

DATE 2/7/83

SHEET 1 OF 7

TMC SPECIFICATION NO. S -748

RK
COMPILED

RK
CHECKED

TITLE:

Ron Kohn
APPROVED

BP

INSTALLATION SPECIFICATIONS FOR TIME DELAY
AND CONTROL RELAY MODIFICATION KIT # KIT-157

DATE 2/7/63
 SHEET 2 OF 7

TMC SPECIFICATION NO. S 746

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TITLE: **INSTALLATION SPECIFICATIONS FOR TIME DELAY AND**

Ron K

APPROVED

CONTROL RELAY MODIFICATION KIT # KIT-157

I INTRODUCTION

The purpose of modification kit KIT-157 is to increase the reliability of the time delay and control relay circuits within the PSP-350 power supply. This increased reliability can be obtained by providing a regulated coil voltage for control relay K-104. KIT-157 contains all the parts necessary to convert present PSP-350 units.

II PARTS LIST

The KIT-157 contains the following parts:

QUANTITY	TMC PART NO.	DESCRIPTION
1	1N3006RB	Silicon Zener Diode; 105 ₋ 5% volts, 10 watts, stud mounted. The mounting hardware for the diode should include at least 2 mica washers, 1 teflon or melamine insulator spacer(s), a lockwasher, flat washer, solder lug and 1032 THD. hex nut.
1	5/16" Drill Bit	5/16" Drill bit for drilling a mounting hole for zener diode.
2	FU-102-.187	Slo-Blo type fuse to replace low voltage supply fuse F-102.
1	RW-110-32	Wirewound resistor, 7.5K 20 watts. Used to replace R-118.
2	WA-109-40	Fiber washer. Used to mount R-118.
1	SCBPO632BN40	Machine screw, used to mount R-118.
1	FW10HBN	Flat washer. Used to mount R-118.
1	TE-102-2	Turret Terminal
10 inches	WL-100-6	Buss Bar.
10 inches	PX-104-2-.034	Yellow Sleeving
2 feet	NWC16(19)U4	Insulated #16 wire. Yellow.

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III PROCEDURE: TURN ALL POWER OFF AND REMOVE AC LINE CORD.

1. Remove the top and bottom covers from the PSP-350.
2. Remove V102, 103, 104, 105, 106, 107 and K-101 with their shields.
3. Cut the wires off of R-118 as close to the terminals as possible.
4. Remove the 25K 10 watt resistor R-118. Discard the mounting screw and shoulder washers but retain the flat washer, lock washer, and nut.
5. Remove the topmost 0440 mounting screw for E-101 on the cover interlock side of E-101. Discard the nut and retain the lockwasher and screw.
6. Place the lockwasher on the screw and re-insert through E-101. Thread the standoff terminal supplied with the kit onto the screw and tighten. The standoff is now mounted and E-101 re-secured.
7. Cut the yellow sleeved negative lead of C-110 off pin 7 of V-102 socket.
8. Using the diagram on sheet 5 as a guide, drill a 5/16 diameter hole as shown using the drill bit supplied with the modification kit. Be sure to remove all burrs from around the hole and all metal shavings and dust from both of the chassis sides.
9. Install the Zener Diode as shown on sheet 5 with the cathode (case) lug pointing at pin 5 on V-107 socket. An ohmmeter check should be made to insure both cathode (case) and anode are isolated from the chassis. Both the anode and cathode should measure ∞ to the chassis.
10. Install the 7.5K 20 watt resistor supplied with the kit using the long screw, fiber washers, flat washer (all supplied with kit) and the flat washer, lock washer and nut retained in step 4. Point the terminals of the resistor toward terminal 4 on E-101. Note installation on sheet 5.
11. Connect the loose white and yellow wire on pin 4 of time delay relay K-101 to the arm terminal of relay K-104 having a white and yellow wire on it. Solder.
12. Connect the loose white and yellow wire from the arm contact of K-104 to the bottom terminal of the 7.5K 20 watt resistor R-118. Solder.
13. Connect the cathode (case) lug of the Zener Diode to the top terminal (closest to chassis) of the 7.5K 20W resistor R-118. Use buss bar and yellow sleeving supplied with kit. Do not solder.
14. Connect the positive lead of capacitor C-110 and the white and black wire to the same resistor terminal as in step 13. Solder.
15. Connect the anode terminal of the Zener Diode to the standoff (ref. step 6) using the buss bar and yellow sleeving supplied with kit. Do not solder.

