

DATE 12/14/61

SHEET OF

TMC SPECIFICATION NO. S -639

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TITLE: KIT-104 BLOWER MODIFICATION, GPT-40K

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KIT-104 BLOWER MODIFICATION
OF THE GPT-40K

DATE 12-14-61

SHEET 1 OF 6

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I EQUIPMENT AFFECTED

GPT-40K transmitting set radio

II PURPOSE

Modification kit to replace the existing blower with a more efficient blower.

III MATERIALS SUPPLIED IN KITITEM NO.

- | | | | |
|-----|------------|---|-------------------|
| 1. | One each | ID-268 Installation Details. | |
| 2. | One each | BL-110 Blower, main. | |
| 3. | Two each | CU-129-18SS Clamp adjustable. | |
| 4. | Two each | CU-129-10SS Clamp adjustable. | |
| 5. | One each | RY-133 Hose, rubber. | |
| 6. | Deleted | | |
| 7. | One each | PX-598 Duct, P.A. Deck. | |
| 8. | One each | RY-134 Duct, elbow. | |
| 9. | One each | MS-2498 Flange, airduct. | |
| 10. | One each | MS-1976 Base, P.A. bandswitch. | |
| 11. | One each | PO-192 Support, tube. | |
| 12. | One each | MS-2764 Plate, insert | |
| 13. | Five each | HB-101-4B Button, plug. | |
| 14. | Three each | TE-155-34170 Lug. | |
| 15. | Six each | A. SCBP1032BN6 screw machine | |
| | | B. LWE10MRN lockwasher ext. | Mtg. PO-192 |
| | | C. NTH1032BN12 nut, hex | |
| 16. | Eight each | A. SCBP0440BN6 screw machine | |
| | | B. FW04HBN washer flat. | Mtg. bottom cover |
| | | C. LWE04MRN lockwasher ext. | tube compartment |
| | | D. NTH0440BN8 nut, hex. | |
| 17. | Two each | A. SCBP1032BN28 screw machine | |
| | | B. FW10HBN washer flat | Mtg. tube base |
| | | C. LWS10MRN lockwasher split | Strap |
| | | D. NTH1032BN12 nut, hex | |
| 18. | Four each | A. SCBP0632BN8 screw, machine | |
| | | B. FW06HBN washer flat | Mtg. grid screen |
| | | C. LWS06MRN lockwasher, split | |
| | | D. NTH0632BNB nut hex | |
| 19. | Six each | A. SCFP1032BN8 screw machine | |
| | | B. LWE10MRN lockwasher ext. | Mtg. b ndswitch |
| | | C. NTH1032BN12 nut, hex | u channel |

DATE 12-14-61

SHEET 2 OF 6

TMC SPECIFICATION NO. S 639

B

COMPILED

CHECKED

TITLE:

KIT-104 BLOWER MODIFICATION 40K

APPROVED

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|-----|---------------|--|-------------------------------------|
| 20. | Twelve each | A. SCBP1032BN8 screw machine
B. LWE10MRN lockwasher ext.
C. NTH1032BN12 Nut, hex | Mtg. handswitch base MS-1976 |
| 21. | Ten each | A. SCBP1032BN12 screw machine
B. LWS10MRN lockwasher split | Mtg. gear assembly and bearing. |
| 22. | Six each | A. SCBP1032BN24 screw, machine
B. LWE10MRN lockwasher, ext.
C. NTH1032BN12 nut, hex | Mtg. handswitch posts |
| 23. | One each | A. LWS10MRN lockwasher split
B. NTH1032BN12 nut hex | Mtg. HF "L" loop |
| 24. | Two each | A. SCHH2520BS36 screw machine
B. LWS25MRS lockwasher split
C. NTH2520BS14 nut, hex | HF coil mtg. |
| 25. | Three each | A. SCHH2520BS12 screw machine
B. LWS25MRS lockwasher split
C. NTH2520BS14 nut, hex | Mtg load capacitor |
| 26. | Five each | A. SCBP0832BN10 screw machine
B. FW08HBN washer flat
C. LWE08MRN lockwasher split
D. NTH0832BN10 nut, hex | Mtg PX-598 MS-2498 |
| 27. | Eight each | A. SCBP0632BN5 screw machine
B. FW06HBN washer flat
C. LWS06MRN lockwasher split
D. NTH0632BN8 nut, hex | Mtg. PX-598 |
| 28. | Nineteen each | A. SCBP0832BN8 screw machine | Mtg. tube cover
Mtg. tube shield |
| 29. | Four each | A. SCBP0832BN6 screw machine
B. LWE08MRN lockwasher ext. | Mtg, contactor box |
| 30. | Sixteen each | A. SCBP1032BN6 screw machine
B. LWE10MRN lockwasher ext. | Mtg, shocks |
| 31. | Four each | A. SCHH2520BN8 screw machine
B. LWS25MRN lockwasher split | Mtg. blower |
| 32. | Seven each | A. SCBP0832BN7 screw machine
B. FW08HBN washer, flat
C. LWE08MRN lockwasher ext.
D. NTH0832BN10 nut, hex | Mtg. plate, insert |
| 33. | One each | #17, #21, #29, 3/16", 3/8" drill bits | |
| 34. | Two each | 08-32, 10-32 tap | |
| 35. | One each | 3/4" Greenlee | |
| 36. | One each | 1 7/8" Greenlee | |

