

# TMC SPECIFICATION

NO. S-1309

REV: 0

COMPILED:

CHECKED:

APPD: 03

SHEET

OF

TITLE:

1/2/73

KIT 161B  
consisting of

Section #1 SWCU-1  
Modification Kit  
S-1309

Section #2 KIT 345-1A  
Peak Reading Wattmeter Kit  
S-1310



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OF 11

TITLE: SWCU MODIFICATION KIT

1. Equipment affected:
  - a. TMC Model GPT-10K General Purpose Transmitter.
2. PURPOSE:
  - a. Provides for a direct wattmeter reading in average power output and an indication of VSWR at the operated output of the transmitter.
  - b. Provides a 2:1 or 3:1 pre-set VSWR protective circuit overload and visual indicating device.
  - c. Provides for a single control ALDC adjustment.

### 3. MATERIALS SUPPLIED IN KIT:

<u>ITEM NO.</u>	<u>AMOUNT</u>	<u>DESCRIPTION</u>
1.	1 ea.	TMC NO. SWCU-1 Control Unit
2.	1 ea.	CA555-1 AC Pwr Cbl for SWCU-1
3.	1 ea.	MR233 RF Wattmeter
4.	1 ea.	LD-1378/PX-794 Ant. Tuner Bd.
5.	1 ea.	CA-412-23-23 Single Conductor Cable
6.	1 ea.	A4223 ALDC Assembly
7.	1 ea.	RV4NCYSD503AYY POTENTIOMETER & SWITCH
8.	2 ea.	PJ055B Telephone Plug for SWCU-1
9.	1 ea.	CA-826 Cable Assembly
10.	1 ea.	CA-829 Cable Assembly
11.	1 ea.	LD1776/MS4334 Plate/SWR Ovld
12.	1 ea.	LD1775/MS4333 Plate/SWR Sw. ALDC Adj.
13.	1 ea.	CA480-14-120 Cable Assy.
14.	4 ea.	3CBP1C32BN8 Mounting Hardware
15.	1 ea.	MS3102A20-29S replaces J-1000
16.	1 ea.	1/2 inch drill bit for SWR-BNC hole
17.	3 ft.	PX-100-1-106 Sleeving for J-1000 Rewiring
18.	12 ft.	CD-101-1MW Lacing Cord
19.	Not Used	
20.	Not Used	for Bracket
21.	1 ea.	MP-108-2 ALDC Knob
22.	Not Used	
23.	4 ea.	WA-101-11 Fiber Washers
24.	Not Used	TMC NO.





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11. Disconnect and remove Phenolic board from L-912-L-913 assembly (no longer used).
12. Replace Phenolic board, removed in Step #11 with Item #4 supplied in Kit.
13. Disconnect and remove TC-900 (thermocouple) L-916 and L-917 (no longer used).
14. Disconnect and remove C-1019 and C-1020 (no longer used).
15. Reinstall L-912 and L-913 assembly in original location, using existing mounting holes and hardware. Restrap board, using original straps for desired balanced or unbalanced output; referring to Figure 2-9 page 2-15 of Model GPT-10K Volume Two, the Maintenance Manual.
16. Remove RF Output Connector, J-903 and bracket (no longer used). Save mounting hardware for Step 17.
17. Replace J-903 and bracket removed in Step #16 with Item 30 supplied in Kit.
18. Connect one end of Item #5 supplied in Kit; to center connecting stud of Directional Coupler and other end of Item #5 to E-904.
19. Disconnect and remove PA Output Meter (M-1004) and capacitor (C-1011) from PA metering Panel. Discard M1004. Retain C1011.
20. Mount Item #3 supplied in Kit, in M-1004's location. Install C1011 across terminals of Item #3.
21. Place Item #10 (CA-829) in right side (front) main frame channel, with P-903 and P-905 (directional coupler connectors) pointing toward top of PA frame.
22. Connect wattmeter connector of Item #10 tagged #2, to forward connector of Directional Coupler and the other connector, tagged #1, to reflected lkw connector of Directional Coupler.
23. Insert the BROWN SHIELDED lead of CA-829 through the opening located on right side of PA meter panel and connect the BROWN WIRE to the (+) positive stud of Item #3 (wattmeter) connect #25 BLACK WIRE to (-) negative stud of wattmeter and pigtail of black wire to any convenient ground. Using 1/2 drill, Item #16, drill a hole (F) in the bottom of the front window right side bracket, MS1588, as indicated on the drawing of MS1588, Item #34.