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TMC SPECIFICATION NO. S 746

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CONTROL RELAY MODIFICATION KIT # KIT-157

16. Connect the negative lead of capacitor C-110 to the standoff also. Do not solder.
17. Connect the yellow #16 wire between the standoff (solder) and the terminal of fuse F-102 having two yellow wires on it. Solder. Be careful to dress the #16 wire along the right sideplate well clear of the high voltage rectifier sockets, terminals and mountings.
18. Replace F-102 and its spare with the fuses supplied with the kit.
19. Replace the tubes and relay noted in step 2 and restore the unit to operation. The coil voltage across K-104 should always be 105+10% over all normal conditions of load and line voltage fluctuations of + 15%.
20. It should be noted that the Zener Diode stud protruding through the chassis is above ground. The voltage present varies from 40 to 50 volts with respect to the chassis.
21. The changes due to modification should be incorporated on unit schematics contained in the instruction manual. A corrected schematic of the section affected by KIT-157 appears on sheet 7 with the schematic of the unmodified circuit appearing on sheet 6 for comparison.

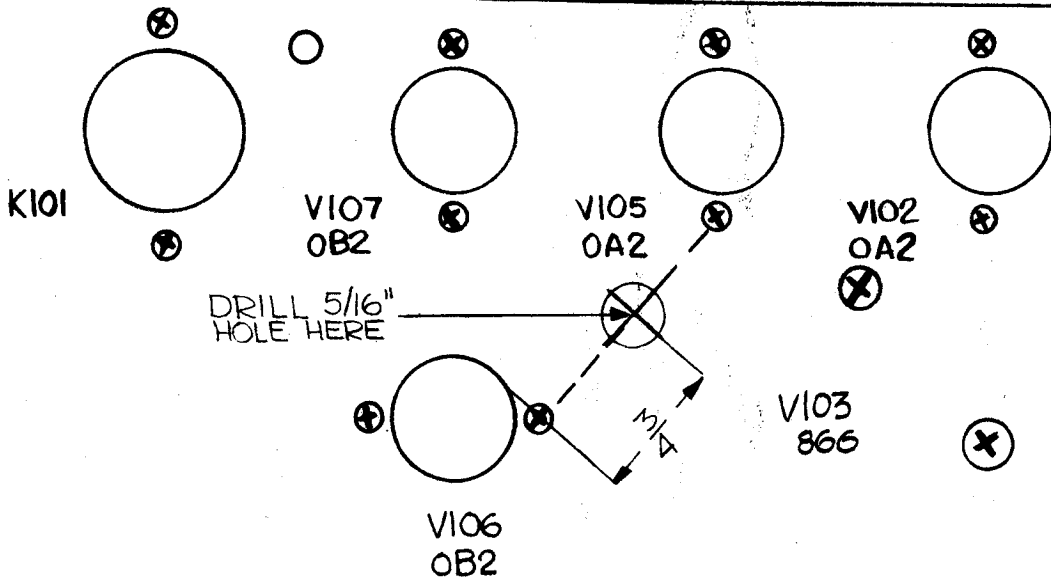
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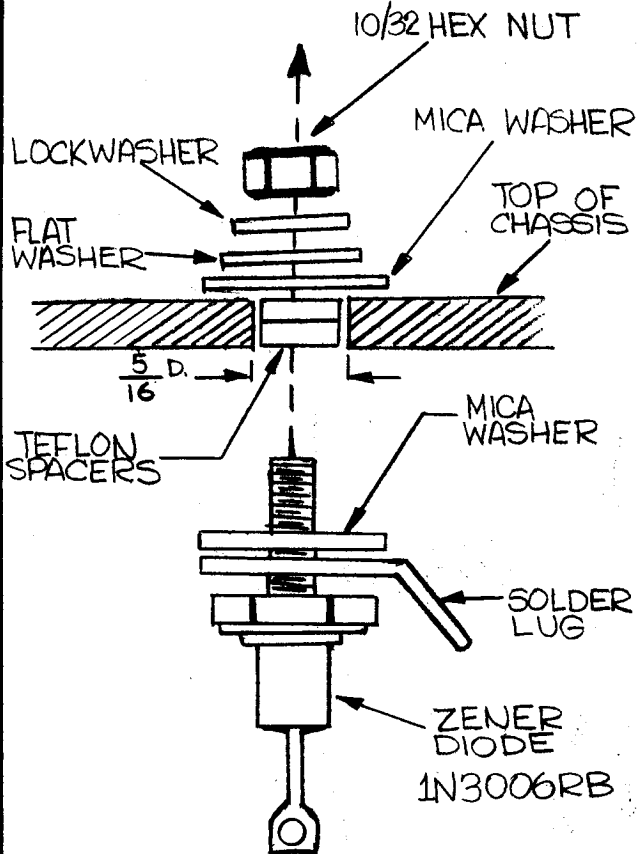
TITLE: INSTALLATION DIAGRAMS

