

# TMC SPECIFICATION

NO. S 1186

REV: **A B**

COMPILED: NAB      CHECKED: *NAB*      APPD: *SPM*      SHEET **1** OF **8**

TITLE:

Typed by mtp 1/30/67

STR-1Y - MODIFICATION INSTRUCTIONS

KIT-330

# TMC SPECIFICATION

NO. S 1186

REV: 0

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APPD:

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TITLE: STR-1Y MODIFICATION INSTRUCTIONS - KIT-330

- I. Receiver Model STR-1 will be modified to provide squelch operating characteristics as follows:

**Squelch Threshold:** The squelch shall enable the receiver to produce audio output at any antenna input level from 1 microvolt to 100,000 microvolts. The threshold adjustment will operate in conjunction with a squelch sensitivity adjustment so that threshold settings will not be unduly critical or difficult to establish after proper AGC settings have been accomplished.

**Squelch Dropout:** The receiver will be automatically muted not less than 0.5 second after the input voltage at the antenna input has dropped 6 db below squelch threshold settings in range of 1 to 10 uv. This relationship will hold over the entire squelch adjustment range.

Upon completion of modification, STR-1 becomes STR-1Y.

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## II. MATERIAL FURNISHED BY TMC

| <u>ITEM</u> | <u>QTY</u> | <u>TMC PART NO.</u>       | <u>DESCRIPTION</u>            | <u>SYMBOL</u> |
|-------------|------------|---------------------------|-------------------------------|---------------|
| 1           | 1          | A4551                     | PC Board Ass'y                |               |
| 2           | 1          | RC20GF103J                | Resistor, Fixed               | R1635         |
| 3           | 1          | CL275-103                 | Coil, RF, Fixed               | L1601         |
| 4           | 2          | RC20GF102J                | Resistor, Fixed               | R1635, R1672  |
| 5           | 1          | RV106UX10C501A            | Resistor, Variable            | R1556         |
| 6           | 1          | RC20GF102J                | Resistor, Fixed               | R1668         |
| 7           | 3          | SCBPO632BN12              | Screw, Mach.,<br>Phillips Hd. |               |
| 8           | 3          | NTH0632BN8                | Nut, Hex                      |               |
| 9           | 3          | LW106MRN                  | Washer, Lock, Int.            |               |
| 10          | 3          | WA-109-36                 | Washer, Fiber                 |               |
| 11          | 3          | FW06HBN                   | Washer, Flat                  |               |
| 12          | 1          | NP362-79                  | Modification Nameplate        |               |
| 13          | 1          | CK1273                    | Schematic Diagram             |               |
| 14          | 1          | CK1274                    | Schematic Diagram             |               |
| 15          | 1          | CK1297                    | Schematic Diagram             |               |
| 16          | 1          | S1172                     | Test Procedure                |               |
| 17          | 1          | RC20GF223J                | Resistor, Fixed               | R1658         |
| 18          | 3          | TE-117-2                  | Spacer 3/8"                   |               |
| 19          | 1          | TP131-1SQUELCH/<br>THRESH | Rubber Stamp                  |               |

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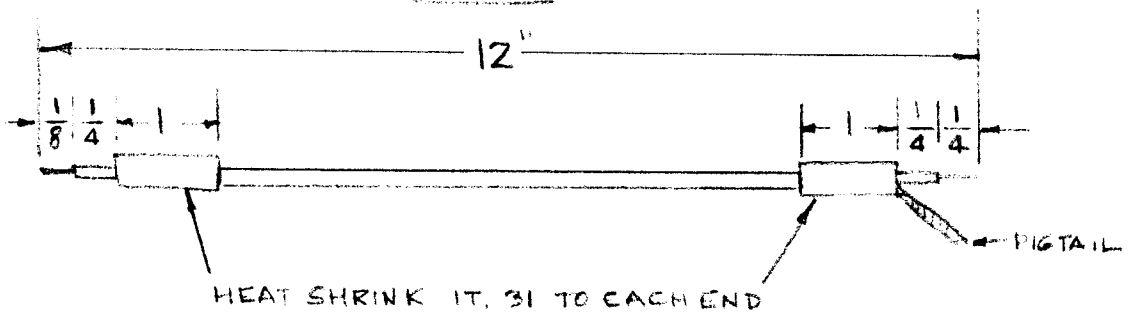
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TITLE: STR-1Y MODIFICATION INSTRUCTIONS - KIT-330

