Film-Tech

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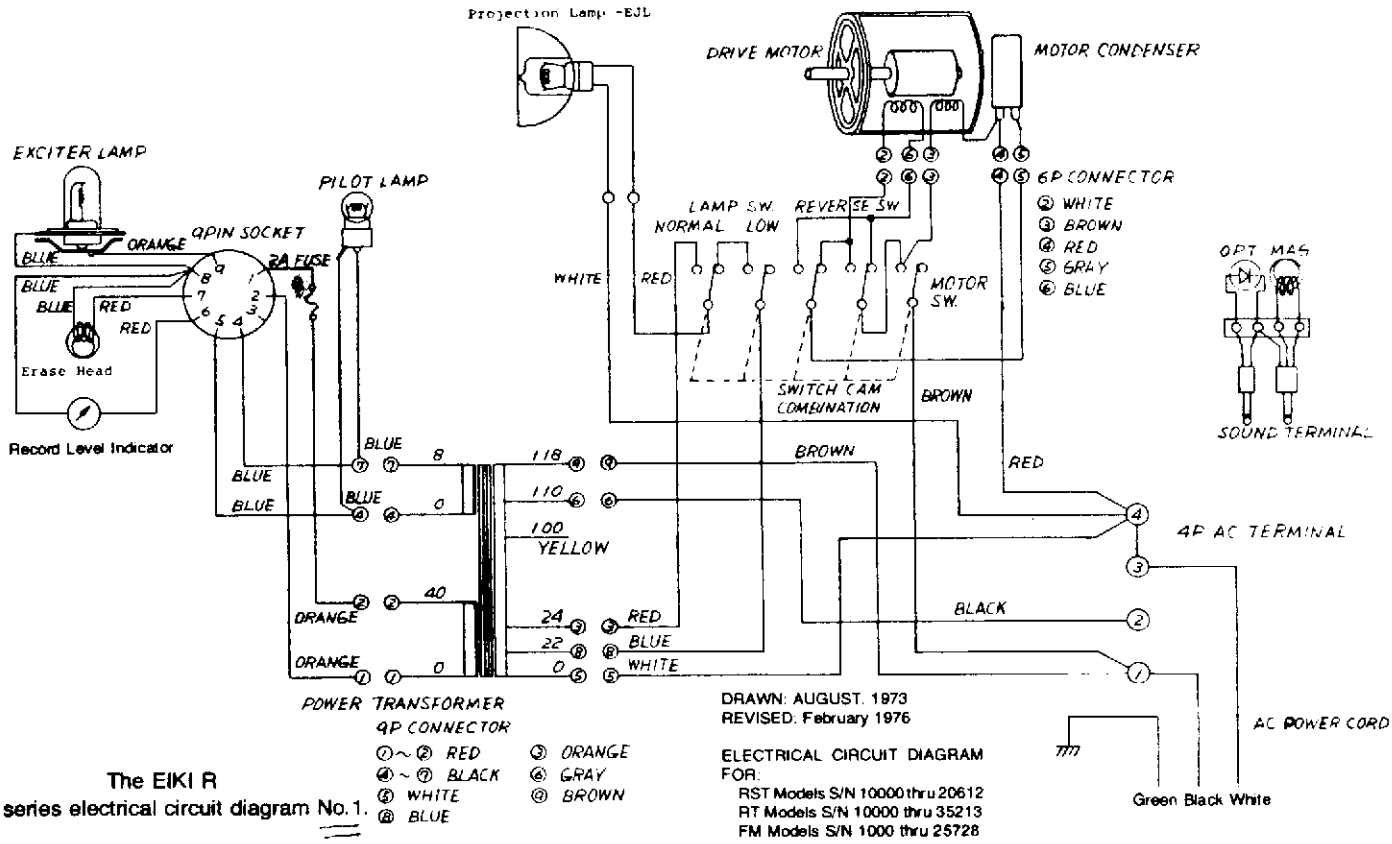
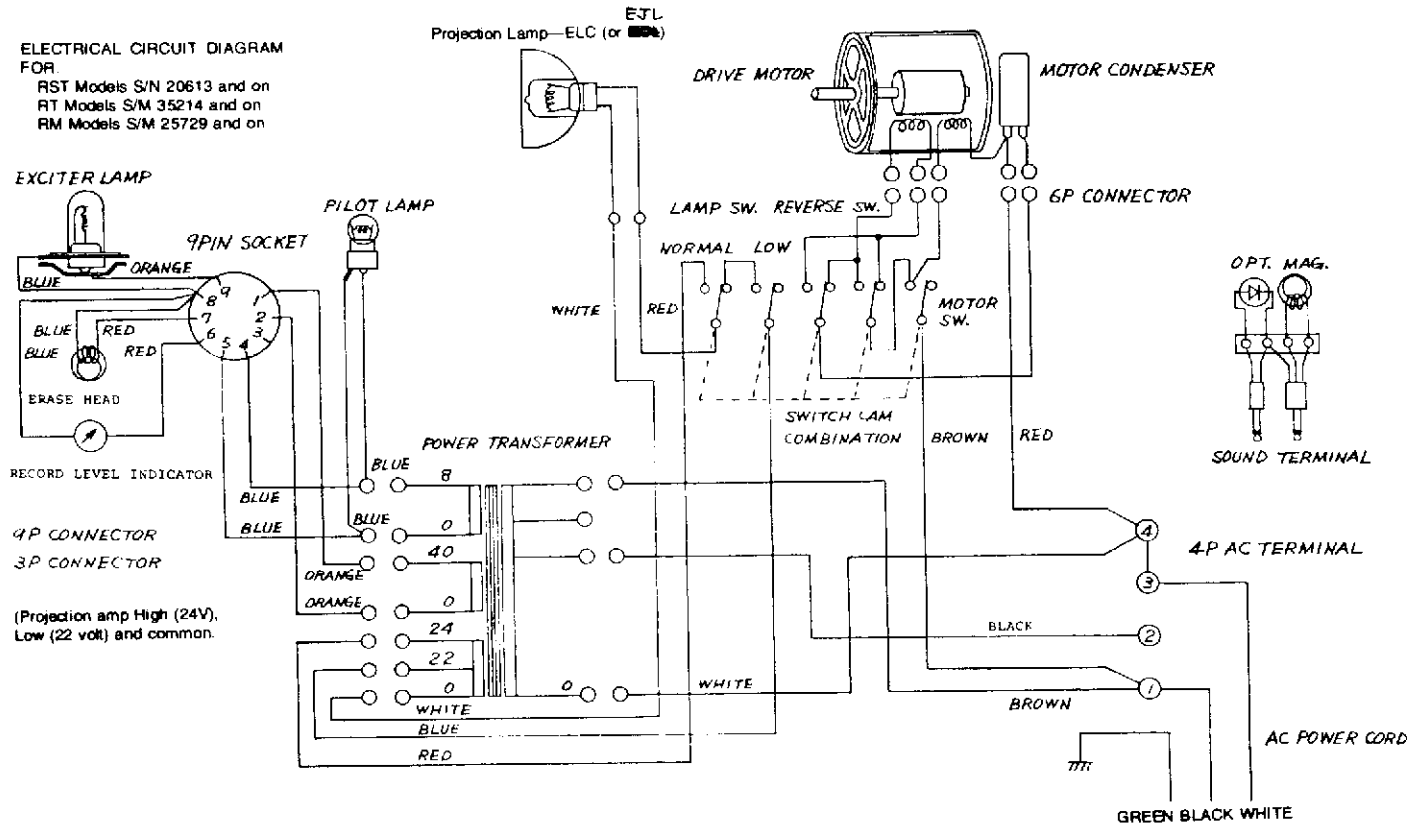
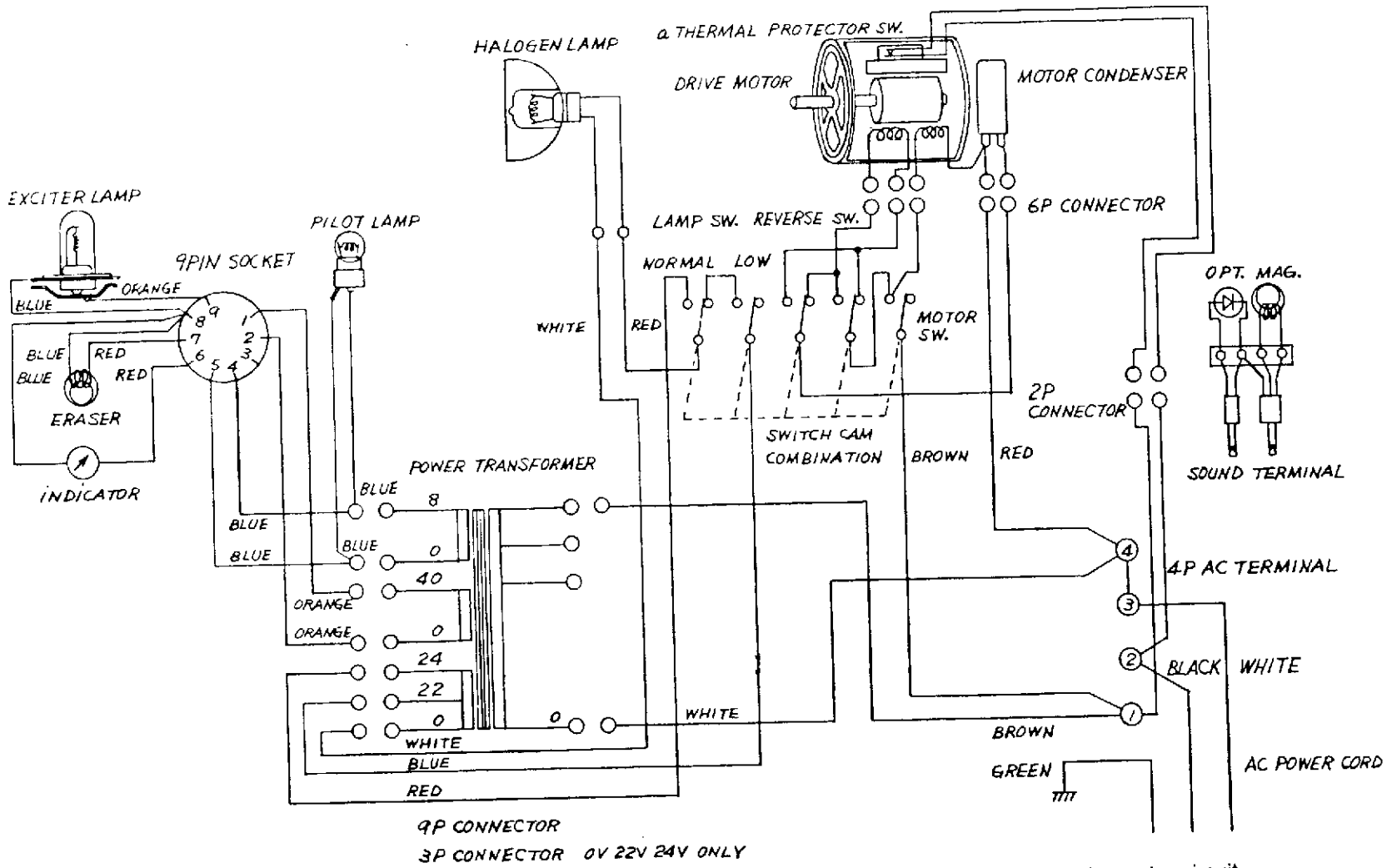


