DATE 27/9/73 SH. 1 OF 6 COMPILED BY	TMC SPECIFICATION NO. S.10239	
	TITLE: MODIFICATION KIT 10047	JOB
APPROVED		

Equipment: TMC Model PAL-500
Linear Power Amplifier

Serial: 1 - 275 inclusive
2011 - 2216 inclusive
40678 - 42057 inclusive

Technical Manual: IN2037

Purpose of Kit:

Prevention of gradual deterioration of relay K102 contact A due to arcing during normal switching of AC input to high voltage transformer T102.

Equipment Required:

DC ohmmeter
Soldering iron and solder.

Installation Procedure:

1. Remove all power from the PSP-500 by disconnecting the AC power cord and the RF control cable.
2. Set the PSP-500 on its side for easy access to top and bottom.
3. Remove top and bottom perforated cover plates.

   NOTE: For the following procedure, refer to the attached line drawing of the PSP-500.

4. At J102, locate Pin 6 and the black lead to ground. Do not confuse with the black lead from Pin 12 to the same ground point.
5. Unsolder the black lead (Pin 6) from the ground point.
6. Using the 19-inch length of stranded wire (P/N MWC22(7)96) solder one end to the black lead just removed in Step 5.
7. Using a piece of the shrink tubing provided, slip over the solder joint and apply a little heat. The tubing will shrink and cover the joint.
8. Pass the other end of the 19-inch lead along the rear of the chassis to relay K101.
9. Solder this end of the lead to lug A2 of K101.

...2

10. Locate toggle switch S103 on the front panel and the lug which terminates two blue/white leads. Unsolder both leads from the lug.

11. Using the DC ohmmeter, determine which blue/white lead is connected to lug A2 of relay K101. (The ohmmeter will read approximately zero ohms impedance). Re-solder this lead back on to S103 where it was just removed. The other lead will not be used and should be cut off.

12. Take the solid-state relay assembly K103 and mount it in the position shown. It is necessary to drill two 3/16-inch holes in the chassis and mount the assembly using the screws provided. Spread the thermal compound liberally over the bottom of the relay so that good thermal contact is made with the chassis.

13. Unscrew the mechanical relay K102 from the chassis.

14. Unsolder all leads to K102, contacts A, B and C. Re-solder contact B and C pairs together and protect the solder joint with shrink tubing. Contact A pair are coloured purple and grey/white. These leads will not be used and should be cut off. Make certain that the cut off ends are covered properly and not touching. These leads were used to switch the AC previously.

15. The two lugs on K102 not connected to the contacts are the coil lugs. One is blue/white and the other is orange/white. Remove both wires from the coil. Set the K102 relay aside.

16. The blue/white wire will not be used and should be cut off.

17. Carefully pull the orange/white wire out of the wiring harness until it is opposite relay K103.

18. Solder this lead to the wirewound resistor (R124) lug opposite the lug connected to the relay. (It is the lug closest to the chassis.

19. Two long leads come from relay K103. One is grey/white and the second is purple. Pass both wires along the chassis, connecting the purple one to lug C of breaker CB101-1 and the grey/white one to lug B of breaker CB102.

    NOTE: This section of the procedure deals with replacing the large wirewound resistor(s) on the top of the PSP-500.

20. Turn the PSP-500 so that access can be made to both the top and bottom sections.

21. Locate the large wirwound resistor R105 on the top and unsolder both leads (one lead is red-insulated and the other is teflon-insulated).

22. Remove the resistor by loosening the mounting screws.

23. Mount the replacement resistor (RW10015) in the same location using existing holes in the chassis. Make sure the lugs are pointing away from the chassis.

24. Resolder the red and teflon insulated leads to the resistor as before.

    NOTE: This step is required only if change 5 has been applied to the RFE-1 amplifier.

25. Locate and remove electrolytic capacitor C286 (25 mfd) which is located at the bottom rear of the RFE-1 chassis opposite the blower exhaust duct and adjacent to the filament adjust rheostat.

