

MODIFICATION INSTRUCTIONS FOR GPT-10K (Serial Numbers 101 thru 119)MATERIALS FURNISHED

All necessary. See attached Parts List.

INSTALLATION

Installation will be greatly simplified if the proceeding steps are followed. Materials furnished will be in containers marked with the Step Number to which they apply.

GENERAL (Section A) Preparation of Transmitter for Modification

- A1. Turn power OFF by setting all circuit breakers to OFF position.
- A2. Remove rear doors by lifting them off hinges.
- A3. Remove the Relay Panel (front of Transmitter) which is directly below the high voltage rectifier tubes. This is necessary only to achieve access to hardware for removal of skins.
- A4. Remove the right hand (facing Transmitter) skin.
- A5. Remove the rear cover from the P.A. R.F. section of the Transmitter.

INSPECTION OF FINAL TUBE SOCKET (Section B)

- B1. Remove rear cover of section immediately below the final tube. (4CX5000).
- B2. Note if resistor stamped RR-126 and two (2) capacitors stamped CX102J103M are mounted below the tube socket. If they are present, send for TMC's Tube Socket Modification Instructions and modify in accordance with it.

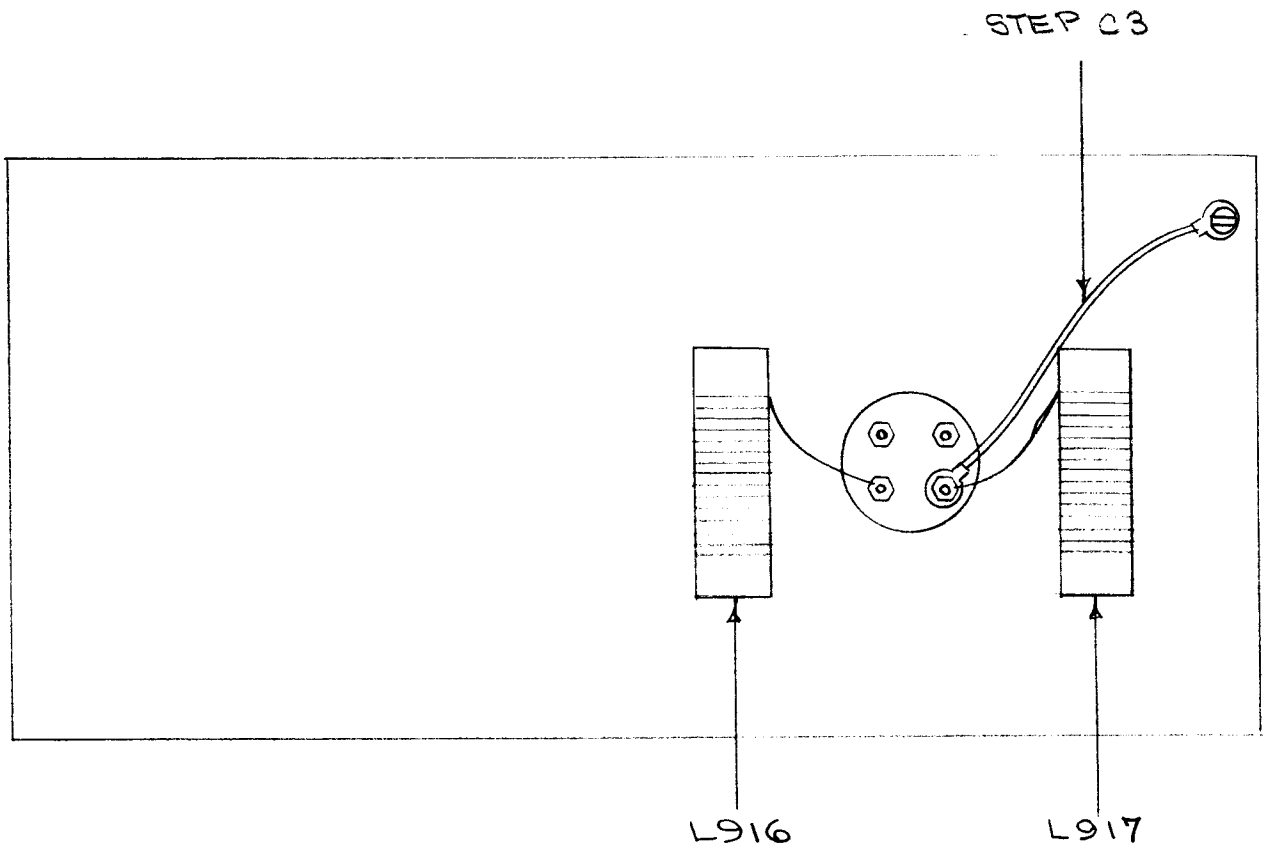
MODIFICATION OF FINAL TUBE SOCKET (Section B continued)

