

DATE 12-23-60

SH. 1 OF 6

COMPILED BY

TMC

SPECIFICATION NO. S-526

TITLE: TEST PROCEDURE, P.S.-4

JOB A

APPROVED

*R. Koh*

NOTE: SEE S580 FOR PS4A TEST PROCEDURE.

A. INTRODUCTION

The P.S.-4 is a low voltage power supply used with the PAL-IK, SBT-IK and other transmitter systems. The main purpose of the P.S.-4 is to supply blower, A,C-, and some B voltages to the RFD-1. In addition, the P.S.-4 provides the primary voltages for the rectifier filaments and high voltage transformers on HIGH VOLTAGE POWER SUPPLY P.S.-5 also makes available external connections for interlocks, remote Keying, relay voltages and blower voltages.

B. TEST PROCEDURE

I. Equipment Required

1. Multimeter, Simpson 260.
2. P.S.-4 test jig, complete with interconnecting cables.
3. A.C. input cable.

II. Ohmmeter Continuity Checks

1. An ohmmeter placed across the points noted in columns 1 and 2 should result in a reading as noted in column 3. The FINAL VOLTAGE, TRANSMITTER VOLTAGES and MAIN POWER switches should be in the ON position for all ohmmeter readings.

(Continued on next page.)




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1	2	3	4	5	6
FROM	TO	OHMS	ACCEPT	REJECT	INSPECTORS INITIALS
AC INPUT TERMINALS OF J-301	GROUND				
TERMINAL 1, E302	TERMINAL 2, E302	.5 (XFMR PRIMARY)			
TERMINAL 9, E302	ground	20K			
PIN h, J303	PIN 1, V302	4.5K			
PIN C, J303	GROUND	10K			
PIN d, J303	PIN e, J303	6K			
PIN e, J303	GROUND				
PIN A, J303	GROUND	0			
PIN B, J303	GROUND				
PIN U, J302	GROUND	0			

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III. VOLTAGE CHECKS USING THE P.S.-4 TEST JIG

1. Set FINAL VOLTAGES and MAIN POWER switches to OFF and the TRANSMITTER VOLTAGES switch to STANDBY.
2. Connect an AC input cable to J301 of the P.S.-4.
3. Connect the cables supplied with the test jig to J302, J303 and E302 of the P.S.-4.
4. Connect the COMMON (-) jack of the Simpson meter to J104 on the test jig. (BLACK).
5. Connect the (+) jack of the meter to J103 on the test jig. (RED)
6. Set the Simpson meter's small selector switch to the -D.C. position and the large selector switch to the 250V position.
7. Set the test jig TEST POINT SELECTOR to the BIAS LINE position.
8. Set the MAIN POWER breaker on the P.S.-4 to the ON position. Adjust LINE VOLTAGE to 115V.
9. The following results should be obtained:
  - a. Meter should read 150 volts with the PUSH TO READ METER switch depressed.
  - b. The WHITE lamp marked EXT. 115VA.C. should light.
  - c. The GREEN lamp marked HV RECT. FIL. should light.
  - d. The AMBER lamp marked BLOWER ON should light. Record results on chart on last page.
10. Set the TEST POINT SELECTOR switch to the P.A. BIAS position.
11. By using the P.A. BIAS ADJ. rheostat located on the P.S.-4 chassis, the voltage on the meter can be varied from 100 to 150 volts. Record results on chart.
12. Set the large selector switch on the multimeter to 1000V position and the small selector switch to the +D.C. position.

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13. Set the TEST POINT SELECTOR switch to the EXTERNAL 600V D.C. position.
14. Depress the PUSH TO READ METER switch. The meter should read between 590 and 620 volts. Record results on chart.
15. Set the TEST POINT SELECTOR switch to the IPA PLATE VOLTAGE position and set the TRANSMITTER VOLTAGES switch on the P.S.-4 to the ON position. The red indicator lamp on P.S.-4 should light.
16. Depress the PUSH TO READ METER switch. The meter should read 580 to 600 volts.
17. Set the TEST POINT SELECTOR switch to the IPA SCREEN and 1st AMPL. VOLTAGES position.
18. Depress the PUSH TO READ METER switch. The meter should read 250 volts.
19. Set the large selector switch on the multimeter to the 10V. position and the small selector switch to the A.C. position.
20. Set the TEST POINT SELECTOR to the P.A. FIL. VOLTAGE position.
21. Depress the PUSH TO READ METER switch. The meter should read NOT LESS THAN 6 VOLTS.
22. Set the TEST POINT SELECTOR switch to the FIL. VOLTAGES position.
23. Depress the PUSH TO READ METER switch. The meter should read 6.3 volts minimum.
24. Set the large selector switch on the meter to the 1000V. position and the small selector to the + D.C. position.
25. Set the TEST POINT SELECTOR to the P.A. SCREEN VOLTAGE position.

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26. Set the FINAL VOLTAGES switch on the P.S.-4 to the ON position.
27. The following results should be obtained:
  - a. The red indicator lamp in the P.S.-4 should light.
  - b. The red indicator lamp in the test jig marked HV XFMR should light.
  - c. The blue lamp marked 115V ANT. RELAY should light.
28. Depress the PUSH TO READ METER switch. The meter should read at least 520 volts.
29. Set the TRANSMITTER VOLTAGES switch on P.S.-4 to STANDBY position. The red indicator lamps on the P.S.-4 should go out. The red and blue indicators on the test jig should go out.
30. Set the TEST POINT SELECTOR to the OFF position.
31. Depress the REMOTE XMTR PLATE SWITCH; the two red indicators on the P.S.-4 and the red and blue indicators on the test jig should light. Release switch.
32. Disconnect A.C. input cable and interconnecting cables to the P.S.-4. Be sure the chart is filled out.
33. This completes testing of the P.S.-4 unit.

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P.S.-4 VOLTAGE TEST CHART

ITEM	CIRCUIT	REQUIRED VOLTAGE	ACCEPT	REJECT	INSPECTOR'S INITIALS
1	BIAS LINE	-150			
2	115V AC	WHITE LAMP			
3	HV RECT. FIL.	GREEN LAMP			
4	BLOWER ON	AMBER LAMP			
5	PA BIAS	-100 to 150			
6	EXTERNAL 600V DC	590 to 620			
7	IPA PLATE VOLTAGE	580 to 600			
8	IPA SCREEN & 1st AMPL. VOLTAGES	250			
9	P.A. FIL. VOLTAGE	6.0 VAC			
10	FIL. VOLTAGE	MINIUMUM 6.3 VAC			
11	HV XFMR	RED LAMP			
12	115V ANT. RELAY	BLUE LAMP			
13	P.A. SCREEN VOLTAGE	520 MIN.			
14.	P.S.-4 indicator lamps	-			
15	REMOTE XMTR PLATE	-			
	KEYING CIRCUIT	-			