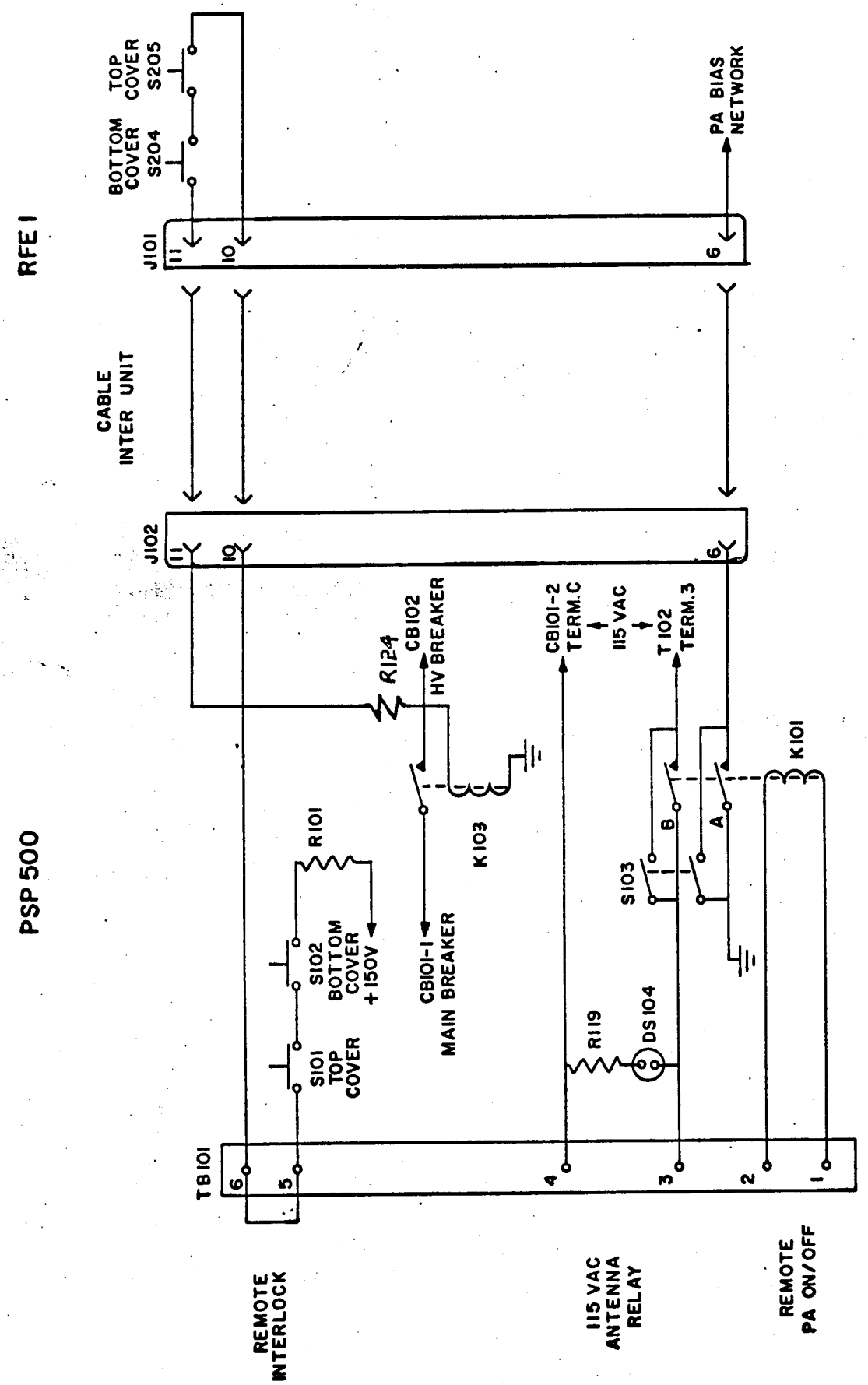

Figure 4-8. Simplified Interlock and Relay Circuit PAL-500.