The EIKI R series electrical circuit diagram No.1.

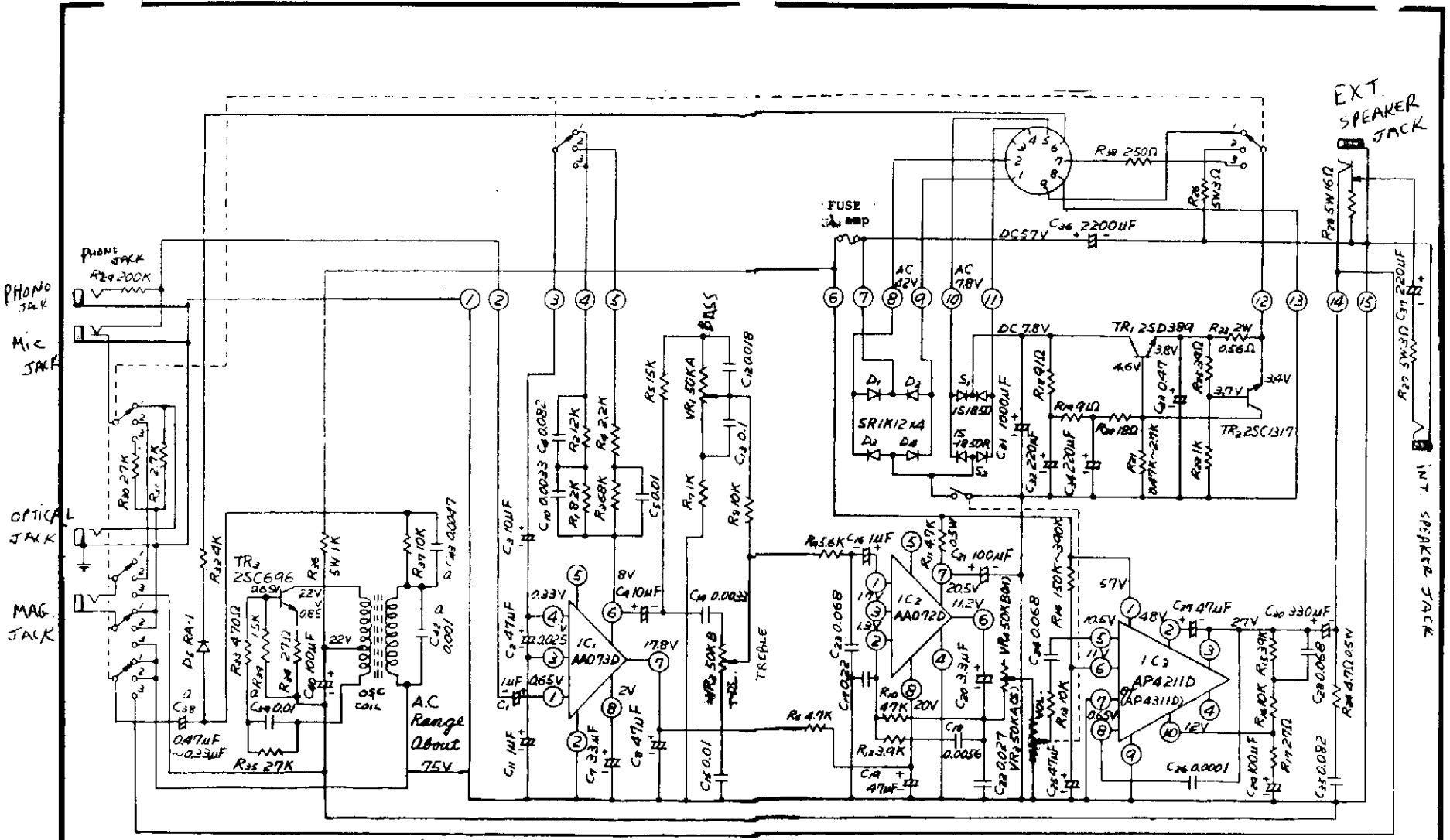
DIAGRAM #2



The EIKI R series electrical circuit diagram No. 2 shows two modifications. The 2 amp fuse has been eliminated from the wiring harness and placed on the amplifier chassis. Two plugs are used for the lamp transformer.



