUT
CON2	connector	NCS-308-RF 8P AC250V 10A	1	NANABOSHI KAGAKU	CONTROL
CON3	connector	NCS-542-RF	1	"	OUTPUT

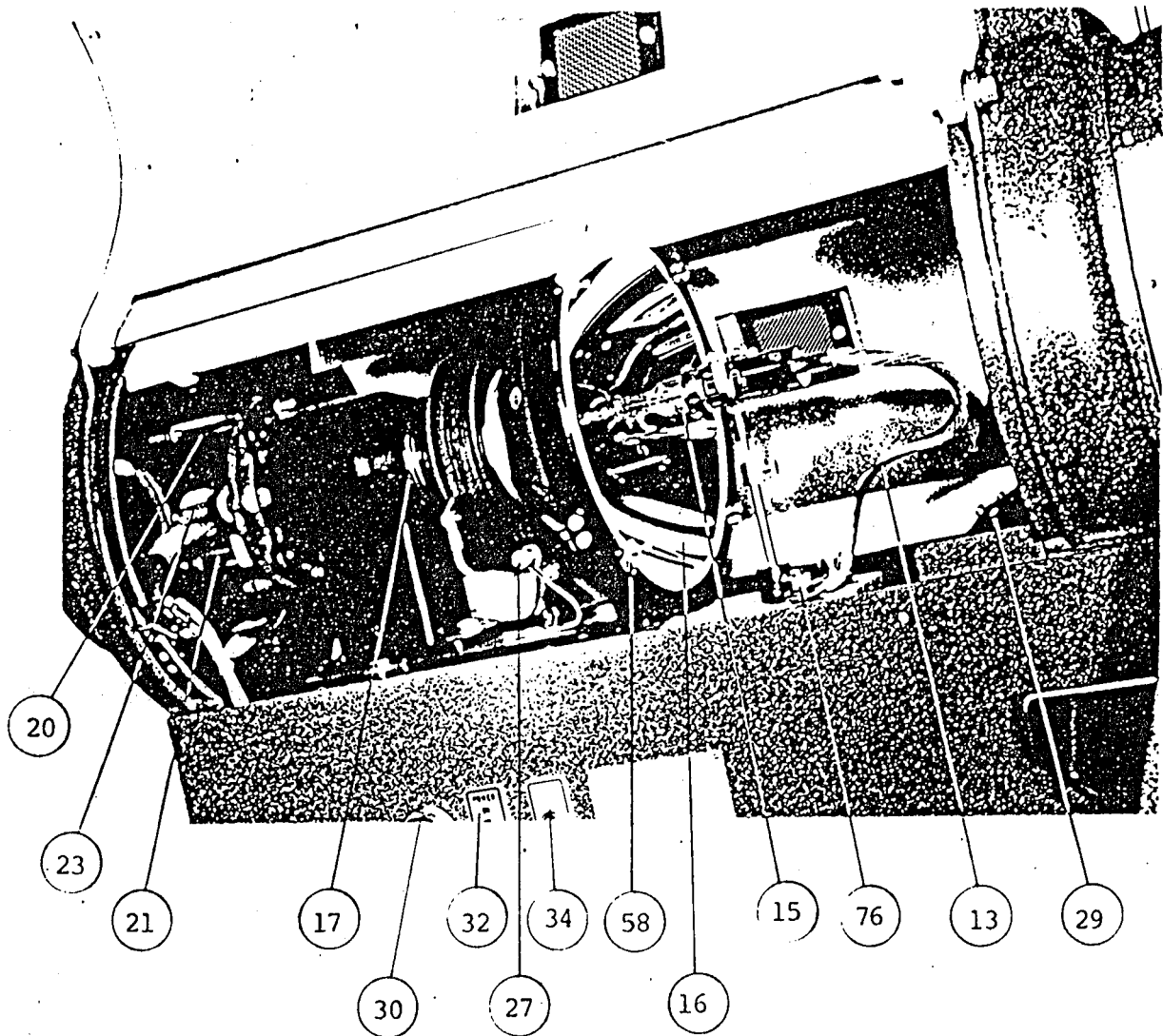
POWER SUPPLY FOR COAXIAL ELECTROMAGNET (ARC STABILIZER) (Fig. 9)



