

DATE	2/16/62	TMC SPECIFICATION NO. S -670	B
SHEET	title OF		
COMPILED	CHECKED	TITLE: GPT-40K OUTPUT METERING CIRCUIT KIT (KIT-126)	
APPROVED			

GPT-40K OUTPUT METERING CIRCUIT KIT

KIT-126

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I. EQUIPMENT AFFECTED

A. GPT-40K Transmitter set, radio

II. PURPOSE

Modification to provide more reliable output metering circuit and provide for measurement of the VSWR of the load.

III. MATERIALS SUPPLIED

- | | | | |
|----|---------------------|--------------------------|------------------------------|
| A. | One each | A-2437 | Directional coupler assembly |
| B. | One each | A-2436 | Switching board assembly |
| C. | One each | MR-146 | Meter, SWR |
| D. | One each | MR-147 | Meter, kilowatts |
| E. | One each | LD-857 | Lettering, output diagram |
| F. | One each | ST-105 | Switch toggle, ON-MOM-ON |
| G. | One each | CA-409-75-12.00 | Cable, jumper assembly |
| H. | One each | CA-409-75-120.00 | Cable, jumper assembly |
| I. | One each | MS-202-28-3.50 | Strap, connecting |
| J. | One each | | Drill bit, 5/16" |
| K. | One each | | Drill bit, 7/64 |
| L. | Eight feet | MWC22(7)U3 | Wire, hookup |
| M. | Forty feet | CD-101-1-MW | Cord, lacing |
| N. | One bag containing: | | |
| | 1. | Twelve each SCHH2520BN12 | Screw, machine |
| | 2. | Twelve each LWS25MRN | Washer, lock, split |
| O. | One bag containing: | | |
| | 1. | Four each SFB0632SN5 | Screw, self tapping |
| P. | One bag containing: | | |
| | 1. | Four each SCBP0440BN10 | Screw, machine |
| | 2. | Four each LWS04MRN | Washer, lock, split |
| | 3. | Four each NTH0440BN8 | Nut, hexagon |
| Q. | One each | ID-279 | Installation Details |

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IV. TOOLS REQUIRED

To be provided by installing activity

- A. Screwdriver, 4" blade standard
- B. Screwdriver, 4" blade, Phillips #2
- C. Wrench, open end, 1/4 - 5/16
- D. Wrench, open end, 3/8 - 7/16
- E. Power drill, 1/4" chuck
- F. Soldering iron, 75 watt

V. PROCEDURE

- A. Remove all power from the GPT-40K.
- B. **Remove the front window from the final amplifier section, Fig. 1. Save all hardware for remounting.**
- C. Remove the bias supply drawer, relay panel, HVR drawer, crowbar drawer and the blank panel from the power transformer compartment, Fig. 1. Save all hardware for remounting.
- D. Remove the two cables and the strap, Fig. 2.
- E. Remove the directional coupler and the split plates mounting it, Fig. 2.
- F. Remove the switching board and associated standoff's, Fig. 2. Also remove the three straps that connect the choke L7307, capacitor C7325 and the antenna tuner strap, Fig. 2.
- G. Remove the PA meter panel and then remove the output meter MR-137; discard, Fig. 1. Save the capacitor for remounting.
- H. Remove the capacitor C7321, choke L7311 and the feedthru, Fig. 7.
- I. Drill two 5/16 holes in the top deck according to drilling plan #1.
- J. Mount the new switching board assembly A-2436 in the holes just drilled.
- K. Connect the new strap MS-202-28-3.50 from the choke L7307 to the flange of the capacitor C7325, Fig. 2.
- L. Mount the new directional coupler assembly, Fig. 3.

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- M. Connect the three straps from the switching board to the flange of capacitor C7325 the directional coupler and the antenna tuner input respectively, Fig. 3.
- N. Connect the cables from the directional coupler to the BNC connectors on the rear of the PA meter box. . . . The short cable should go to the BNC on the left and the arrow on the diode should be pointing up while the long cable should go to the BNC on the right and the arrow on that diode should be pointing down, Fig. 3.
- O. Disconnect and remove the SWR-CAL switch, Fig. 1, and replace it with the new switch ST-105.
- P. Mount the new meter MR-147 in the PA meter panel. Fig. 1
- Q. Replace the capacitor across the new meter and connect the jumper CA-409-72-12.00 to the positive side of the meter and solder the other end to the junction of capacitor C7208 and choke L7201.
- R. From the negative side of the meter run the cable CA-409-72-120.00 down the main cable (tying it in with the lacing supplied) and solder it to pin C of the connector P7101. Fig. 4
- S. From pin C of receptacle J8101, Fig. 4, run the wire up to the new SWR-CAL switch and wire the switch according to Fig. 5.
- T. Replace the PA meter panel, Fig. 1.
- U. Remove the PS meter panel and replace the SWR meter MR-136 with the new meter MR-147, and then replace the meter panel. Be sure to replace the capacitor across the meter. Fig. 1
- V. Make sure that the plug P7101 and receptacle J8101 are secure and the cover is on the filter box that they are mounted on, Fig. 4.
- W. Drill four 7/64 holes in the right inside shield of the PA compartment according to drilling plan #2 and mount the output diagram LD-857 with the four self tapping screws.
- X. Connect the straps on the switching board according to the output required. (70 ohm unbalanced or 600 ohm balanced)
- Y. Replace the blank panel, crowbar drawer, HVR drawer, relay panel bias supply drawer, front window and the top cover, Fig. 1.
- Z. Mount the nameplate NP-362-16 on the right side of the relay panel.