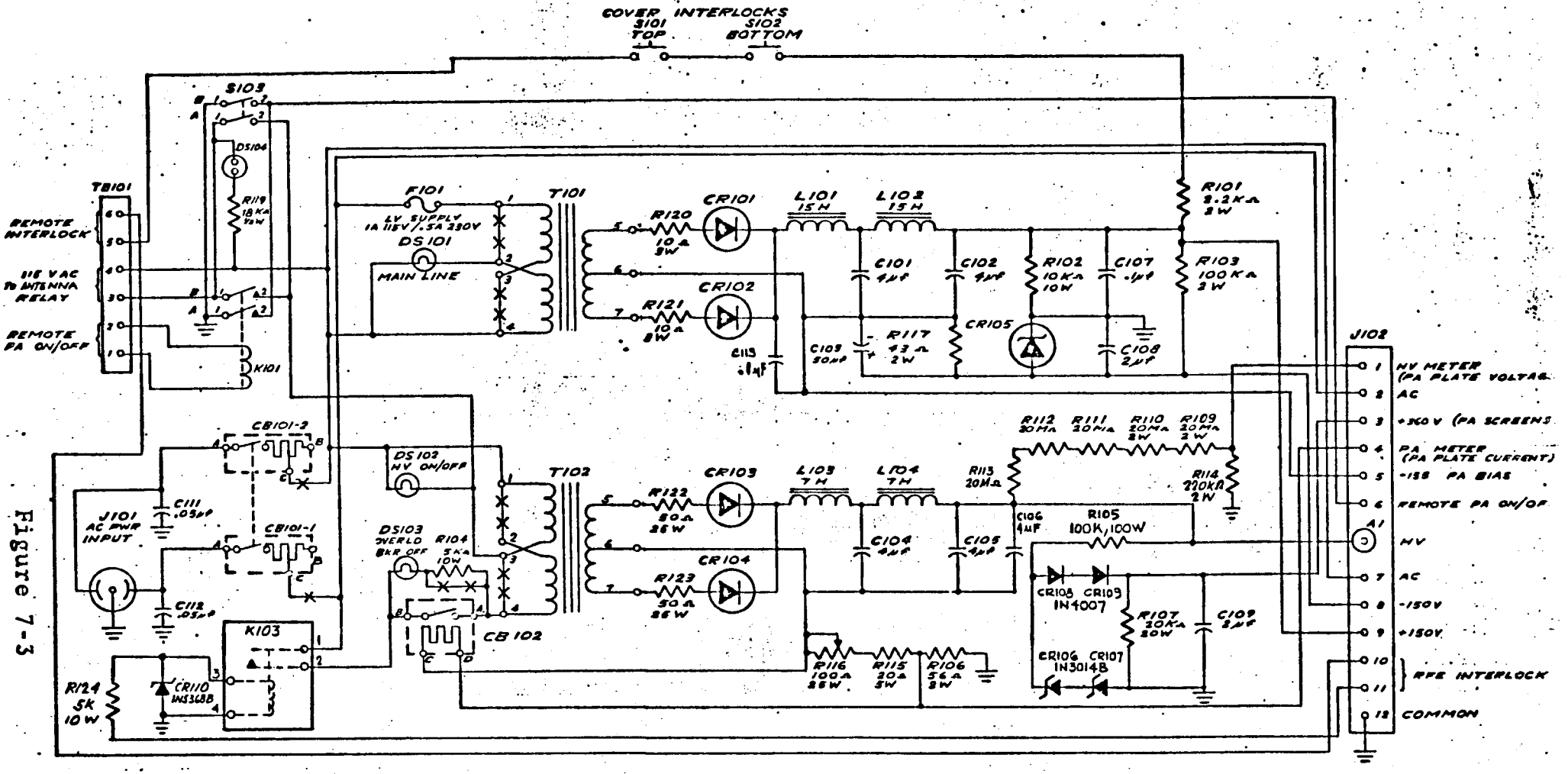

Figure 7-3

CHANGES NECESSARY TO CONVERT TO 230V OPERATION

T101 REMOVE JUMPERS MARKED -X-X-X- AND CONNECT JUMPER BETWEEN TERMINALS 2 & 3.

T102 SAME AS T101.

CB101 REMOVE LEADS FROM TERM "C" AND CONNECT TO TERM. "B" (MARKED -X-)

R104 REMOVE AND DISCARD JUMPER MARKED -X-X-.