PARTS LIST

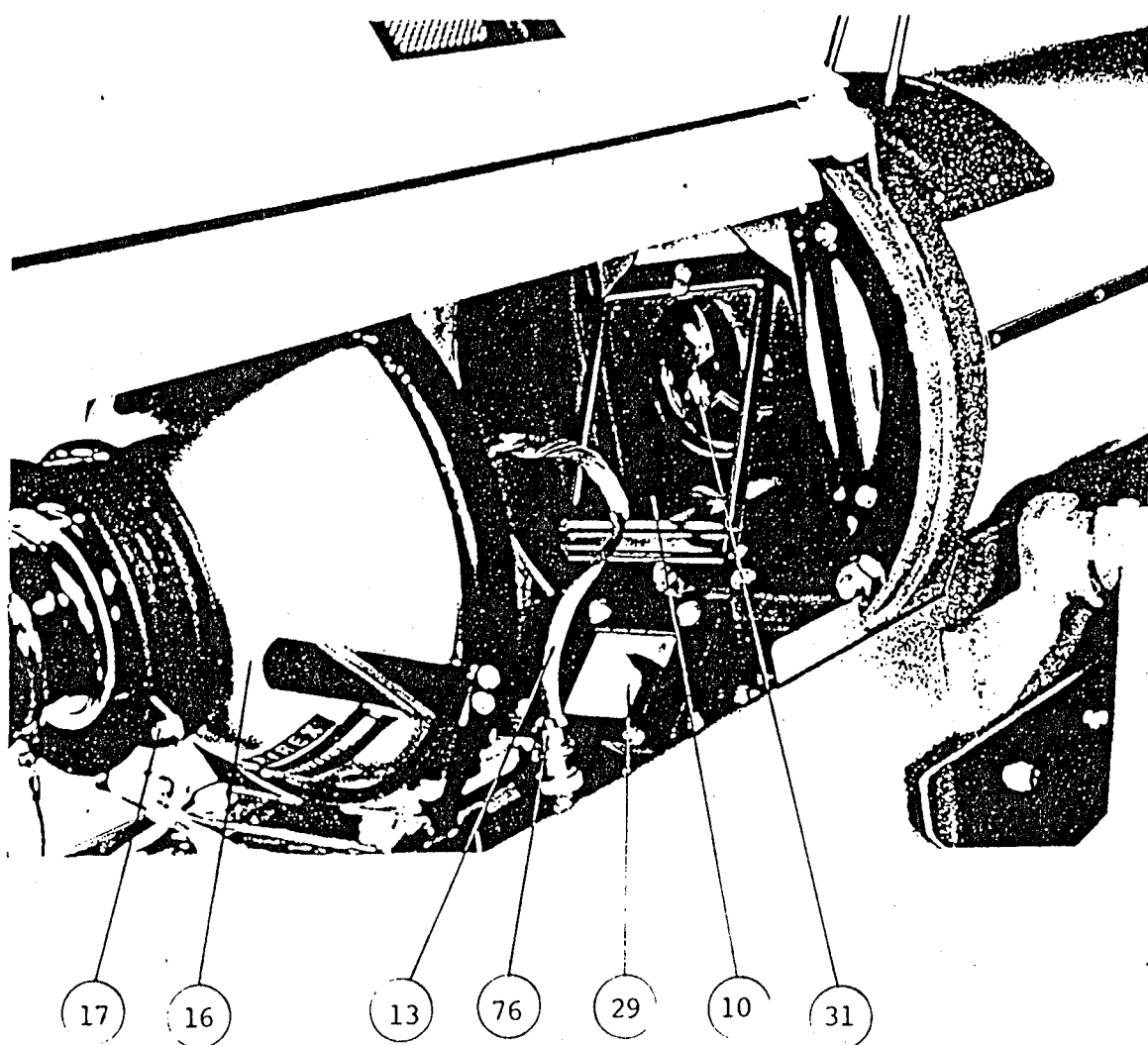
INDEX	NOMENCLATURE	RATING	Q'TY	MANUFACTURER	REMARK
Ts	STEP DOWN TRANSFORMER	100V/12V	1	AIHARA DENKI	
Rf1	SILICON DIODE	SRIK12 600V 0.8A	1	UNIZON	
Rf2	"	SRIK12 600V 0.8A	1	"	
C1	ELECTROLYTIC CONDENSER	25V 2200mf	1	ELNAR	OR EQUIVALENT
C2	"	25V 2200mf	1	"	"
VR	VARIABLE RESISTOR	25W 500Ω	1	NIHON TEIKO	"
TB	5-P TERMINAL BOARD	ML-1765 250V 15A	1	SATO PARTS	"

XENON LAMP AND REFLECTOR ASSEMBLY (Fig. 10)