The EIKI R series circuit schematic No. 3 has an added thermal protector switch on the motor circuit.

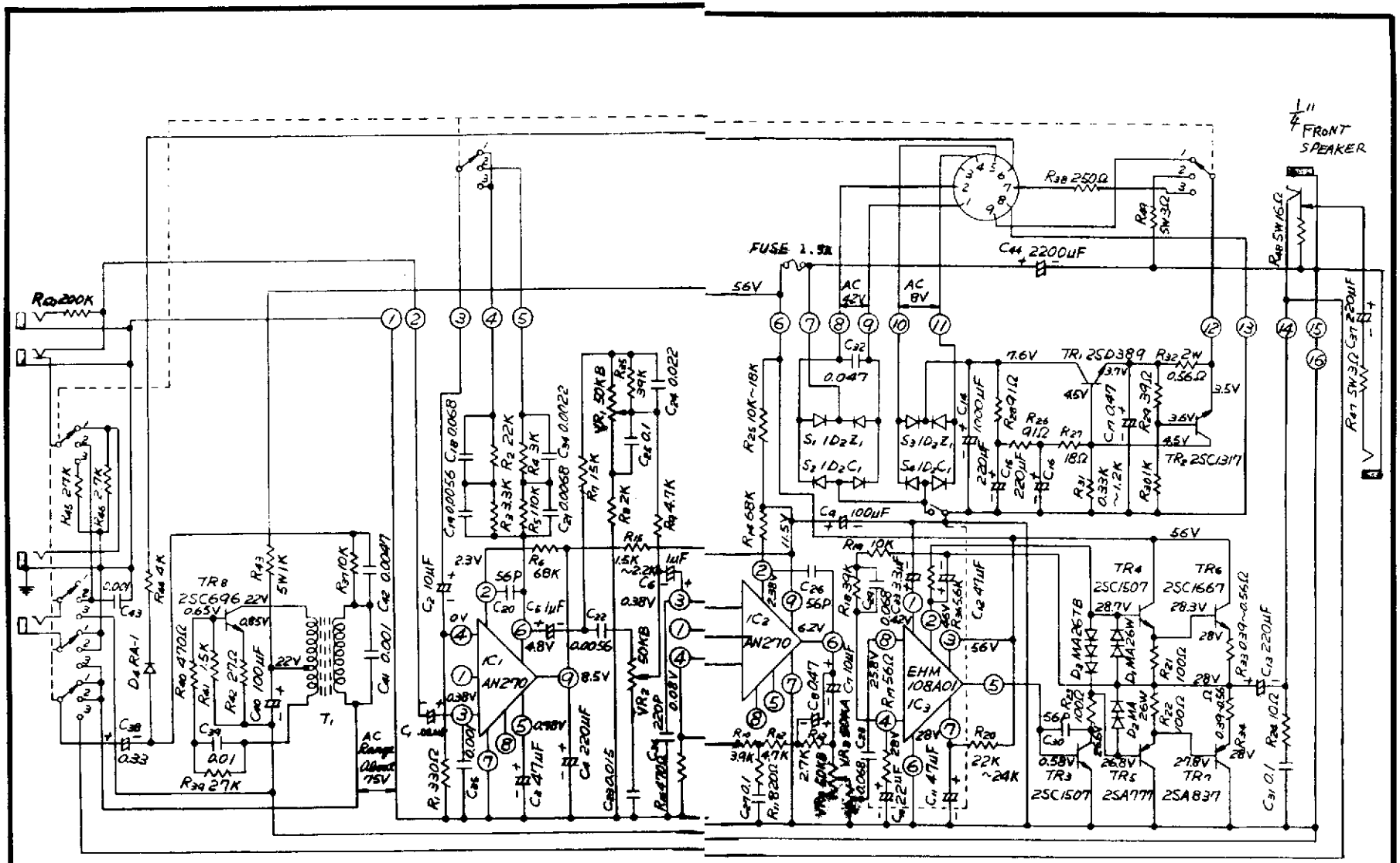


AMPLIFIER CIRCUIT DIAGRAM FOR:

RST MODELS - S/N 10000 thru 20028
RT MODELS - S/N 10000 thru 25878
RM MODELS - S/N 10000 thru 20178

Fig. 2-31. The EIKI series R amplifier schematic No. 1. It can be identified by designation EUH-WA206 etched on the printed circuit board. Also, this amplifier uses a 1 amp fuse. Do not use a slow-blow type.

