

DATE 1/29/62

SHEET _____ OF _____

TMC SPECIFICATION NO. S-655

B

COMPILED

CHECKED

TITLE: KIT-120 2MC MODIFICATION GPT-40K

APPROVED

FINAL AMPLIFIER SECTION

KIT-120 2MC MODIFICATION GPT-40K

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FINAL AMPLIFIER SECTION

I. Equipment Affected

- A. GPT-40K Transmitting Set Radio

II. Purpose

- A. Field modification of GPT-40K to extend the frequency from four megacycles down to two megacycles

NOTE: This kit should be installed only if KIT-131 has already been installed or in conjunction with KIT-131

III. Materials Supplied

- | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> 1. One each A-2301 2. One each AC-139 3. One each AX-257 4. Three each CB-160 5. One each CL-271 6. One each LD-836 (MS-2676) 7. One each MS-202-30-5.50 8. One each MS-202-27-5.50 9. One each MS-2169 10. One each 11. One each 12. One each 13. One each 14. One each 15. One each ID-274 16. a. Eighteen each SCBP1032BN6 b. Eighteen each LSW10MRN c. Eighteen each NTH1032BN12 17. a. Three each SCHH2520BN8 b. Three each LWS25MRN c. Three each NTH2520BN14 18. a. Three each SCBP1032BN24 b. Three each FW10HBN c. Three each LWS10MRN d. Three each NTH1032BN12 19. a. Six each SCBP1032BN6 b. Six each LWS10MRN c. Six each NTH1032BN12 20. a. Four each SCBP1032BN6 b. Four each LWS10MRN | <p>Capacitor and gear assembly
Counter, bandswitch, antenna tuner
Contact, button, rotary switch
Capacitor, variable, vacuum 40-1000 mmfd.
Coil, RF Fixed, 33 micro henries
Bracket, capacitor support
Strap
Strap
Plate, Capacitor, triple
Stamp C7330
Stamp C7331
Stamp C7332
Stamp MP8203
Stamp pad
Installation drawing
Screw, machine
Washer, lock, split
Nut, hexagon
Screw, machine
Washer, lock, split
Nut, hexagon
Screw, machine
Washer, flat
Washer, lock, split
Nut, Hexagon
Screw, machine
Washer, lock, split
Nut, hexagon
Screw, machine
Washer, lock, split</p> | <p>Flanges (3)
Mounting

Hub
Mounting

Hub
Pins

Flange
Mounting

Capacitor
Bracket Mtg.</p> |
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- | | | | | | |
|-----|----|-----------------------------|-------------------------------------------|---|--------------------------------------------|
| 21. | a. | One each SCBP0832BN8 | Screw, machine | } | CL-271
Mounting |
| | b. | One each FW08HBN | Washer, flat | | |
| | c. | One each LWS08MRN | Washer, lock, split | | |
| 22. | a. | Three each SCBP1032BN16 | Screw, machine | } | Capacitor
And Gear Assembly
Mounting |
| | b. | Three each FW10HBN | Washer, flat | | |
| | c. | Seven each LWS10MRN | Washer, lock, split | | |
| | d. | Seven each NTH1032BN12 | Nut, hexagon | | |
| | e. | Four each SCBP1032BN8 | Screw, machine | | |
| 23. | a. | Two each SCBP0832BN8 | Screw, machine | } | Strip
Mounting |
| | b. | Two each FW08HBN | Washer, flat | | |
| | c. | Two each LWS08MRN | Washer, lock, split | | |
| | d. | Two each NTH0832BN10 | Nut, hexagon | | |
| 24. | a. | Four each SCBP0632BN8 | Screw, machine | } | Counter
Mounting |
| | b. | Four each LWS06MRN | Washer, lock, split | | |
| | c. | Four each NTH0632BN8 | Nut, hexagon | | |
| 25. | | Seven each SC-143-0832-W-16 | Screw, nylon, insulation, plate, mounting | | |
| 26. | a. | Two each SCBP1032BN18 | Screw, machine | } | Spring
Contact
Mounting |
| | b. | Four each FW10HBN | Washer, flat | | |
| | c. | Four each LWS10MRN | Washer, lock, split | | |
| | d. | Two each NTH1032BN12 | Nut, hexagon | | |
| | e. | Two each SCBP1032BN14 | Screw, machine | | |
| 27. | a. | One each A-2224 | Filament coil core assembly | | |
| | b. | Two each NTH2520BN14 | Nut, Hexagon | | |
| | c. | Two each LWS25MRN | Washer, Lock, Split | | |
| | d. | Two each FW25HBN | Washer, flat | | |

IV. Tools Required

- A. To be provided by the installing activity
1. Allen wrench #10
 2. Allen wrench #8
 3. Screwdriver, seven inch
 4. Screwdriver, seven inch Phillips
 5. Wrench, open-end, 1/4-5/16
 6. Wrench, open end, 3/8-7/16
 7. Allen wrench #6

V. Procedure

A. PA Capacitor Change, Ref. ID-274

1. Remove the AC power from the unit. Short out all high voltage points.
2. Remove the front window from the final Amplifier Compartment. Save this hardware for remounting.
3. Remove the coil L7312, if required, item 1, Fig. 1.
4. Remove the bracket and flange, item 3 and 4, Fig. 1, from the capacitor, item 2, Fig. 1.