## II. MATERIAL FURNISHED BY TMC (Cont)

| <u>ITEM</u> | <u>QTY.</u> | <u>TMC PART NO.</u> | <u>DESCRIPTION</u>  | <u>SYMBOL</u> |
|-------------|-------------|---------------------|---------------------|---------------|
| 20          | 1           | Stamp Pad, Blk      | Stamp Pad           |               |
| 21          | 1           | Drill Bit #60       | Bit, Drill #60      |               |
| 22          | 30"         | MWC22(7)U93         | Wire, Elect. wh/orn |               |
| 23          | 16"         | MWC22(7)U2          | Wire, Elect. red    |               |
| 24          | 24"         | MWC22(7)U6          | Wire, Elect. Blue   |               |
| 25          | 7"          | MWC22(7)U0          | Wire, Elect. Black  |               |
| 26          | 36"         | RG188/U             | Wire, Coax.         |               |
| 27          | 30"         | MWC22(7)U7          | Wire, Elect. Violet |               |
| 28          | 10"         | MWC22(7)U3          | Wire, Elect. Orange |               |
| 29          | 10"         | MWC22(7)U4          | Wire, Elect. Yellow |               |
| 30          | 1           | A4551               | Assy, Drawing       |               |
| 31          | 8"          | PX830-16-1          | Shrink Tubing       |               |

FIG. 1



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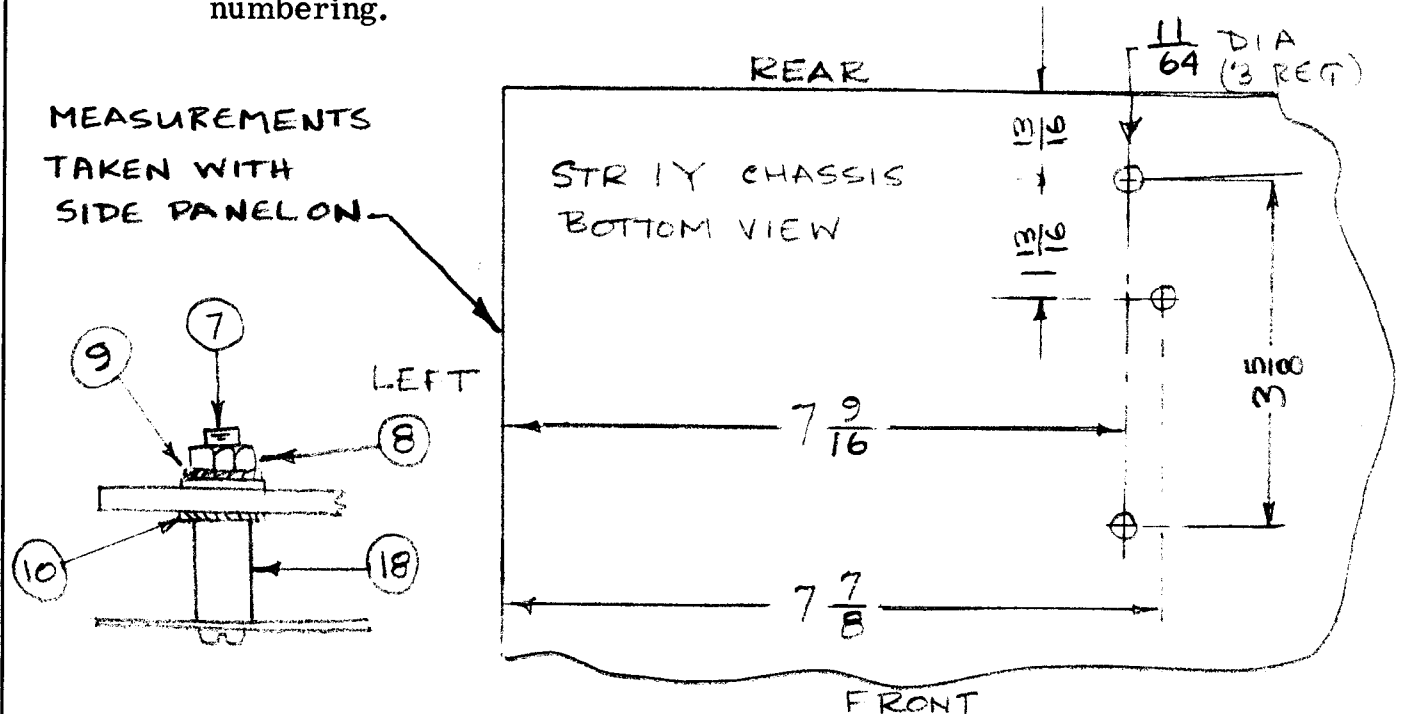
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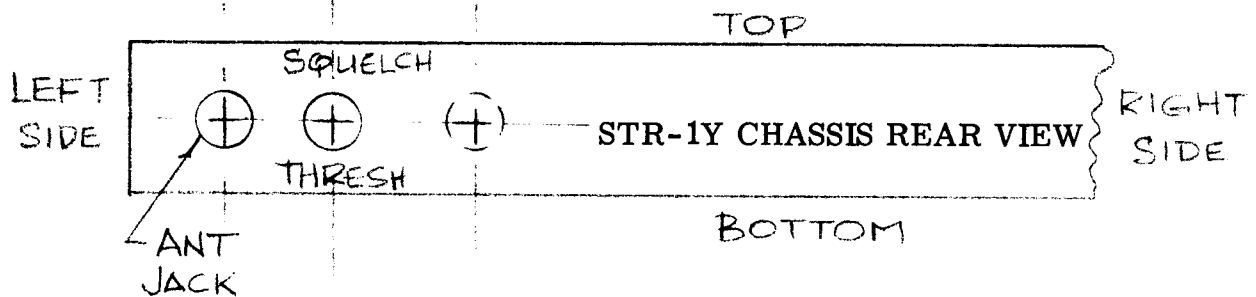
## III PROCEDURE

NOTE: ENSURE THAT KIT-305-1 HAS BEEN INSTALLED BEFORE PROCEEDING WITH THIS MODIFICATION.