AMPLIFIER #1 "R" SERIES

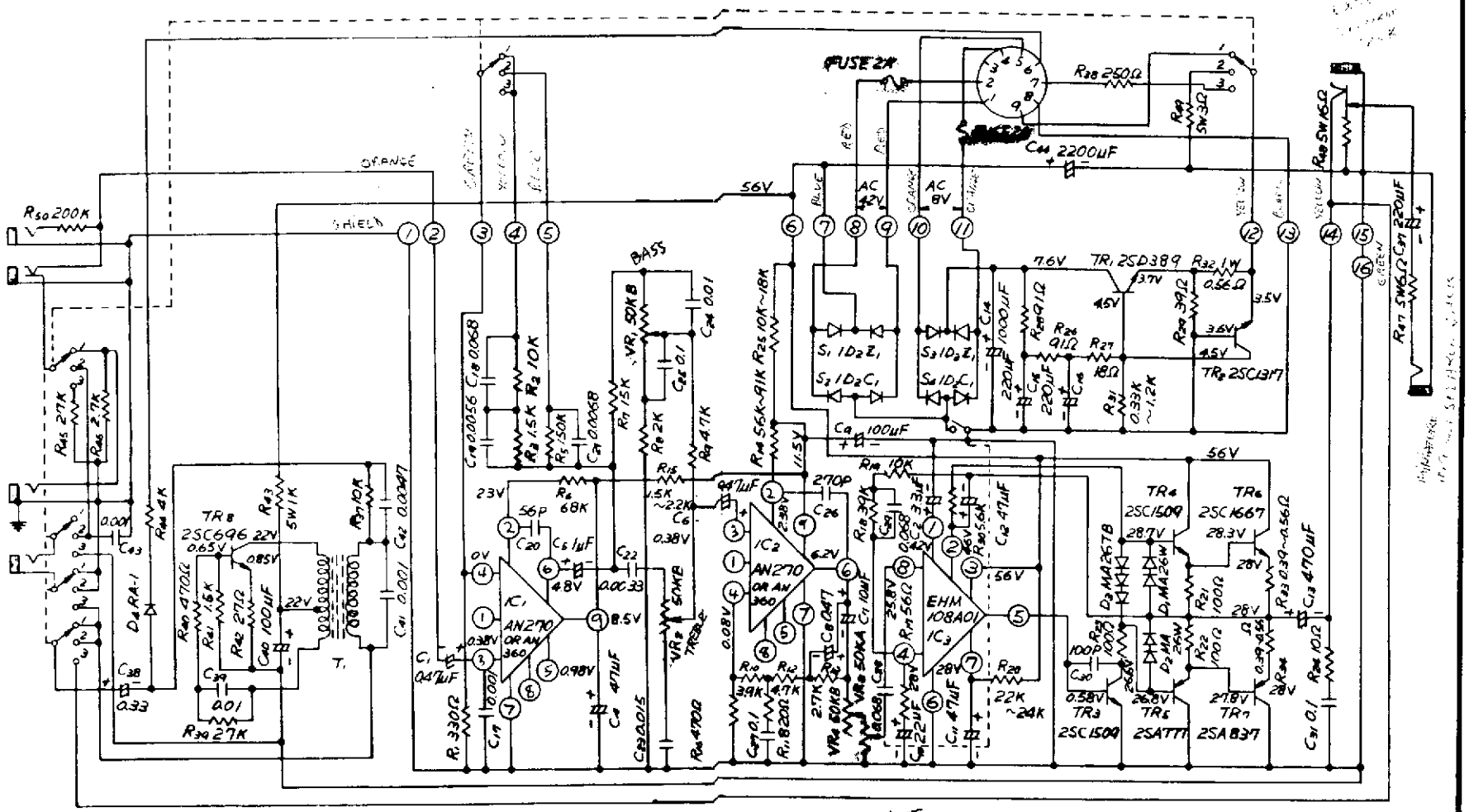


AMPLIFIER CIRCUIT DIAGRAM FOR:

RST - 20029 thru 20097
RT - 25879 thru 30499
RM - 20179 thru 25499

The EIKI R series amplifier schematic No. 2 uses a 1.5 amp fuse and is identified by the designation EUH-WA 414 on the printed circuit board and output transistor cover.

AMPLIFIER # 2 "R" SERIES



R2, R3, - R37 values have been changed. If your amplifier does not have these values it can be updated.

RST - 20098 and on
RT - 30500 and on
RM - 25500 and on

SWITCH POSITIONS

1. OPTICAL SOUND
2. MAGNETIC PLAY
3. MAGNETIC RECORD

VR4 TRIMPOT
VR3 VOLUME

312-50601 AMPLIFIER MODULE
WITH 312-52601 P.C. BOARD

The EIKI R series amplifier schematic No. 4 (EUH-WA 526) has a 2 amp fuse on top of the amplifier chassis in an open fuse holder. This is in addition to the standard 2 amp fuse.

USE 314-51101 AMP. MAIN P.C. BOARD ASSY.

USE "RT" SCHEMATIC 312-51161

MAG. RECORD MODEL USES 312-50811 OSCILLATOR BOARD ASSY ALSO

EIKI

CHANGEOVER SYSTEM

INSTALLATIONS INSTRUCTIONS
R Series -1, -2 & -3 ONLY

Steps:

1. Unplug projector.

2. Remove rear cover, lamp transformer module, flywheel, amplifier module, gate module and camtank module per service instructions in service manual.

3. Layout c-o switch assy. (cos-1) mounting hole locations per sketch "A". Center punch hole locations. Drill center hole to 3/8" dia. and greenlee punch hole to 7/8" dia. (It may be necessary to rotary file a boss off on the back side of the casting in this area to allow the c-o switch assy. to sit flat on the casting). Drill the two outer hole locations to 2.8 mm and countersink with a 7/32" dia. drill to the proper depth to have c-o switch assy. mounting screws flush with front surface of projector.

4. Layout hole locations for 9 pin jack (JA-1) and two 1/4" phone jacks (JA-2 & 3) in power cord pan per sketch "B". Center punch hole locations. Drill hole locations to 1/4" dia. Greenlee punch hole locations to 1/2" dia.

5. Locate power transformer assy. (T-1) in recessed area behind where lamp transformer module is located. Drill two 2.8mm hole thru power transformer assy. mounting flanges. Remove power transformer assy. and tap holes to 3.5mm.

6. Temporarily mount c-o switch assy.. Locate c-o switch plate over c-o switch assy. and mark hole locations. Remove c-o switch assy.. Drill hole locations to 1.8mm and tap to 2.3mm.

7. This completes the machining processes to the projector. Clean and deburr projector.

8. Mount c-o switch assy.. Route cable CA-4 back across inside top of casting and down behind motor (using clamp provided, clamp cable CA-4 to casting in this area) and out through the area of the 9 pin plug. Route cable CA-3 forward and down between the #1 sprocket boss and the rewind assy. boss (the #1 sprocket drive gear may be removed to facilitate installation). Then down thru the hole in the main casting going into the power cord pan area. Then over to the holes drilled in step #4.

9. Slip the blue 9 pin hood onto cable CA-3. Then slip the piece of 1" dia. red heat shrink tubing onto cable CA-3. Slip cable CA-3 thru the left hole drilled in step #4 and using a 1/4" piece of black heat shrink tubing on each connection solder the 9 pin jack JA-1 onto cable CA-3 per the wiring diagram.

10. Solder the 1/4" phone jack assy. (JA-2 & 3) to the green and orange wires of the cable CA-3 per wiring diagram. Mount the two 1/4" phone jacks (JA-2 & 3) in the two remaining holes in the power cord pan using the washers and nuts provided.

11. Mount the power transformer assy. T-1 in the holes drilled in step #5 using hardware provided. Route cable CA-1 towards the rear of the projector to the terminal strip. Connect cable CA-1 to the terminal strip per the wiring diagram.

12. Route cable CA-2 from the c-o switch assy. along same route as cable CA-3 down to the power transformer assy.T-1. Connect cable CA-2 to the two red leads of the power transformer assy. T-1 using a piece of 1" long white heat shrink provided on each connection and a piece of 2" long yellow heat shrink over both connections. As this is A.C. current polerity is not needed.

13. Affix relay SSR-1 to casting next to c-o switch assy. using suitable glue or epoxy.

14. Install amplifier and plug cable CA-4 into amplifier using the miniature phone jack located next to the fuse holder.

15. On the cam tank locate the solenoid assy. SA-1 on the fin of the cam tank so that it nests into the boss for the oil filler hole per sketch "C". Mark the two mounting hole locations. Drill the two mounting hole locations to 3.2mm and tap to 4mm. Clean and deburr cam tank. Mount solenoid assy. SA-1 on cam tank using hardware provided. Check at this point to be sure the plunger of the solenoid operates freely. If it does not operate freely bend the wire carefully where it is brazed to the solenoid plunger so that it does not rub on the cam tank casting.

16. Install the cam tank assy. being carefully not to damage the solenoid assy.. Also check to be sure it does not contact cable CA-2 or CA-3.

17. Locate the douser assy. (the three connected piece assy.) on the back of the gate module per sketch "D". Mark the pivot hole location and drill to 1.8mm and tap to 2.3mm. Clean and deburr gate module. Mount the douser assy. using the ST-30021 screw provided in the pivot hole. Replace the upper inner guide rail screw with one of the two modified ST-31061 screws provided. Using the other modified ST-31061 screw provided insert it thru the angled pieces center pivot hole and slip the three washers onto the screw. Mount this screw into the back side of the same hole that the upper inner guide rail screw uses. Check to be sure the three washers are free to move on the ST-31061 screw.

18. Install the gate module on the projector.

19. To connect the douser assy. installed on the gate module to the solenoid assy. plunger, open the clip connection wide enough to allow it to slip onto the top hole of the dousers angled piece.