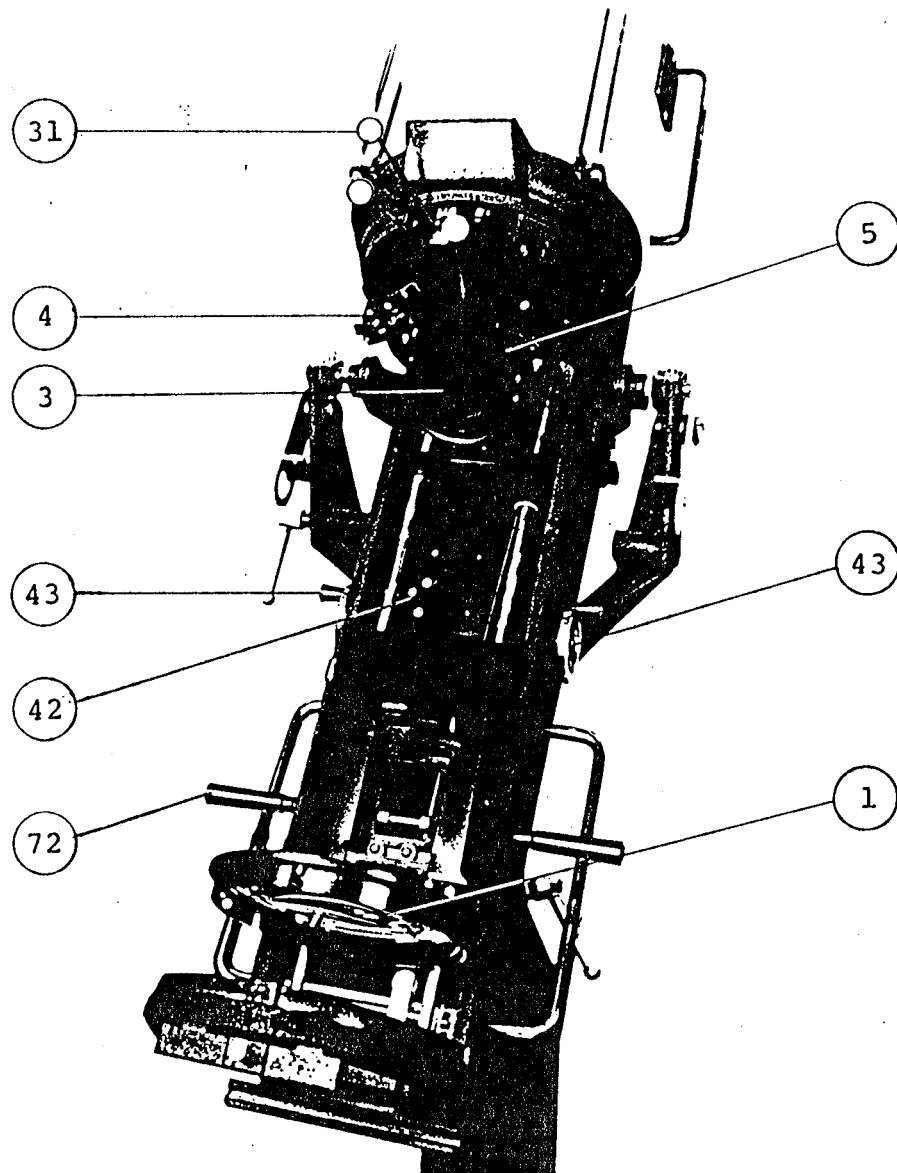
- 20. xenon lamp right/left adjust knob
- 23. xenon lamp up/down adjust knob
- 21. xenon lamp fore/back adjust knob
- 17. arc stabilizer electromagnet
- 27. arc stabilizer permanent magnet
- 30. arc start push button
- 32. power switch
- 34. full/half switch
- 58. reflector clamp
- 16. reflector
- 15. xenon lamp, UXL-2000PR
- 76. clamp nut
- 13. negative(-) lead
- 29. cooling fan motor

FOLLOW SPOT OPTICAL ASSEMBLY (FIG. 11)



