

TMC SPECIFICATION

NO. S 1116

REV:

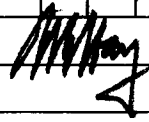
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COMPILED:

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APPD:



SHEET 1

OF 5

TITLE:

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7/9/66

SPECIFICATIONS

FOR THE

KIT-298-3

TMC SPECIFICATION

NO. S 1116

REV: **A B**

COMPILED: CL

CHECKED:

APPD:

SHEET 2 OF 5

TITLE: SPECIFICATIONS FOR THE KIT-298-3

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I. This modification affects the receiver module TTRR-3. It involves changes to the 1st, 2nd, 3rd RF and mixer sections.

II. LIST OF MATERIALS SUPPLIED:

| <u>ITEM NO.</u> | <u>SYMBOL</u> | <u>QTY</u> | <u>TMC PART NO.</u> | <u>DESCRIPTION</u> |
|-----------------|------------------|------------|---------------------|--------------------|
| 1. | R301, R302, R303 | 3 | RC20GF103J | RESISTOR |
| 2. | C331 | 1 | CM20B681J | CAPACITOR |
| 3. | C304, C305, C306 | 3 | CC100-33 | CAPACITOR |
| 4. | DELETED | | | |
| 5. | | 1 | NP-362-74 | NAME PLATE |
| 6. | | 1 | CK685 | SCHEMATIC |
| 7. | R319, R320, R321 | 3 | RC20GF471J | RESISTOR |
| 8. | R318 | 1 | RC20GF473J | RESISTOR |

III. MODIFICATION INSTRUCTIONS

A. PREPARING THE UNIT FOR THE MODIFICATIONS:

1. Turn the power OFF.
2. Remove the module from the receiver.
3. Remove the top and bottom covers.
4. Unsolder R301, R302, R303, C331, C304, C305, C306.
5. Unsolder the terminals of C301, C302 and C303, which connect to the bases of their respective transistors.

B. CHANGES ON THE MODULE:

1. Mount the three 10K ohms resistors, Item 1, in place of R301, R302 and R303. Solder them.
2. Mount the 680 ^{capacitor} pf, Item 2, in place of C331. Solder it.
3. Solder resistor, Item 7, between the unsoldered capacitor leads C301, C302, and C303, (see step III A5) and terminal at base of transistor Q301, Q302 and Q303 respectively.

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REV:

AB

COMPILED:

CL

CHECKED:

APPD:

SHEET

3

OF 5

TITLE:

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4. Mount the three .2 mf, Item 3, in place of C304, C305 and C306. Solder them.
5. Mount on the underside IF printed circuit board R318 Item 8, from collector of Q301 to junction of C302 and T102. Solder in place.
6. Mount the bottom cover, and plug the module in the receiver for alignment.

C. MODULE ALIGNMENT:

a. TEST EQUIPMENT REQUIRED

1. HP Model 524C Frequency Counter or equivalent.
2. HP Model 606A RF Signal Generator or equivalent.
3. Tektronic Model 545 Oscilloscope or equivalent.
4. Simpson Model 260 VOM or equivalent.

b. PROCEDURE

1. Using the oscilloscope, measure signal level at TP2; level should be approximately .3 volts peak-to-peak.
2. Using the frequency counter, check frequency of signal at TP2; signal should be approximately 1.75 MC above operating frequency of TTRR (F1 or F2, dependent upon setting of F1/F2 switch). If this signal is not obtained, check circuitry of local oscillator and buffer/doubler.
3. Remove local oscillator crystal Y301 and Y302. Connect RF signal generator to Antenna Jack of receiver, adjust generator to deliver TTRR operating frequency (F1 or F2). Connect oscilloscope to stator of adjustment A capacitor C316.

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REV: A B

COMPILED: CL CHECKED: APPD: SHEET 4 OF 5

TITLE: SPECIFICATIONS FOR THE KIT-298-3

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4. Adjust screw A on the TTRR for maximum amplitude on oscilloscope.
5. Connect oscilloscope to stator of adjustment B capacitor C317. Adjust screw A for maximum amplitude on oscilloscope, then adjust screw B for maximum amplitude.
6. Connect oscilloscope to stator of adjustment C capacitor C318. Adjust screw A for maximum amplitude on oscilloscope; readjust screw B for maximum amplitude, then adjust screw C for maximum amplitude on oscilloscope.
7. Connect oscilloscope to stator of adjustment D capacitor C319. Readjust screws A, B and C (in that order). Adjust screw D for maximum amplitude on oscilloscope.
8. Connect oscilloscope to TP1 (mixer input), and set generator output at 1 microvolt.
9. Readjust screws A thru D (in that order) for maximum amplitude on oscilloscope.
10. Insert local oscillator crystal (or crystal oven), and allow 30 minutes for the crystal to warm up.
11. Connect oscilloscope to TP3, then adjust screw E for maximum amplitude on oscilloscope.
12. Replace top cover of TTRR-3.
13. Connect oscilloscope to the IF input of the IF board in the receiver (terminal #1) and readjust screws A thru E (in that order) for maximum amplitude on oscilloscope.
14. Disconnect test equipment and after adhesive namplate, Item 5, to the top cover of the TTRR.