20. The energized location of the douser should now be set up. Energize the solenoid assy. either by supplying a separate 24 VDC power source or connecting the solenoid assy. plug to the c-o switches jack and connecting the two projectors together using the inter-connecting control cable CA-5. With the solenoid assy. energized the douser should pull down so that it covers the apature opening. If it

does not cover the apature opening the solder connections between the douser assy. and the solenoid assy. can be heated and the douser assy. adjusted so that it properly covers the apature opening. (If the douser assy. is force to a proper position to cover the apature before the solder connection is heated than held in place until the solder connection cools this should properly align the douser assy. for proper operation). Switch the c-o switch assy. or interrupt the auxillary power to activate and check for proper and smooth operation of the douser.

21. Install the c-o switch plate using the hardware provided.

22. If the solenoid assy.'s plug has not been connected to the c-o switches jack do so now.

23. Install the lamp transformer module, flywheel and rear cover.

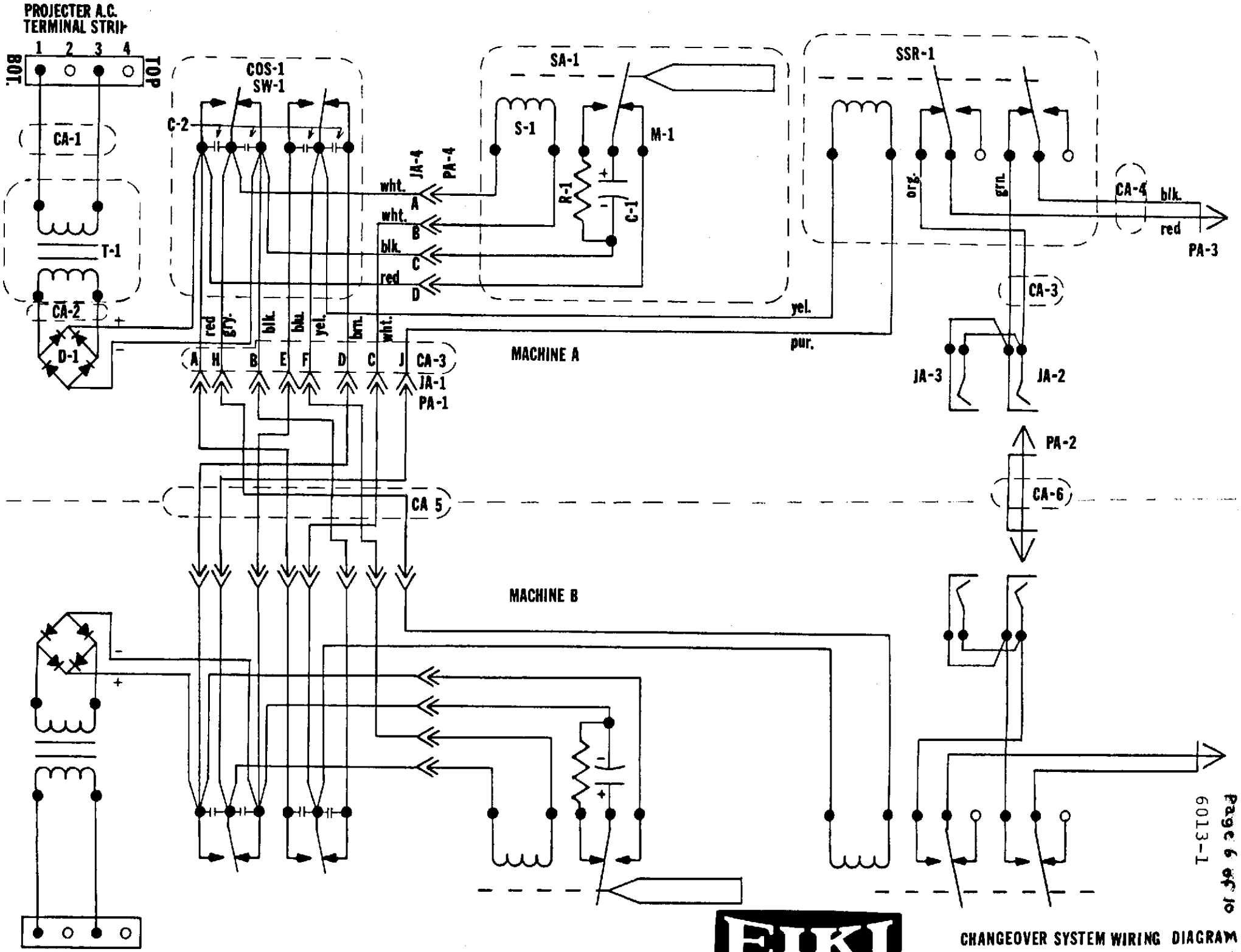
This should complete the installation. Repeat the operation for the other projector (if required). The projector should now be tested for operation as a single unit to check for any adjustments that may have been disturbed during installation. Also check to be sure all wires and cables do not interfer with proper operation of the projector.

To test the system refer to the system and function explanations.

EIKI

Tool List:

Center Punch
1.8mm Drill
2.8mm Drill
3.2mm Drill
7/32" dia. Drill
1/4" dia. Drill
3/8" dia. Drill
2.3mm Tap (JIS)
3.5mm Tap (JIS)
4mm Tap (ISO)
1/2" dia. Greenlee Punch # 730 - 1/2
7/8" dia. Greenlee Punch # 730 - 7/8


