

DATE Dec. 7/68

SH. 1 OF 2

COMPILED BY

# TMC SPECIFICATION NO. S10175

TITLE: TEST PROCEDURE FOR STR5 (A, U, or L)

JOB

APPROVED

RECEIVER

## EQUIPMENT NEEDED

Simpson Model 260 Multimeter or equivalent to measure 12V D.C.  
R.F. signal generator H.P. Model 606 or equivalent.  
Frequency counter H.P. model 524 or equivalent.  
Audio line-level meter (-20 dbm to +10 dbm).  
Two 600 ohm dummy loads.

## PROCEDURE

- 1) Make up dummy load and jumper plug by making following connections to mating plug to J11, supplied with unit:
  - a) Connect pin 20 to pin 21
  - b) Connect pin 9 to pin 28
  - c) Connect pin 9 to pin 10 only if 2 SSB boards are used in the receiver.
  - d) Connect pin 10 to pin 29 ) only if 1 SSB and 1 A M Board
  - e) Connect pin 11 to pin 31 ) is used in the receiver
  - f) Connect pin 36 to pin 37
  - g) Connect one 600 ohm resistor between pins 24 and 26, and the other to pins 16 and 18.

## D.C. VOLTAGE TESTS

- 2) Apply power to unit, and check that indicator lamp lights.
- 3) Check for +12V at pin 5, J5.
- 4) Plug jumper plug (step 1) into J11.
- 5) Check +12V at pin 9, J5, pin 5, J9, and pin 5, J10.
- 6) Check clarifier voltage range on pin 4, J5. Rotation of clarifier control should give 0 to +12V at this point.

## SENSITIVITY TEST

- 7) a) Connect R.F. signal generator to J1. If the receiver has an upper or lower sideband board, switch mode switch to select appropriate board (usually CH 1) and set signal generator to  $1\mu\text{V}$  inmodulated at the specified receiver operating frequency. With the audio VTVM, check for 8dBm (1 milliwatt) across pins 24 and 26 of the jumper plug made in step 1.

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- 7) b) If the receiver uses an A M board, connect R.F. signal generator to J1, switch and set signal generator to  $3\mu\text{V}$ , 30% modulation at the operating frequency of the VTVM, check for 8dB across pins 16 and 18 of the jumper plug in J11.

### AGC ACTION TEST

- 8) a) For a receiver using an upper or lower sideband board, connect signal generator and audio VTVM as in 7 (a), and increase R.F. signal to J1 by 100dB. (0.1 volts). Increase in reading of VTVM should be no greater than 10dB.
- b) For a receiver using an A M board, connect R.F. signal generator and audio VTVM as in 7 (b), and increase R.F. signal to J1 by 70dB (10mV). Increase in reading of VTVM should be no greater than 10dB.

### SIGNAL PLUS NOISE TO NOISE RATIO TEST

- 9) a) For receivers with upper or lower sideband boards, connect R.F. generator and VTVM as in 7 (a), and note VTVM reading. Remove signal input to J1, and observe drop in reading on VTVM. This should be 15dB or greater.
- b) For receivers with an A M board, connect R.F. generator and VTVM as in 7 (b), and note reading on VTVM. Decrease the modulation of the input signal to zero and observe drop in reading on VTVM. This should be 10dB or greater.

### OSCILLATOR FREQUENCY TEST

- 10) Connect frequency counter to J8. With clarifier control approximately in the centre of its range, frequency observed should be receiver signal frequency plus 1.75MHz.