F101 CHANGE FROM 1 AMP TO ½ AMP.

NOTES:

1. ALL FUSES ARE SLOW BLOW.
2. TB101 # 5 & 6 NORMALLY JUMPERED UNLESS REMOTE INTERLOCK IS REQUIRED

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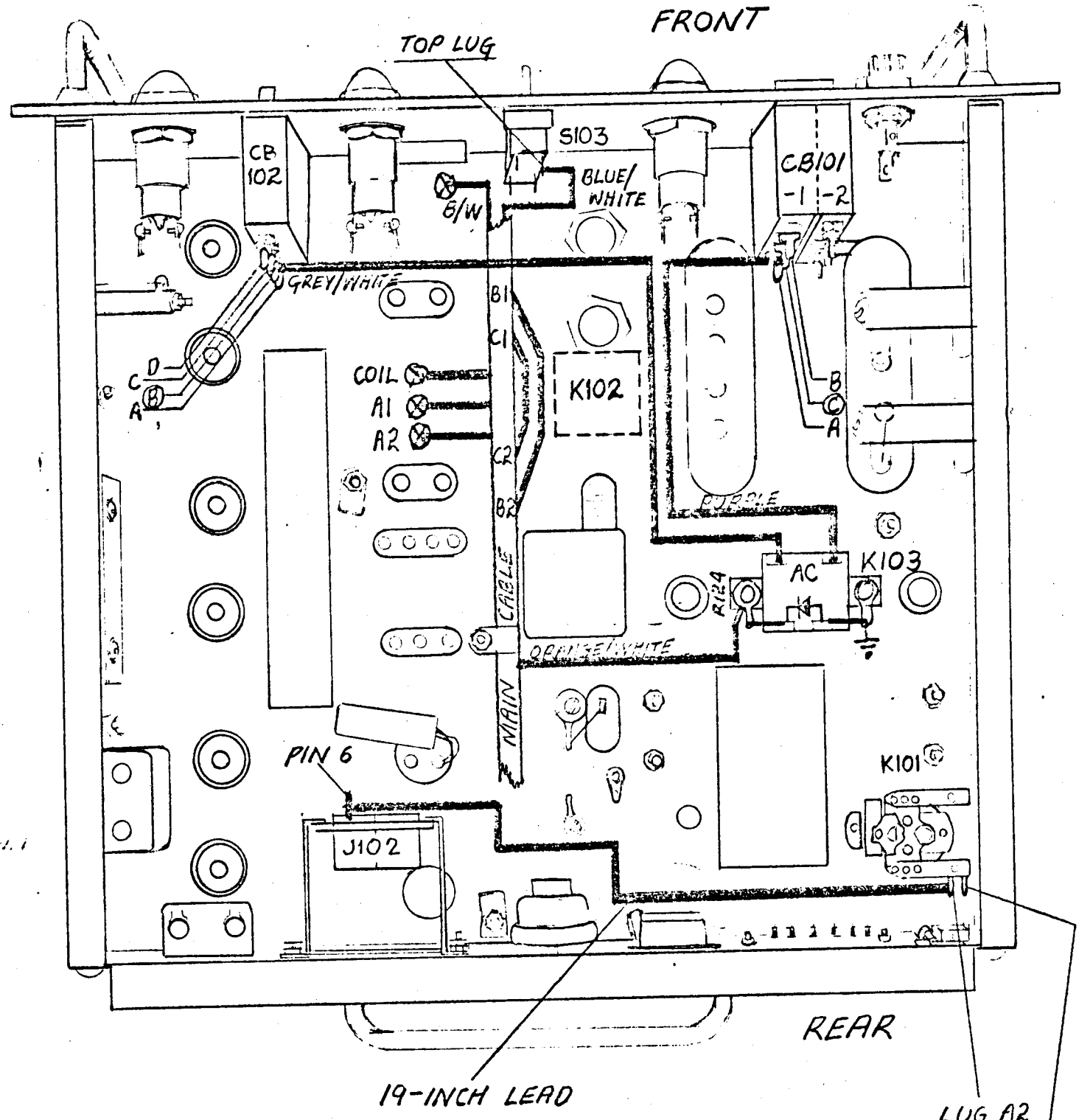
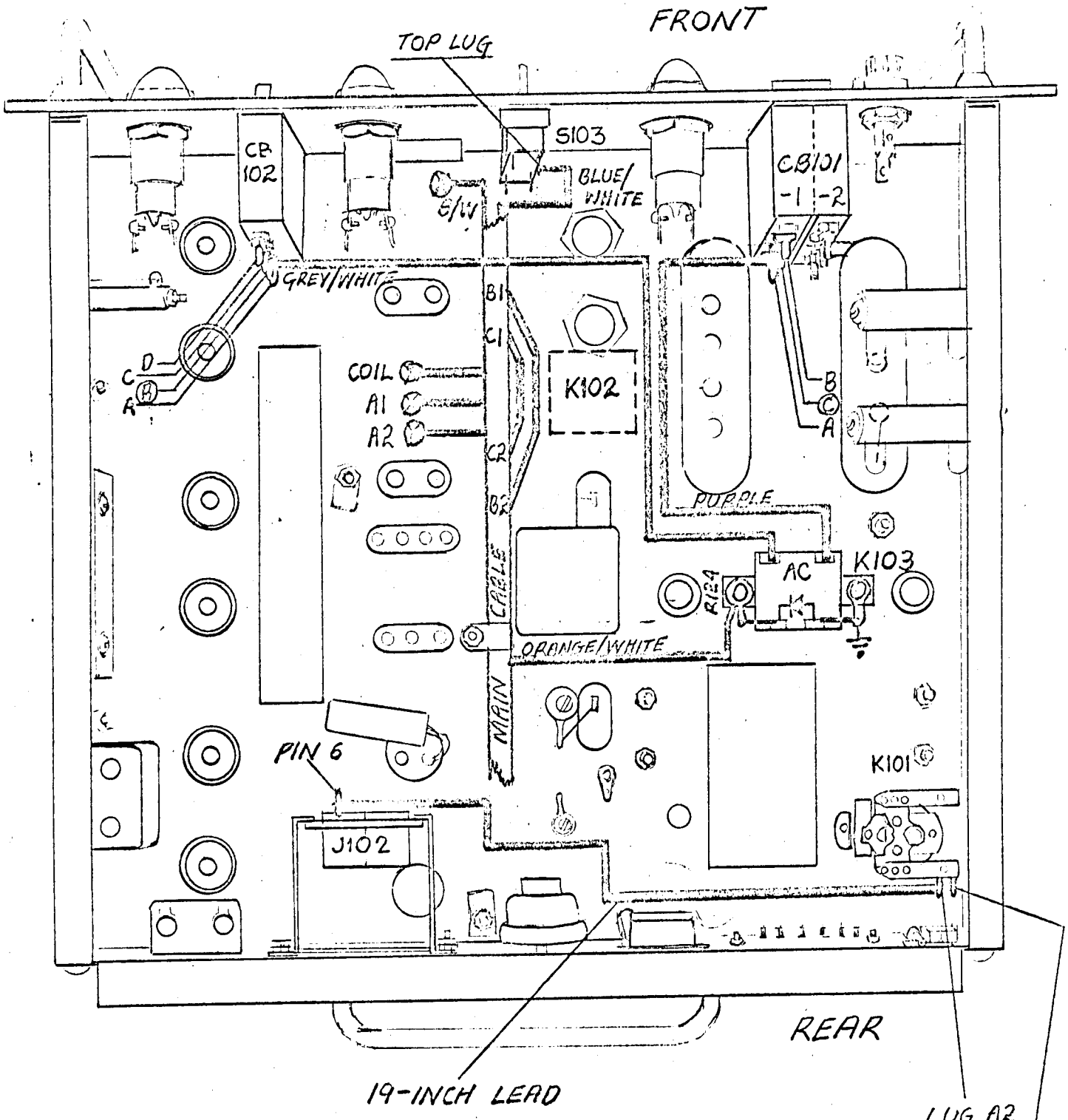


WIRING CHANGES
PSP-500



WIRING CHANGES
PSP-500