PROJECTER A.C.
TERMINAL STRIP
1 2 3 4
BOT.
TOP
CA-1
T-1
CA-2
D-1
COS-1
SW-1
C-2
SA-1
S-1
M-1
R-1
C-1
SSR-1
org.
grn.
CA-4
blk.
red
PA-3
wht.
wht.
blk.
red
JA-4
PA-4
A
B
C
D
yel.
pur.
red
gry.
blk.
blu.
yel.
brn.
wht.
A H B E F D C J CA-3
JA-1
PA-1
MACHINE A
CA-3
JA-3
JA-2
PA-2
CA-6
CA 5
MACHINE B
2-1-77
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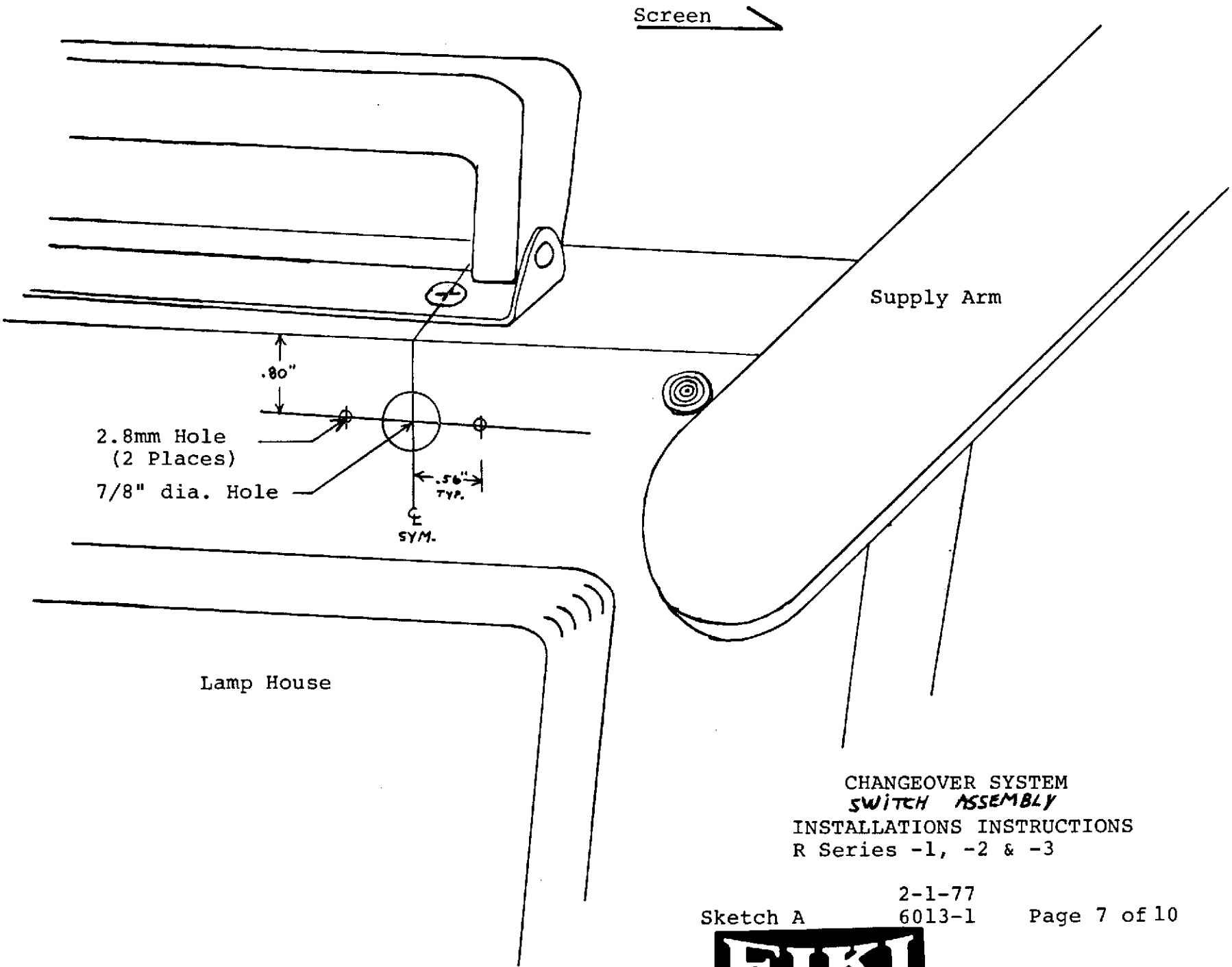
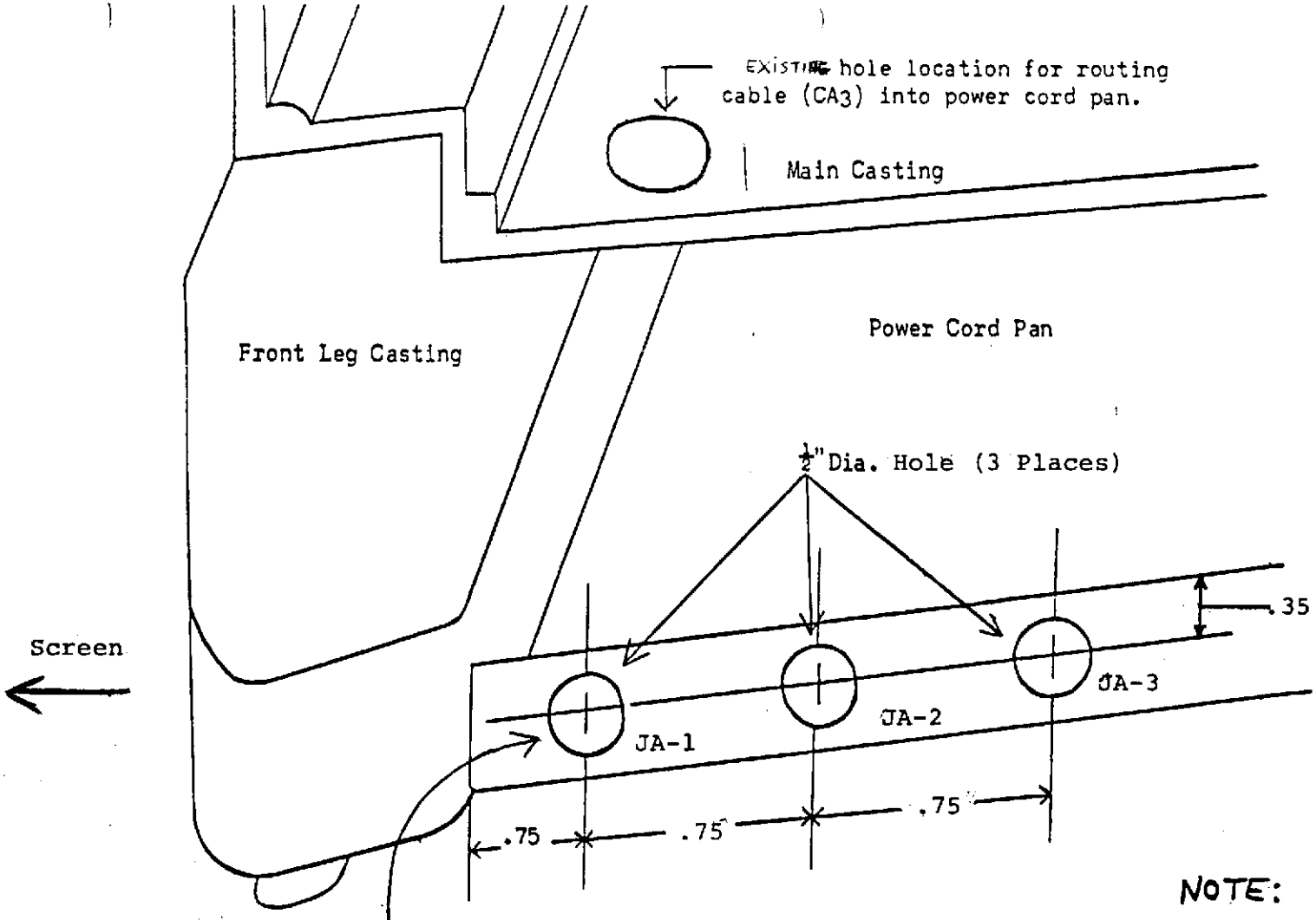
6013-1
EIKI
CHANGEOVER SYSTEM WIRING DIAGRAM
R SERIES -1 -2 &-3 ONLY REV. 10/1/76