- B3. Remove the final tube (4CX5000) from its socket.
- B4. Disconnect all tube socket and tube chimney connections.
- B5. Remove tube chimney and tube socket from the Transmitter.
- B6. Replace existing tube socket capacitors with new capacitors furnished with the kit.
- B7. Replace tube socket and tube chimney.
- B8. Replace all connections to socket and chimney.
- B9. Replace cover.

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MODIFICATION OF R.F. COMPARTMENT (Section C)

- C1. Locate static choke L907 which is mounted vertically in the antenna tuner. between the two tuning coils. Remove three (3) turns from the bottom of the coil. Allow enough wire for reconnection. Strip the loose wire and re-solder it to the coil lug. Note that wire must be tight before being soldered to lug. Number of turns remaining 70.
- C2. Spray all non-metallic parts of the antenna tuning unit with the silicon resin lacquer supplied. Carefully follow directions on side of can.
- C3. If the Transmitter is to be used with a balanced load, a shorting strap (supplied) must be installed as shown in sketch below.
- C4. Replace existing coils L916 and L917 with new coils supplied.



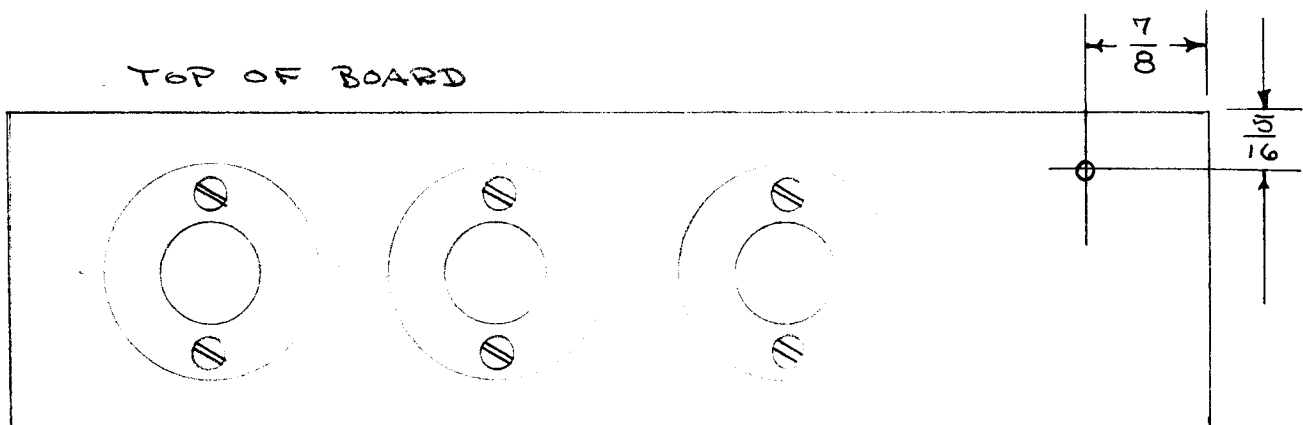
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MODIFICATION OF HIGH VOLTAGE COMPARTMENT (Section D)