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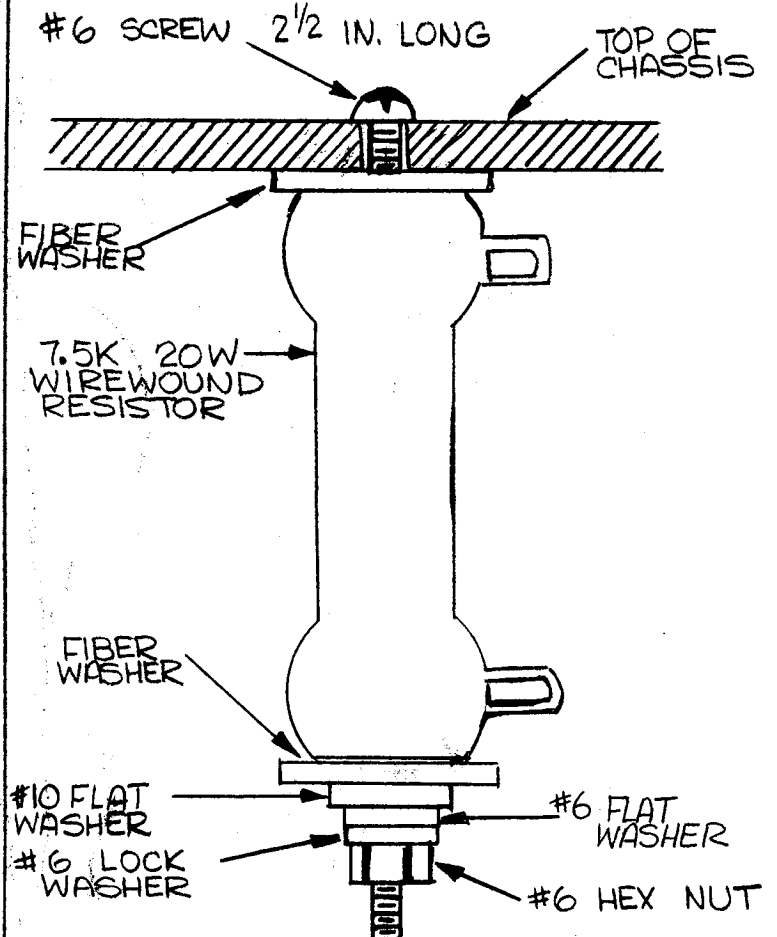
DRILL PLAN (TOP OF CHASSIS)



ZENER DIODE MOUNTING



WIREWOUND RESISTOR MOUNTING



DATE 7 Feb. 1963
 SHEET 7 OF 7

TMC SPECIFICATION NO. S-746

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TITLE: SCHEMATIC DIAGRAM OF PSP-350
 LOW VOLTAGE SUPPLY AFTER MODIFICATION