CHANGEOVER SYSTEM
SWITCH ASSEMBLY
INSTALLATIONS INSTRUCTIONS
R Series -1, -2 & -3

2-1-77
Sketch A 6013-1

EIKI



JA-1 9-PIN JACK FOR CHANGEOVER CABLE

CHANGEOVER SYSTEM

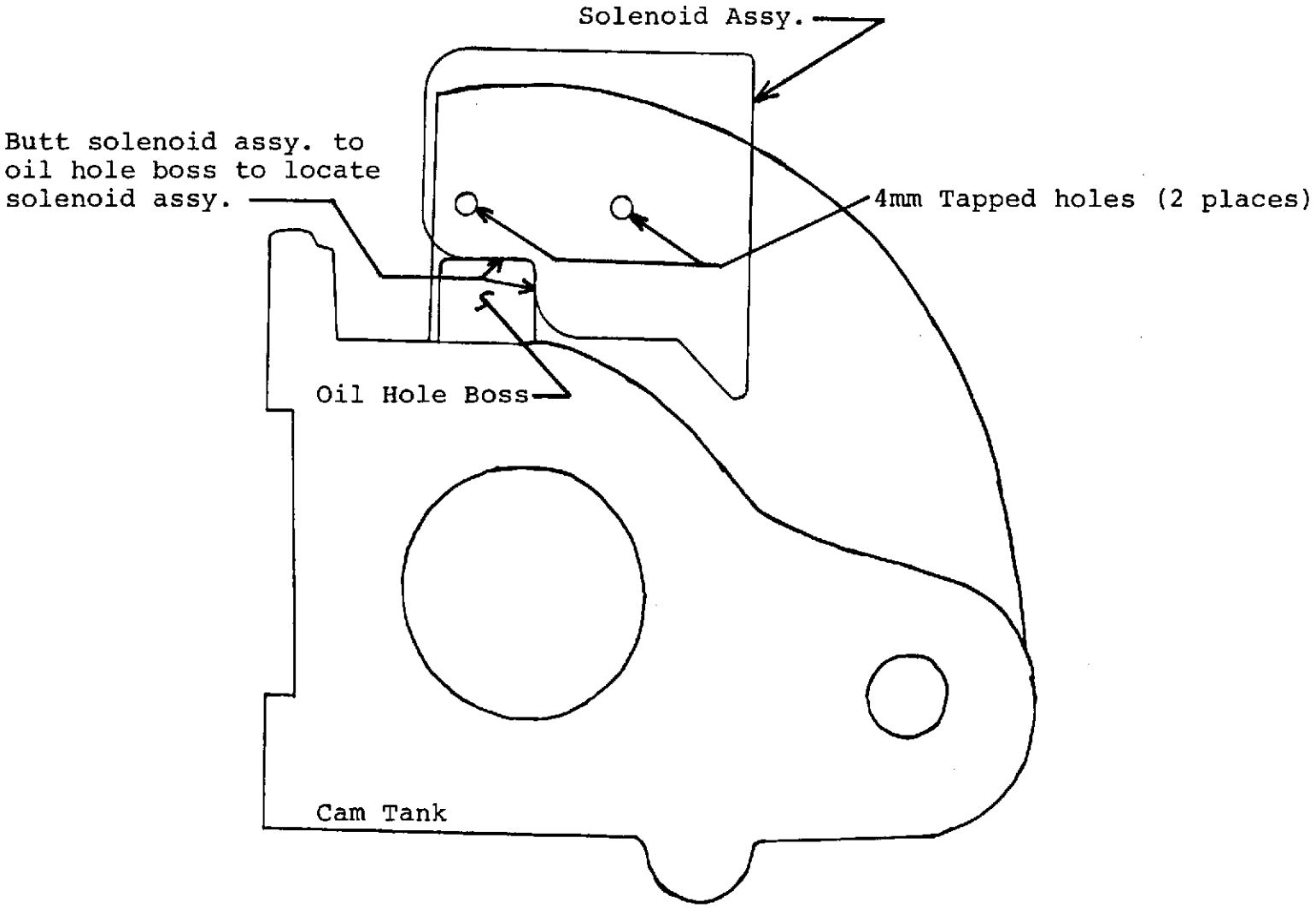
INSTALLATION INSTRUCTIONS
R Series -1, -2 & -3
JACK LAYOUT

NOTE:

JA-2 is FOR INTERCONNECTING THE SOUND OF BOTH PROJECTORS.

JA-3 is OUTPUT TO PERMANENT HOUSE SOUND SYSTEM

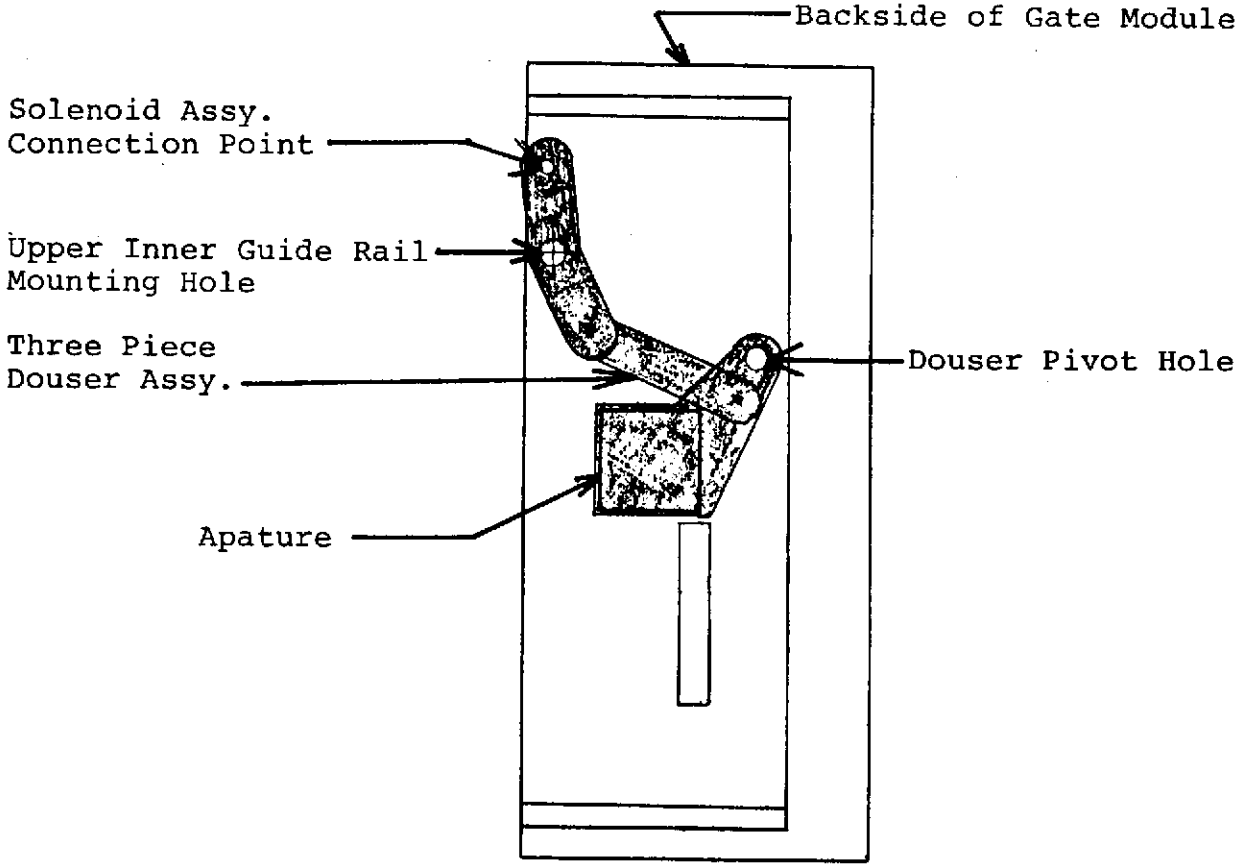
EIKI



CHANGEOVER SYSTEM
SOLENOID ASSEMBLY
INSTALLATION INSTRUCTIONS
R Series -1, -2 & -3

2-1-77
Sketch C

EIKI



CHANGEOVER SYSTEM
DOUSER ASSEMBLY
INSTALLATION INSTRUCTIONS
R Series -1, -2 & -3

2-1-77
6013-1

Sketch D

EIKI

CHANGEOVER SYSTEM
GENERAL INFORMATION
R Series -1, -2 & -3 ONLY

System Explanation:

The type of changeover EIKI uses does not require any outside boxes or controls and each projector is identical. The inter-connecting control cable CA-5 does the actual crossing over of circuits and can be used with either end in either projector.

The advantage of this type of system is its simplicity. We have tried to use simple parts rather than complicated printed circuit boards that are hard to repair and expensive to replace.