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24. Route the CA-829 cable end (remaining end pointing downward), that has been placed in right front channel of main frame, through this grommet hole, and lace to existing cable as far as ALDC switch (S-1003).
25. Remove ALDC on/off switch (S-1003) and unsolder the leads from switch.
26. Remove ALDC "adj knob" from R-1004.
27. Remove ALDC control (R-1004) and unsolder the leads from R-1004. Retain lug for use in Step #33.
28. Using Item #16 supplied in Kit, enlarge hole from which R-1004 was removed, to a diameter of 1/2 inch, to accommodate Item #6.
29. Place Item #12 supplied in Kit, to fit over the two existing holes created in Step #25 and Step #27.
30. Mount Item #7 supplied in Kit in hole left empty in Step #25. Switch lever down.
31. Mount Item #6 to assembly supplied in Kit in hole enlarged in Step #28.
32. Attach Item #21 supplied in Kit to shaft of Item #7.
33. Connect CA-829 (Item #10) cable to newly installed Items #6 and #7 as per Figure #1 'a' and 'b'.
34. Remove connections from rear of IPA bias indicator (located right, front, relay panel).
35. Remove IPA bias lamp assembly X-705 and place Item #11 over lens panel cutout.
36. Replace bias lamp assembly, secure over SWR overload indicator plate.
37. Rewire Relay panel, AX-139 and SWR overload indicator as follows:
  - a. On Terminal Barrier E-705 of Relay Panel, remove lead between Terminal #53 and Terminal #57.
  - b. Eliminate lead #58 on E-705 and connect Item #31 on I-705, SWR overload lamp, and other end of Item #31 to Pin small "h" of J-700.
  - c. Remove lead that tied I-704 to I-705.
  - d. Add Lead from fuse F-705 to SWR overload lamp, I-705 (Item #26 supplied in Kit).

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## VIEWING SIDEBAND RACK FROM REAR OF TRANSMITTER:

38. Disconnect P-3000 from J-1000.
39. Remove J-1000 from left panel of Sideband Rack, label and unsolder all connections on plug.
40. Replace J-1000 with Item #15 supplied in Kit and rewire as per figure #2 using 3/4" lengths of plastic tubing, Item #17 supplied in Kit, over each solder connection of plug. Also add Item #28 to Pin R and Item #27 to Pin S of Item #15.
41. Route the YELLOW and RED wires (new Items #27 and #28 from J-1000 aux. to main frame interconnect) through grommet hole located on deck below main blower along main frame cabling: then, route YELLOW wire down cable run to P-700 (connector that mates to J-700 on relay panel) and route RED wire up behind main power control panel to Reset Switch (S-1000).
  - a) Solder Red wire just routed to S-1000 to the terminal that has one red wire already attached.  
NOTE: After soldering, you now should have (2) red wires on the same switch terminal.
  - b) Disassemble P-700 and connect YELLOW wire from J-1000 to pin small "h" of P-700.
  - c) Reassemble P-700.
42. Remount J-1000 in original location.
43. Drill a 1/2" hole with Item #16 supplied in Kit one inch to right from horizontal plane of P-3048 (ALDC).
44. Install Item #13 supplied in Kit in ole drilled in Step #43. Stamp above Item #13, J-1009, P-3051 and below Item #13 stamp SWR using Item #32. Keep the RGI74/U cable projecting into the main PA frame.
45. Route coaxial cable from SWR, BNC connector on left side of Sideband Rack, through grommet hole, (right side, 4" from back of xmtr, on deck below main blower motor); through grommet hole, rightside, behind RFC drawer; follow main frame harness laying coaxial cable behind main power control panel up to SWR Switch located on Main Power Control Panel (S-1017). Lace the three, loose, new cables to main frame cable harness. Wire per Fig. 1 (b).