- D1. Remove R802, R803 and R816 (50K resistors) from their clips.
- D2. Move R800 (18K resistor) into R802 clip. See Figure 1 for resistor locations.
- D3. Remove and discard jumper between R816 and junction of R812 and R813. (Jumper are shown in dotted line on Figure 2). Note that jumpers referred to are on opposite side of board from resistors.
- D4. Remove and discard jumper between R815 and R816. (Jumper is shown in dotted lines on Figure 2).
- D5. Install metal straps with mounted clips below and parallel with R816 and replace angle bracket. See Figures 1 and 2 for placement of ceramic insulators and hardware.
- D6. Disconnect jumper (between L801 and R800) at L801. (See Figure 1). Reconnect it as shown in Figure 2 to junction of R816, R819 and R820.
- D7. Using 3/8" drill furnished, drill hole as shown in Figure 2.
- D8. Install jumper supplied between liberated terminal of L801 and junction of R816, R819 and R820. (See Figure 2).
- D9. Insert four 5K resistors (supplied) into clips for R800, R816, R819 and R820. (See Figure 1).
- D10. Insert 18K resistor (supplied) into clips for R803. (See Figure 1).

MODIFICATION OF DIODE ASSEMBLY (Section D continued)

- D11. Using #19 drill furnished, drill hole in diode mounting board as shown in sketch below.



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- D12. Mount the 100K, 20 watt resistor furnished. (See Figure 3).
- D13. Connect the lower end of the resistor to the ground lug.
- D14. Connect the other terminal of the resistor to the No. 1 terminal of the diode board terminal strip.

MODIFICATION OF C800, C801 and C802 (Section D continued)

- D15. Install ground straps furnished. See Figure 1 for location of jumpers.

MODIFICATION OF HIGH VOLTAGE SHORTING RELAY (Section D continued)

- D16. Remove and discard the jumper between R801 and terminal E803 (furthest forward of four terminals on the shorting relay).

MODIFICATIONS TO IPA DRAWER (Section E)

- E1. Pull out the IPA drawer and remove top and bottom covers.
- E2. Remove all connections to the sub unit RFB.
- E3. Remove front panel mounting screws and remove RFB unit from drawer. Place it upside down on work bench. Replace panel mounting screws in drawer to prevent loss.
- E4. Remove cover from pressurized compartment at base of tube socket. (See Figure 4).
- E5. Remove screw and nut between tube socket compartment and gear compartment.
- E6. Using 1/4 inch drill furnished, enlarge the hole. (See Figure 4 for location of screw and nut).
- E7. Using 1/4 inch drill furnished, drill a hole as indicated in Figure 4, between gear compartment terminal board compartment.
- E8. Using #19 drill furnished, drill hole exactly between the two gears as shown in Figure 4.
- E9. NOT USED.
- E10. Mount an .01 ufd, 4000 v teflon capacitor (furnished) in the hole. This capacitor now becomes C260. (Existing C260 will be removed in Step E17.)
- E11. Mount a feed thru capacitor furnished (CK70A202M) in the 1/4 inch hole drilled in Step 6.
- E12. Mount a feed thru capacitor and ground lug (furnished) (CK70A202M) in the 1/4" hole drilled in Step 7. (See Figure 4 for positioning of capacitors.)
- E13. Remove (with soldering iron) the three grounding straps of the cathode terminals of the IPA tube socket. (See Figure 4.)
- E14. Mount the six .01 ufd capacitors furnished (CM35B103K) in place of the straps which were removed in Step E13. (See Figure 4 for positioning of capacitors, and note that leads are to be as short as possible.) These capacitors become symbols C290, 291, 292, 293, 294, and 295.
- E15. Remove the air vane switch. Retain for replacement.
- E16. Remove the two chokes, L235 and L236, in air switch compartment and retain for use later.
- E17. Remove the two upright capacitors, C259 and 260, in the air switch compartment.
- E18. Replace the capacitors with the two 1-1/2 inch long ceramic standoffs. Use fiber washers and hardware supplied.
- E19. Unsolder and discard high voltage lead between terminal board and pressurized compartment. Replace with short lead to C260 as shown in Figure 4.
- E20a. Install lead as shown in Figure 4.