DATE 12-14-61

SHEET 3 OF 6

TMC SPECIFICATION NO. S 639

B

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KIT-104 BLOWER MODIFICATION 40K

APPROVED

IV TOOLS REQUIRED

To be provided by installing activity.

1. Two screwdrivers, one 7 inch, one 3 inch Phillips #2.
2. Wrench, open end $\frac{1}{2}$ -5/8.
3. Wrench, open end 3/8-7/16.
4. Wrench, crescent 10 inch.
5. Allen wrench 8-32.
6. Soldering iron 75 watt.
7. Electric hand drill 3/8" chuck.
8. Crimper.

V PROCEDURE

REF. ID-268

1. Remove AC power from unit.
2. Remove rear shields from the final PA and blower compartments.
3. Remove the air switch and mounting bracket item 1 Figure (1) save for remounting.
4. Disconnect the cable item 3 Figure 1 from the blower motor and unscrew the plug item 2 Figure (1) from the contactor box item 4 Figure 1.
5. Remove the contactor box item 4 Figure 1 and the attached cable. Save for remounting.
6. Remove the belt guard item 5 Figure 1 Discard.
7. Remove the rubber gasket from the blower outlet and then remove the six bolts item 8 Figure 1 holding down the blower and remove the blower. At this time remove the air switch box for remounting on the new blower.
8. Remove the six shocks item 6 Figure 1. Save four for later use.
9. Disconnect the HF "L" section loop item 1 Figure 2A from the capacitor.
10. Disconnect the HF coil item 2 Figure 2A from the main coil assembly item 3 Figure 2A.
11. Disconnect the load capacitor strap and plate item 4 Figure 2A.
12. Remove the six screws item 5 Figure 2A holding bandswitch posts.
13. Loosen the Allen screws in the lower hub item 6 Figure 2A.
14. Lift out the whole bandswitch assembly and set aside for remounting. Be sure to save the key from the shaft.
15. Remove the nut item 15 Fig. 2A holding the hub item 6 Fig. 2A. Then remove the hub.
16. Disconnect the shaft item 8 Fig. 2A.
17. Remove the ten screws item 3, Fig. 4 the gear ass'y. and bearing and put them aside for remounting.

DATE 12-14-61

SHEET 4 OF 6

TMC SPECIFICATION NO. S 639

B

COMPILED

CHECKED

TITLE:

KIT-104 BLOWER MODIFICATION 40K

APPROVED

18. Remove the air deflector item 13 Figure 2A, or item 1 Figure 4.
19. Remove the two air jets item 14 Figure 2A, or item 2 Figure 4.
20. Remove the mounting plate and then remove the 3 "U" brackets item 11 Figure 2A for remounting on the new plate.
21. Remove fiberglass cover and metal shield from the final tube compartment Figure 2B.
22. Remove the filament rings item 1 Figure 2B.
23. Remove the grid screen item 2 Figure 2B. Save for remounting.
24. Remove the screws holding the tube base strap item 3 Figure 2B.
25. Remove the spring clips item 4 Figure 2B. Save for remounting.
26. Remove the capacitor strap item 5 Figure 2B and capacitor C7326 item 6 Figure 2B. Save for remounting.
27. Carefully remove the air duct tube base item 7 Figure 2B, and the final tube item 8 Figure 2B as a unit and put it aside for remounting.
28. Remove the rear half of the bottom cover item 9 Figure 2B.
29. Remove the glass tube support item 10 Figure 2B discard.
30. Replace the glass tube support with a new unmodified PO-192 that is supplied. Item 10 Figure 2B.
31. Replace the bottom cover item 9 Figure 2B.
32. Carefully replace the air duct tube base and final tube item 7 and 8 Figure 2B.
33. Replace the capacitor and capacitor strap items 5 and 6 Figure 2B.
34. Replace the spring clips item 4 Figure 2B.
35. Replace the screws that hold the tube strap item 3 Figure 2B.
36. Replace the grid screen item 2 Figure 2B.
37. Replace the filament rings item 1 Figure 2B.
38. Layout on the P.A. deck the holes according to drilling plan #1.
39. Before drilling place the fiberglass air duct item 10 Figure 2A against the final tube compartment as shown by item 10 Figure 2A and check the alignment of the holes in the deck. If they are not correct make the proper adjustments.
40. Using the two greenlee punches that are supplied increase the 3/8" hole in drilling plan 1 to 3/4" and then to 1 7/8"
41. Once more line up fiberglass air duct item 10 Figure 2A with the holes in the deck. Then mark and drill the holes in the final tube compartment with #17 drill bit.
42. R mount the "U" brackets item 11 Fig. 2A on the new mounting plate MS-1976 item 7 Fig. 2A that is supplied then replace the mounting plate.