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46. Disconnect J-1006 through J-1008 and remove entire cable assembly CA-571 (main frame interconnect to Sideband Rack) and unsolder and disconnect all connections of this cable, located at rear of Sideband Rack from the 10 feedthru caps, K-3000, K-3001 and J-3000.
47. Replace Step #46, removed cable assembly, with Item #9 (CA-826) supplied in Kit, rewiring according to Figure #3.
48. Install Item #1 supplied in Kit, directly below CPP-5, located at rear of Sideband Rack, with Items #14 and #23 supplied in Kit.
49. Connect AC Power cord of SWCU-1 to AC Outlet Strip.
50. Connect P-3052 to J-105 and P-3053 to J-101 of CA-826 to rear of SWCU-1.
51. Connect P-3051 to CA-826 to J1009 (Items #13) installed in Step #44.
52. Connect P-3000 of CA-826 to J-1000.
53. Reconnect P-700 to J-700 and all other connectors of Relay Panel, and install Relay Panel, AX-139.
54. Replace Hi Voltage Rectifier Drawer, AX-103.
55. Replace RFC Drawer, AX-104, and reconnect all connectors at rear of drawer.
56. Replace Top Cover of Transmitter.
57. Replace Hi Voltage Lamp assembly on top of transmitter and fasten assembly mount with the two studs inside Sideband Rack. Reconnect the lamps two connections on E-3003.
58. Replace and reconnect CBE in Sideband Rack.
59. Replace Meter Panel at Top Front of Transmitter, using the six #8-32 screws.
60. Replace right side Transmitter shield and right side outside cover.
61. Replace PA Glass Window with the 10 #9-32 oval head screws, removed in Step #4.
62. Replace rear Transmitter RF shield and close rear doors of Transmitter and Sideband Rack.
63. Reconnect antenna or dummy load.

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64. Check ALDC switch (be sure it is in OFF position).
65. On SWCU-1 select either 2:1 or 3:1 VSWR with switch S-102.  
This completes the modification #161 of your GPT-10K.
66. Apply Item #33 directly below nameplate of relay panel cover.

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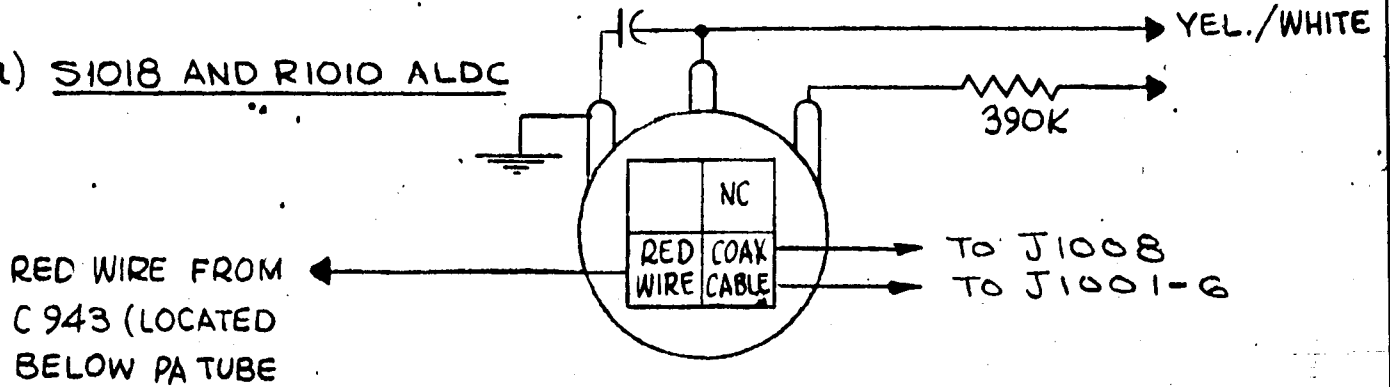
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APPD: \_\_\_\_\_