The basic change from the previous system is the addition of the sound switching relay SSR-1. This relay will automatically switch the sound from one projector to the other when the switch is activated. Furthermore it does not require that the ground wire be cut on the projector as was required by the previous system.

We have limited the type of projector that this system can be used on to the R series types -1, -2 & -3 only. It is not intended for the RT-O or the RM-O types which have speakers in the rear cover. This is because the miniature phone jack located on the amplifier next to the screw type fuse holder is used as the input of sound to the changeover system. As this is where the rear cover speaker would normally plug in the speaker cannot be used.

Function Explanation:

When the two projector's are set up side by side and the interconnecting control cable CA-5 is plugged into each projector and the interconnecting speaker cable is plugged into one of the ¼" phone jacks next to the control cable the system is operative. The other ¼" phone jack located in the power cord pan of either projector can be used as the output of sound to the house system.

When either changeover switch is activated it switches the 24 VDC power so that one projector's solenoid is

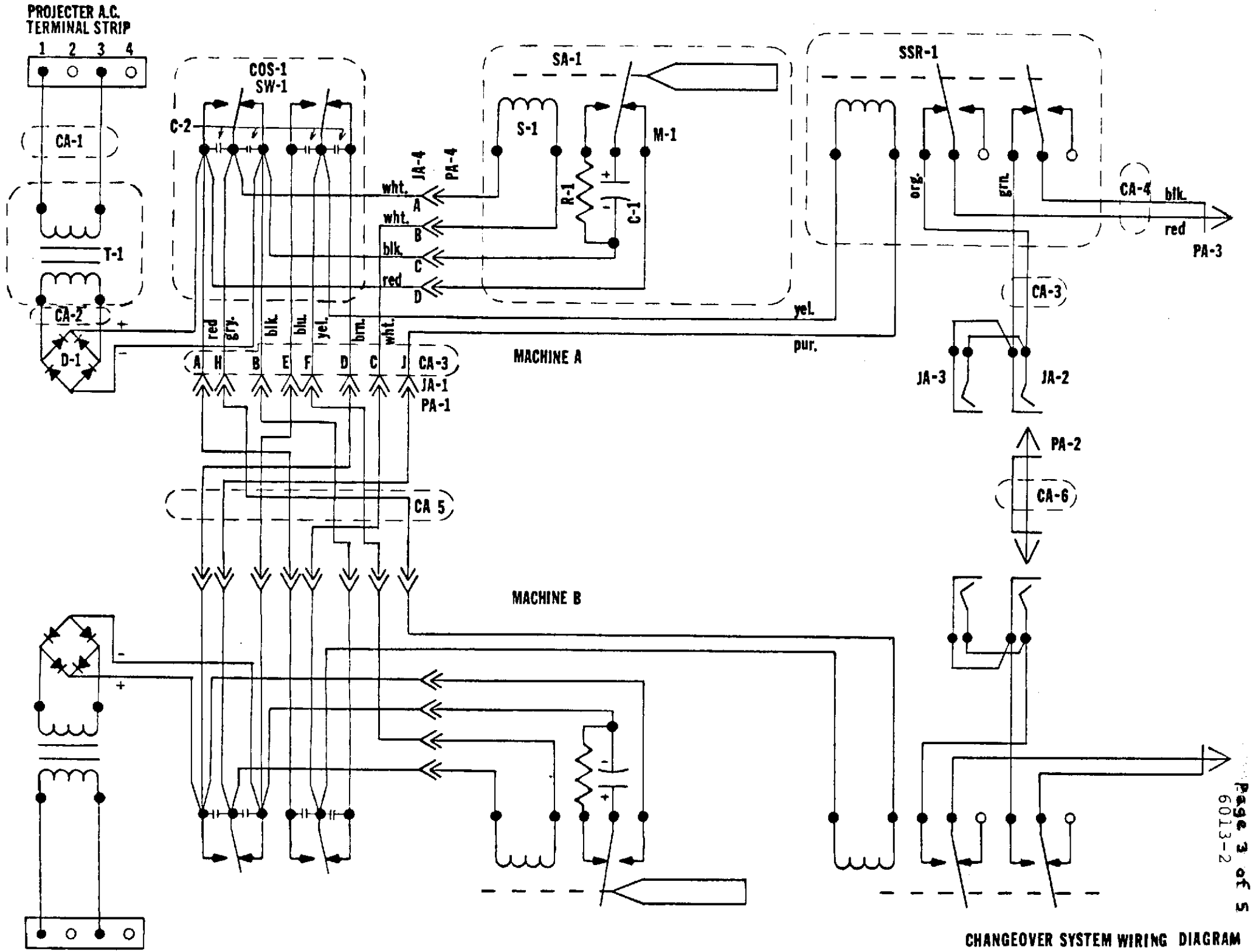
Function Explanation:

released while the other projector's solenoid is activated. At the same time the projector which as it's solenoid released has it's sound switching relay SSR-1 activated so that it's sound is on the line. While the projector which has it's solenoid activated has it's sound switching relay SSR-1 de-activated taking it's sound off the line. This is accomplished only when the interconnecting control cable CA-5 is plugged in both protectors. If the control cable CA-5 is unplugged the system will not operate.

If it is necessary to use only one projector by itself it is necessary to plug into the ¼" phone jack located on the front of the projector to get sound out as the jack's in the power cord pan would be deactivated because the cables would not be plugged in.

Special Note:

If it is necessary to use this system to feed a house amplifier a suitable impedence matching transformer will have to be used to convert the 8 ohm output of the change-over system to the input impedence of the house amplifier.



CHANGEOVER SYSTEM WIRING DIAGRAM
R SERIES -1 -2 & -3 ONLY REV. 10/1/76

PARTS LIST
CHANGEOVER SYSTEM

R Series -1, -2, & -3 ONLY

Identification List:

C-1	Booster capacitor - 50 volt 220 MFD. electrolytic.
C-2	Suppressor capacitor - .1 MFD. 100 volt
CA-1	A.C. power cable - 2 conductor (black & red) #22 stranded.
CA-2	Secondary A.C. power cable - 2 conductor (tinned & untinned) #22 stranded.
CA-3	Internal control cable - 10 conductor #22 stranded.
CA-4	Sound input cable - 2 conductor (black & red) #22 stranded.
CA-5	Control cable - 10 conductor (only 8 are used) #22 stranded.
CA-6	Speaker cable - 2 conductor (black & white) #18 stranded.
COS-1	Changeover switch assy. - includes CA-2, CA-3, CA-4, D-1, JA-4, PA-3 & SSR-1.
D-1	Full wave bridge rectifier - 2 amp..
JA-1	9 pin jack (only 8 are used).
JA-2	¼" phone jack to interconnect projectors.
JA-3	¼" phone jack-house speaker output.
JA-4	7 pin jack (only 4 are used).
M-1	Micro Switch S.P.D.T.
PA-1	9 pin plug (only 8 are used).
PA-2	¼" phone plug.
PA-3	Miniature phone plug - to amplifier.
PA-4	7 pin plug (only 4 are used).

EIKI

PARTS LIST

Identification List:

R-1	Bleeder resistor-180 OHM ¼ watt.
S-1	Solenoid - 24 VDC continuous duty.
SA-1	Solenoid assy. includes C-1, M-1, PA-4, R-1 & S-1.
SSR-1	Sound switching relay - 24 VDC D.P.D.T.
SW-1	Rocker switch (Eiki #ST-60061) D.P.D.T.
T-1	Transformer assy. - 120 volt primary 24 volt secondary - includes CA-1.