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5. Remove the flange, item 4, Fig. 1, from the bracket, item 3, Fig. 1, for remounting on the new bracket, MS-2678, that is supplied.
6. Remove the plate and flanges, items 1 and 2, Fig. 2.
7. If the plate, item 1, Fig. 2, is shaped like a top hat, as shown; the flanges, items 2, must be removed for remounting on the new plate, MS-2169, that is supplied. If the plate is flat, as shown in Fig. 1, it can be replaced as is and the new plate, MS-2169, will not be needed.
8. Remove the screws, in the three capacitor hubs, items 3, 4, and 5, Fig. 2 and remove the capacitors and hubs.
9. At this point make sure that the three capacitors, items 7, 8, and 9, Fig. 1, are completely closed or at maximum capacitance. If they are not, upon removal of the hubs, the vacuum will spring the plates closed with enough force to shatter them.
10. Remove the hubs, items 3, 4 and 5, Fig. 2 as per Fig. 3 and replace them on the three new capacitors CB-160.
11. Replace the three new capacitors in the GPT-40K and replace the screws back in the hubs (with the new hardware supplied).
12. Replace the plate and flange assembly as indicated in step 7 above.
13. Mount the flange, item 4, Fig. 1, on the new bracket MS-2676 and replace it as shown by item 3, Fig. 1 and tighten the flange on the capacitor.
14. Tighten the screws on the six flanges of the capacitors, items 7, 8 and 9, Fig. 1.
15. Remove the chain, item 9, Fig. 2, (be sure not to lose the connecting link) and turn the capacitor shafts until the plates are completely closed and then replace the chain.
16. Bring all three capacitors to minimum capacitance or until the plates are as far apart as possible.
17. Loosen the two lower set screws in the couplings, item 1 and 2, Fig. 4, and set the counters, items 3 and 4, Fig. 4 to 000. Then tighten the set screws.

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18. Install the new coil, CL-271, that is supplied according to Fig. 5.
 19. With a piece of sand paper rub out the existing symbols, items 6, 7, and 8, Fig. 2.
 20. With the stamps supplied, restamp item 6, Fig. 2 with stamp C7330, restamp item 7, Fig. 2, with stamp C7331, and restamp item 8, Fig. 2, with stamp C7332.
 21. Replace the PA- compartment window.
- B. Antenna Tuner Capacitor Change , Ref. ID-274
1. Remove the antenna tuner drawer from the GPT-40K.
 2. Remove the top cover; discard. Do Not Replace.
 3. Remove the two spring contacts, items 1 and 2, Fig. 6; save for remounting.
 4. Remove the insulator plate, item 3, Fig. 6, save for remounting.
 5. Remove the strap, item 4, Fig. 6, from the center tap of the coil; discard.
 6. Remove the button contact, item 5, Fig. 6; discard.
 7. Remove the front knob of the capacitor drive shaft, item 6, Fig. 6. Be sure to save key for remounting.
 8. Loosen the Miter gear, item 1, Fig. 7.
 9. Remove the screws from the bottom plate and side bracket and take out the capacitor and gear assembly, item 7, Fig. 6, and shaft, item 8, Fig. 6.
 10. Mount the new capacitor and gear assembly, A-2301, in the same position.
 11. Replace the contact button, item 5, Fig. 6, with the new AX-257. At the same time connect the strap MS-202- that is supplied from the back of the contact button to the center tap of the coil.
 12. Connect the strap that is attached to the contact button to the strap on the top of the new capacitor.

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13. Replace the knob, item 6, Fig. 5, on the capacitor shaft.
14. Loosen the Bevel gear, item 1, Fig. 7, on the capacitor shaft.
15. Bring the capacitor to minimum capacitance or where the plates are completely separated.
16. Set the counter to 000 and then mesh and tighten the Miter gear, item 1, Fig. 7.
17. Set the switch wiper, item 9, Fig. 6, as shown.
18. Replace the counter, item 2, Fig. 7, with the new counter AC-139. Make sure that you remove the Miter gear, from the old counter and put it on the new counter.
19. Before tightening the Miter gear, item 3, Fig. 7, make sure that the switch is in the position indicated in step 17 and then set the counter, item 2, Fig. 7, on the 2-12mc. position.
20. Replace the plate, item 3, Fig. 6.
21. Replace the spring contacts, items 1 and 2, Fig. 6, make sure that the straps from the coil and the strap from the capacitor, item 10, Fig. 6, are also connected at this time.
22. Rub out the symbol above the counter, item 2, Fig. 7, and restamp it with the stamp, MP8203.
23. Replace the unit in the GPT-40K.

C. To add core assembly to filament coil.

1. Remove rear shield and the two tube compartment covers.
2. Remove the coil tie-down insulators (see figure page 6) and replace them with the core assembly, A-2224.

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