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- b. Install lead as shown in Figure 4 from L235 to ceramic feed thru.
  - c. Install lead as shown in Figure 4 to other end of L235.
  - d. Replace L235 (which was removed in Step E16) between the two ceramic stand-offs installed in Step E18.
- E21a. Replace air van switch using 5/8 inch high spacers and associated hardware to elevate the switch.
- b. Solder van to arm. (See Figure 4.)
- E22. Mount a turret type standoff between compartments as shown in Figure 4.
- E23. Mount the 185 uhy choke furnished (L252) as shown in Figure 4.
- E24. Mount the 185 uhy choke furnished (L251) as shown in Figure 4.
- Note: These chokes are the same as L235 and 236 which were removed in Step 16. They are furnished as extra chokes in the event that L235 or L236 were broken in removal.
- E25. Connect the short yellow jumper furnished between the turret standoff (Step22) and the nearest cathode terminal of the IPA tube socket. (See Figure 4.)
- E26. Connect the black lead coming out of the cable in the vicinity of the feed thru capacitor (mounted in Step 12) to the ground lug. (Also mounted in Step 12.)
- E27. Using pink wire furnished, connect one end to feed-thru capacitor (mounted in Step 12.) Tuck wire under cable, feed it thru grommet as shown in Figure 4, carry it to the IPA Plate current meter.
- E28. Remove the jumper to ground from the plus terminal of the IPA Plate current meter.
- E29. Connect the pink wire to this plus terminal.
- E30. Check the wiring of the IPA unit carefully.
- E31. Replace cover of the pressurized compartment.
- E32. Replace unit in its drawer.
- E33. Replace connections between drawer and IPA unit.
- E34. Replace all covers.

MODIFICATION OF EXCITER UNIT (SBE-2) (Section F)

- F1. Pull Exciter Unit out until slides lock. Swivel the unit so that the bottom is up.
- F2. Remove bottom cover.
- F3. Cut pink wire at terminal 3 of terminal board E101. Cut other end of pink wire which is connected to a feed-thru capacitor (C208) located on the wall of the first RF compartment. This is the compartment housing V118 (6AH6).
- F4. Drill a hole with #30 drill in the vicinity of terminal #4 of E101 in the back of the unit.
- F5. Mount a standoff terminal, furnished, in the hole drilled in Step F4.
- F6. Replace the pink wire with a shielded wire furnished but do not connect the ends. Care must be taken that pigtail end of shielding is at terminal board end. Make sure that the shielded lead follows the cable and does not touch any electrical components.
- F7. Mount choke CL-100-5, supplied, between terminal #4 of E101 and the stand off mounted in Step F5.
- F8. Mount capacitor CC-100-16 between stand off and ground.
- F9. Connect the shielded wire, which has been installed in Step F6, between the stand off turret and C208.
- F10. Connect pigtail of shielding to terminal 2 of terminal E101.
- F11. Replace bottom cover and return Exciter unit to operating position.



ASSEMBLIES SUPPLIED WITH KIT

ITEM	USED IN STEP	CONSISTS OF PARTS	
Shorting Strap	C-3	1 - 2" Wire	HWC18(16)U-99
		1 - 2" Teflon Insulation	PX-370-6-7
		2 - Lugs	TE-155-34171
Cradle Clip	D-5	1 - Bracket Left Side	1-1425
		1 - Bracket Right Side	1-1425
		4 - Fuse Clips	FC-103
		2 - Screws	SCBS0832BN7
		2 - Counter Sunk Screws	SCFS0832BN6
		4 - Lockwashers	LWE08MRC
		4 - Nuts	NTH0832BN12
Jumper	D-8	1 - 18" Wire	HWC18(16)U-99
		1 - 18" Teflon Insulation	PX-370-6-7
		2 - Lugs (blue)	TE-159-32960
Resistor	D-12	1 - 100K, 20 Watts	RW-110-43
		1 - Screw, 8-32 thds x 2-1/2" lg	SCBS0832BN40
		1 - Lockwasher, 8-32 clearance	LWE08MRC
		1 - Nut, 8-32	NTH0832BN10
		1 - 5" Yellow Hook-Up Wire	MWC22(7)U-44
		1 - Lug (Red)	TE-120-2
		2 - Fiber Washers	WA-102-5
		2 - Fiber Washers	WA-109-46
Ground Strap	D-15	1 - Braided Wire 1"	WL-103-4
		4 - Lugs	TE-165-31646
		1 - Braided Wire 2"	WL-103-6
		1 - Braided Wire 4-1/2"	WL-103-6
		2 - Lugs	TE-158-31134
Capacitor	E-10	1 - .01 mfd 4 Kv Teflon	CX102J103M
		1 - Nut #8	NTH0832BN10
		1 - Lockwasher #8	LWE08MRC
Stand-Offs	E-18	2 - Ceramic Stand-offs 1-1/2" lg	NS3W0212
		4 - Screws	SCBS1032BN6
		4 - Fiber Washers	WA-109-56
		4 - Lockwashers	LWE10MRC
High Voltage Lead	E-19	1 - 3-1/2" HV Lead (Stripped 1/2" for connector)	HWC18(16)U-99
		1 - Lug #8 (blue)	TE-159-32960