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TITLE: SWCU MODIFICATION KIT

(a) S1018 AND R1010 ALDC



(b) S1017 SWR

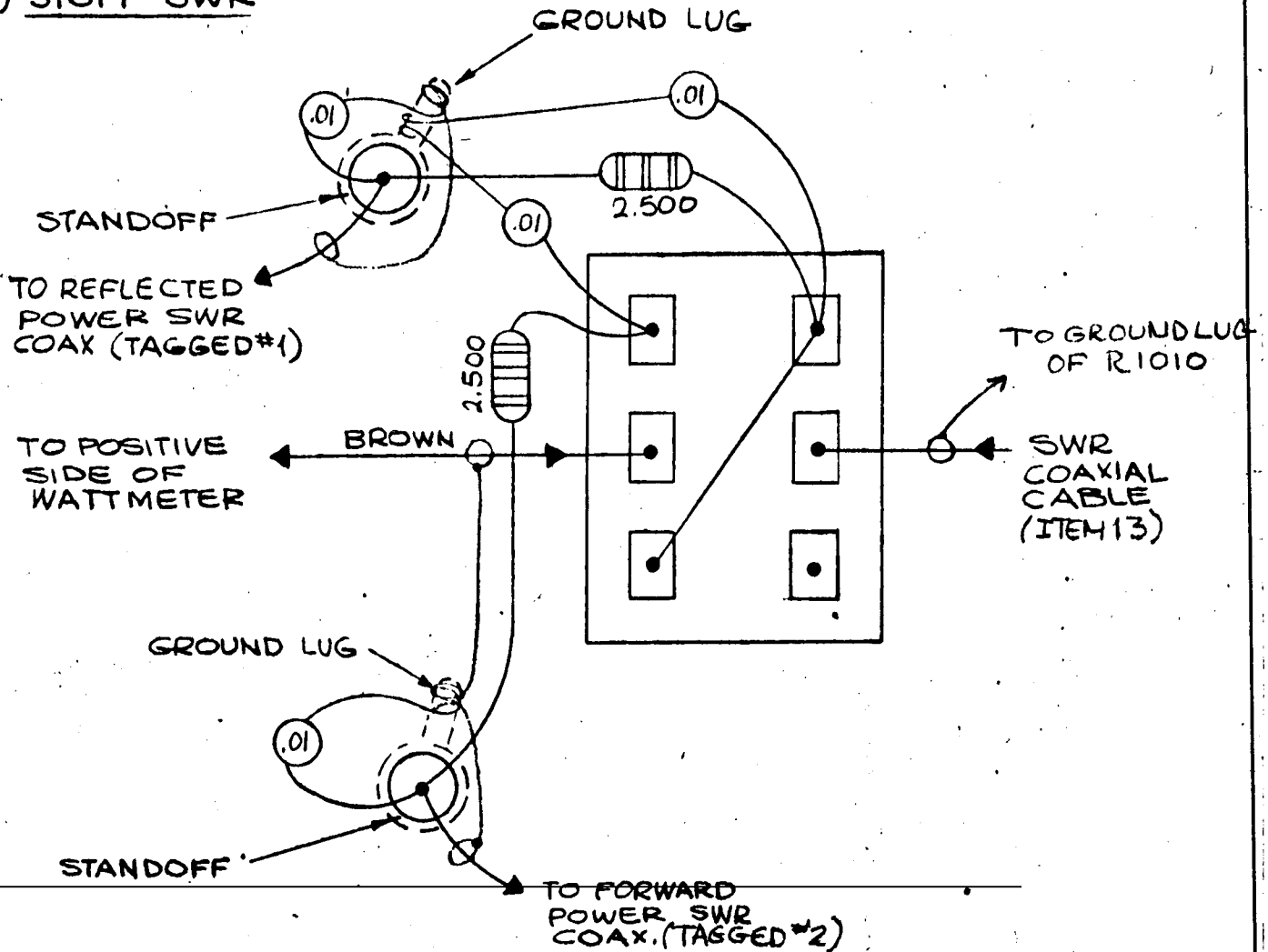


FIG-#1

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TITLE: SWCU MODIFICATION KIT