1. Install (Item 1), A4551. Use drilling and mounting plan as shown below for (Items 7, 8, 9, 10, 11 and 18) Refer to (Item 30) for pin numbering.



2. Install (Item 5), RV106UX10C501A. Use drilling plan as shown below and stamp with (Items 19 and 20).



Locate hole midway between and on same center line as antenna jack and R1547. Use a 1/4" drill.

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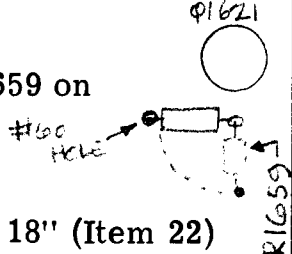
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STR-1Y MODIFICATION INSTRUCTIONS - KIT-330

## III PROCEDURE - (Con't)

3. Remove 5 screws securing A3189 IF Board. Lift gently from rear.
  - (a) Change value of R1635 from 1K to 10K. (Item 2)
  - (b) Remove C1607.
  - (c) Change value of L1601 from 47,000 uh to 10,000 uh. (Item 3)
  - (d) Change value of R1635 from 4.7K to 1.0K on rear panel. (Item 4)
  - (e) Change C1642 to 1K becomes R1672. (Item 4)
4. Remove 4 screws securing A3190 AUDIO BOARD.

Drill #60 hole about 5/8" to the left of the back hole of R1659 on audio board. (Item 21) See sketch.


5. Lift front side of R1659 and insert it into new hole. Connect 18" (Item 22) ORANGE/WHITE wire to R1659 on the bottom and run to terminal 10 A3153 P/S Printed Circuit Board.
6. From terminal 1 of A4551 run a RED wire to + side of C910. Jumper terminals 1, 8 and 13 of A4551 with a piece of RED wire. (Item 23)
7. From terminal 2 of A4551, run a BLUE wire to bottom end of R1556, (rear panel). 12" (Item 24)
8. From terminal 3 of A4551, run a BLUE wire to top end of R1556, (rear panel). 12" (Item 24)
9. Connect terminals 4, 5 and 15 of A4551 together with (Item 25) BLACK wire.
10. From terminal 4 of A4551, run a BLACK wire to ground lug of mounting screw of J1511. (Item 25)

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## III PROCEDURE (Cont)

11. From terminal 6 of A4551, run a coax to the inside hole where C1607 was removed. Ground shield to terminal 4 of A4551. 12" (Item 26) per Figure 1 for fabrication.
12. From terminal 7 of A4551, run a coax to the outside hole where C1607 was removed. Ground shield to terminal 5 of A4551. Use 12" (Item 26) per Figure 1.
13. From terminal 9 of A4551, run 12" ORANGE/WHITE wire to junction of L1601 and R1604. (Item 22)
14. From terminal 10 of A4551, run 12" VIOLET wire to the wiper of R1556. (Item 27)
15. From terminal 12 of A4551, run 8" VIOLET wire to terminal 2 of J1511. (Remove all other wires from terminal 2 of J1511.) (Item 27)
16. From terminal 14 on A4551, run a coax to the junction of C1637 and Q1610 collector. Ground shield at terminal 15 of A4551. 12" (Item 26)
17. From terminal 15 on A4551, run 10" ORANGE wire to terminal 14 on A3190 (audio board). (Item 28)
18. Disconnect VIOLET wires from terminal 6 on A3190 (audio board). Disconnect the VIOLET wire from terminal 9 on A3189 (IF board), pull this wire out of the harness. Connect VIOLET wire that was connected to terminal 6 on A3190 (audio board) to terminal 9 on A3189, (IF board).
19. From terminal 17 on A4551, run a YELLOW wire to terminal 6 on A3190 (audio board). 10" (Item 29)

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## III PROCEDURE (Cont)

20. At terminal 2 of J1511 there is a VIOLET wire that was disconnected in Step 13 above. Check this wire for continuity to terminal 9 on A3189 (IF board). Splice a short piece of VIOLET wire to it and run to terminal 11 on A4551. Use 1" (Item 31) over splice. Heat shrink to fit.
21. From wiper of R1669, completely remove the wire which runs to the AGC line, (this may be at the underside of terminal 9 on A3189).
22. From terminal 12 on A4551, run 10" VIOLET wire to the wiper of R1669. (Item 27)
23. If L1609 is still installed, change to a 1K resistor. This becomes R1668. Near Y1602. Use (Item 6) if necessary.
24. Change value of R1658 from 2.2K to 22K. A3190 (Item 17)
25. Replace boards. Test per S1172 (Item 16).  
  
Affix Nameplate (Item 12) to unit.