DATE 12-14-62
SHEET 5 OF 6

TMC SPECIFICATION NO. S 639

B

A.A.
COMPILED CHECKED

TITLE: ~~KIT~~ 104 BLOWER MODIFICATION 40K

APPROVED

43. Replace the bearing and gear assembly item 9 Fig. 2A.
44. Reconnect the shaft item 8 Fig. 2A.
45. Replace the hub item 6 Fig. 2A and put back the nut item 15 Fig. 2A that holds the hub.
46. Replace the whole bandswitch be sure to replace the key and tighten the Allen screws at this time.
47. Reconnect the load capacitor, H.F. coil and H.F. "L" section loop items 1, 2 and 3 Fig. 2A.
48. Press the 5 plug buttons that are supplied into the holes from which the air jets and air deflector items 13 and 14 Fig. 2A were removed.
49. Remove the front window of the PA section.
50. Place the plate MS 2764 that is supplied over the perforated section of the P.A. deck Fig. 4.
51. Using the holes in the plate as a template drill the seven holes in the perforated metal and then screw it down with the 8-32 hardware.
52. On the blower deck layout, drill and tap the holes shown in drilling plan 2.
53. Mount the flange item 1 Fig 3 with one screw in the "A" hole on drilling plan 1.
54. Mount the duct item 2 Fig. 3, and the flange to the deck. Also at this time mount the duct to final tube compartment, and the air baffle PX-607 item 12 Fig 2A near the rectangular holes in the duct PX-598 item 2.
- 55/ Replace the metal shield and fiberglass cover on the final tube compartment.
56. Mount the contactor box item 3 Fig. 3 in the 8-32 tapped holes and connect the plug item 4 Fig. 3.
57. Mount the four shocks item 5 Fig. 3 in the new 10-32 tapped holes.
58. Mount the air switch box item 6 Figure 3 on the new blower. Be sure the air hole is facing the intake side of the blower.
59. Make sure the flange item 7 Fig. 3 on the transition piece item 8 Fig. 3 is on the opposite side of the blower intake.
60. Mount the blower item 9 Fig. 3 on the shocks item 5 Fig. 3.
61. Measure and cut to length if needed the cable item 10 Fig. 3 from the contactor box to the blower. Crimp and/or solder the new lugs that are supplied and connect the blower.
62. Mount the rubber hose item 11 Fig. 3 from the blower outlet to the tube support item 12 Fig. 3 using the two clamps item 13 Fig. 3.
63. Remount the air switch and mtg bracket item 14 Fig. 3. Make sure that the vane is lined up with the hole in the box.
- 64/ Mount the elbow hose item 15 Fig. 3 from the blower flange item 7 Figure 3 with the clamps item 16 Fig. 3.

DATE 12-14-61

SHEET 6 OF 6

TMC SPECIFICATION NO. S 639

B

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65. Check the blower for proper rotation which should be in a clockwise direction looking from the blower intake side.

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK NEW YORK

S-639

MODEL KIT-104

PROJECT NO. _____

DATE	REV.	PAGE	EMN #	DESCRIPTION	CHK.	APP.
2/21/62	A	1	6434	On item 16 (B) Chg. FWO4MBN to FWO4HBN. On item 17 (B)	}	16
				Chg. FW10MBN TO FW10HBN. On item 18'(B) Chg. FW06MBN		
				to FW06HBN. On item 18 (D) Chg. NTH0632BNB to		
				NTH0632BN8.		
		2		On item 26 (B) Chg. FW08MBN to FW08HBN. On item 26 (D)		
				Chg. NTH0837BN10 to NTH0832BN10. On item 27 (B) Chg.		
				FW06MBN to FW06HBN. On item 32 (B) Chg. FW08MBN to		
				FW08HBN.		
3/14/63	B	1	8574	On Sect. III, Dele. item 6, 1 ea. PX-607		16