MS-3102A20-29S

(NEW J-1000 WIRING COLOR CODE)

PIN -	J- GREEN	Tag 1	
	K- YELLOW	Tag 25	MWC22(7)U4, External Interlock Ind.
	A- RED		MWC20(7)U2, H.V. Relay
	P- WH/BROWN		
	B- WH/GREY		
	D- WH/ORANGE		
	H- WH/BLACK		
	C- WH/BLUE		
	F- WH/YELLOW		
	E- BLACK		
	G- BLUE		
	L- WH/BROWN		
	M- WH/RED		
	N- RED		MWC22(7)U2, RFB (SCREEN) Conn. to Excit. Cont.
	R- YELLOW		MWC20(7)U4, Relay Plug to Exciter Connector
	S- RED		MWC20(7)U2, Ovld Reset to Exciter Connector

FIGURE #2

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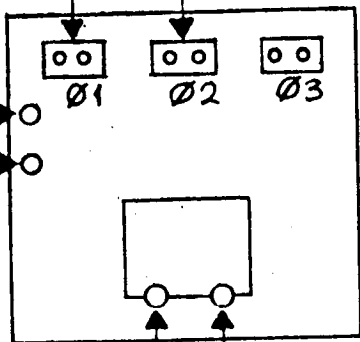
LD / 528 B

WHITE / VIOLET LEAD

WHITE / GREEN LEAD

RED

GREY



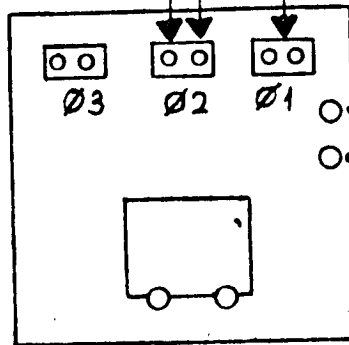
WHITE / RED LEAD

WHITE / BROWN LEAD

REWIRING OF CA 826 IN REAR SIDE BAND RACK.

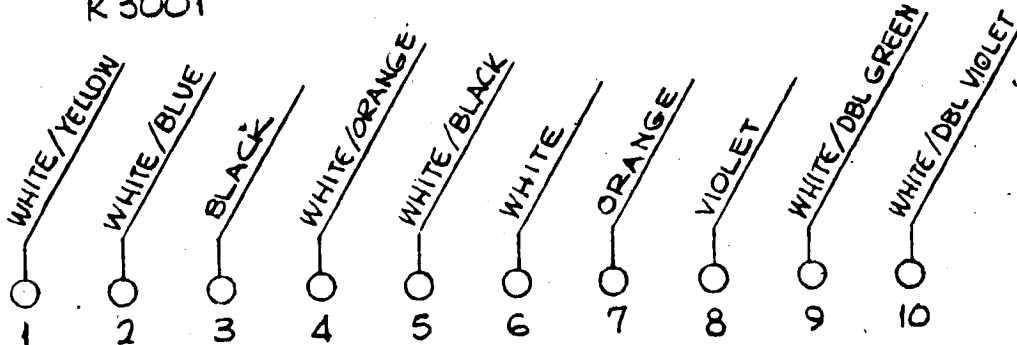
(2) ORANGE LEADS

(1) VIOLET LEAD



K 3000

K3001



**NOTE:** ALL ABOVE WIRING IS IDENTICAL TO CABLE REMOVED IN STEP #46 OF MOD. KIT INSTRUCTION.

FIG-#3