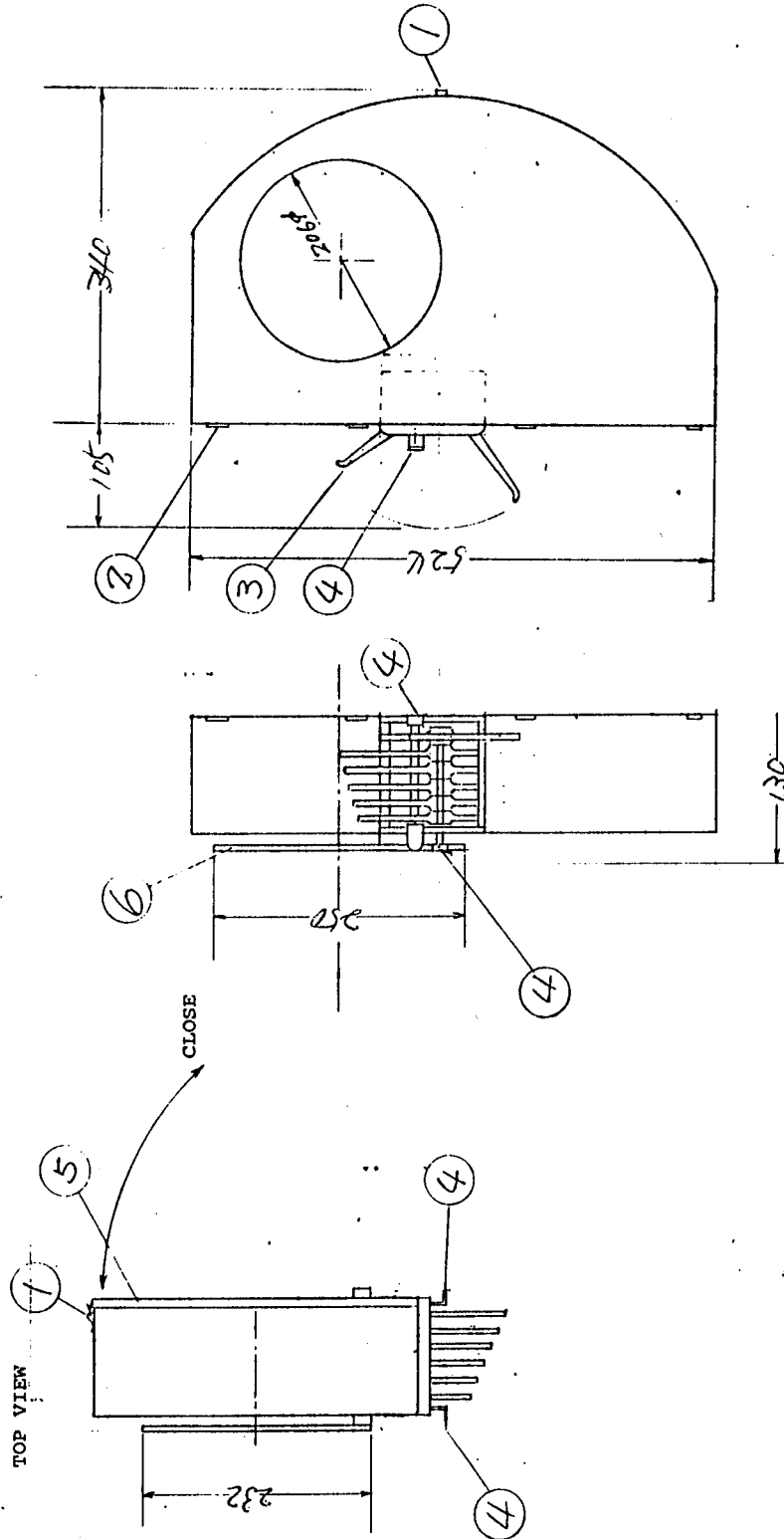
- 17. arc stabilizer electromagnet
- 16. reflector
- 13. negative lead (a part of UXL-2000PR)
- 76. clamp nut
- 29. cooling fan
- 10. heat deflector
- 31. douser (blade)

OPTICAL LENS SYSTEM (Fig. 12)



- 4. microswitch for iris shutter(full/half)
- 5. iris shutter
- 3. rear zoom lens
- 1. front zoom lens
- 31. douser(handle) reversed operation
- 42. zoom pulley with stopper wheel
- 43. fucus adjust handle
- 72. zoom lever shaft

COLOR CHANGER ASSEMBLY-FIG. 13



COLOR CHANGER FOR ICE CAPADES

NO	NOMENCLATURE
1	CLAMP LOCK
2	HINGE
3	OPERATION LEVER
4	RELEASE LEVER
5	DOOR
6	HOLDER BOARD

COLOR CHANGER		型式		図面番号	
		発行月日		50.7.4.	
		設計			
		検査			
		承認			
		図面番号			

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COLOR CHANGER ASSEMBLY
FOR ICE CAPACES (WITH LIGHT SHIELD COVER)
Fig. 13B