ASSEMBLIES SUPPLIED WITH KIT

(PAGE 2 CONTINUED)

ITEM	USED IN STEP	CONSISTS OF PARTS	
High Voltage Lead	E-20	1 - 4-1/4" HV Lead	HWC18(16)U-99
		2 - Lugs #8 (blue)	TE-159-32960
		1 - 2-1/2" HV Lead	HWC18(16)U-99
		2 - Lugs #8 (blue)	TE-159-32960
Air Switch Spacer	E-21	2 - 4-40 x 1-1/2" Screw	SCBS0440BN24
		2 - 5/8" Spacers	TE-150
		6 - Flat Washers	FW04MRC
		2 - Fiber Washers	WA-109-34
		2 - Nuts	NTH0440BN8
		2 - Lockwashers	LW104MRC
Stand-Off (Turret)	E-22	1 - Stand-off (Turret type)	TE-102-2
		1 - Screw	SCBS0440BN3
		1 - Lockwashers	LWE04MRC

LOOSE ITEMS SUPPLIED WITH KIT

ITEM	USED IN STEP	CONSISTS OF PARTS	
-	B-6	9 - Capacitor, Ceramic	CC-109-36
-	C-2	1 - Walsco #120-06 Silicone Spray	
-	C-4	2 - Choke, R.F.	A-1163
-	C-4	2 - Bracket, Coil Mtg. Top	MS-1862
-	C-4	2 - Bracket, Coil Mtg. Bottom	MS-1861
-	C-4	4 - Insulators, Ceramic	NS3W0206
-	C-4	4 - Screws, 6-32	SCBS0632BN4
-	C-4	8 - Fiber Washers	WA-109-34
-	D-5	2 - Ceramic Insulator O.D. 3/4" lg. 1"	NS3W0308
-	D-5	1 - Bracket	1-1424
-	D-5	4 - Screws	SCBS0832BN16
-	D-5	4 - Lockwashers	LWE08MRC
-	D-5	4 - Nuts	NTH1024BN12
-	D-5	2 - Screws #10	SCBS1032BN6
-	D-5	11 - Fiber Washers 3/4 O.D. #10 Screw Hole	WA-109-56
-	D-7	1 - 3/8" Drill	
-	D-9	4 - Resistor, 5K, 140 watt	RW118F502
-	D-10	1 - Resistor, 18K, 140 watt	RW118F183
-	E-12	1 - Ground Lug (1/4" hole)	TE-104-5
-	D-11,E-8	1 - #19 Drill	
-	D-13	1 - Ground Lug - #8 hole	TE-104-3
-	E-11,E-12	2 - Feed thru	CK70A202M
-	E-14	6 - .01 mfd Mica Capacitor	CM35B103K
-	E-23,E-24	2 - 185 Microhenry Choke	A-1126
-	E-25	1 - 3-1/2" Yellow Hook-Up Wire #22	MWC22(7)U-44
-	E-27	1 - 2' Pink Hook-Up #22	MWC22(7)U-Pink
-	E-4,E-7	1/4" Drill	
-	F-4	1 - #30 Drill	
-	F-5	1 - Stand-off	TE-102-2

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LOOSE ITEMS SUPPLIED WITH KIT

(PAGE 2 CONTINUED)

ITEM	USED IN STEP	CONSISTS OF PARTS	
-	F-5	1 - Screw	SCBSO440BN3
-	F-5	1 - Lockwasher	LWE04MRC
-	F-6	1 - 29 inches of Shielded Wire	WI-101-2
-	F-7	1 - Choke	CL-100-5
-	F-8	1 - Capacitor	CC-100-16
-	C-4	4 - Lugs	TE-141-3
-	C-4	4 - 6-32 Screws	SCBSO632BN8