

1. EQUIPMENT: Function Generator, DVM. UNIT: Set to GEN mode; VOLT and 1.8 RANGE in METER/VERT section; MOD in monitor frequency section; FM; AUDIO SYNTHESIZER OFF; ZERO BEAT OFF and 1 kHz OFF in modulation section; FM Calibrate OFF, and SIGNAL STRENGTH OFF, in scope section. Set Function Generator to 100 kHz, 1.06 VRMS and cable to unit EXT VERT.

a. Check that meter indicates 1.5V peak $\pm .075V$. Record on PTR. Check that scope reads 1.5V peak $\pm .075V$. Record reading of scope on PTR.

2. EQUIPMENT: DVM set up for AC RMS, mV range. UNIT: Audio synthesizer in X1 and CONT MODE.

a. Cable MOD OUT to DVM. Adjust audio synthesizer level to read 200 mV on DVM. Remove cable from DVM and cable mod out to EXT VERT. Check that audio LED is lit. Check on PTR.

3. EQUIPMENT: Same as 2A. Set up same. UNIT: Change to RCV mode.

a. By changing audio synthesizer frequency, verify the following frequencies on the LCD counter ± 1 Hz.
1) 1000 2) 2123 3) 3234 4) 4345 5) 5456 6) 6567 7) 7678 8) 8789 9) 9899 10) 9999. Record on PTR.

4. EQUIPMENT: Same as 3a. Set up same. UNIT: Audio synthesizer in X .1 range. Change to SUBTONE (synthesizer in .01 or .1 range respective to frequency) in monitor freq. section.

a. Cable MOD OUT to DVM with unit audio synthesizer to 100 Hz and adjust level to read 750 mV on DVM. Cable MOD OUT to EXT VERT. By changing audio synthesizer frequency verify the following frequencies on LCD counter $\pm .1$ Hz. 1) 60 2) 71 3) 82 4) 93 5) 124 6) 145 7) 166 8) 187 9) 238. Record on PTR.

5. EQUIPMENT: Same as 4a. UNIT: Audio synth off, 1 kHz fixed on.

a. Cable MOD OUT to DVM. Switch to GEN mode. Check that full CW on 1 kHz fixed source pot yields > 1.0 VRMS. Turn off 1 kHz fixed source and activate audio synthesizer X1 and check that full CW on audio

synthesizer pot yields > 1.0 VRMS. Check on PTR.

6. EQUIPMENT: Unit only. UNIT: Turn off audio synthesizer. Activate 1 kHz fixed source, scope, X1 (ms/div).

a. Adjust 1 kHz level to obtain 6 kHz on range 18. Adjust VERT position so that peaks of audio sinewaves are lined up along center horizontal line of scope graticule. Make sure horizontal RATE is in CAL position. Adjust horizontal position so that 1 peak aligns with center vertical line. Check that each peak aligns with each mark along horizontal center line ± 1 cycle. Check on PTR.

B. SINAD

1. EQUIPMENT: DVM, A BNC male to cable. UNIT: SINAD mode.

a. Cable MOD OUT to DVM. Adjust 1 kHz fixed source to 1 VRMS. Cable MOD OUT to EXT VERT. Check that meter reads less than -20dB. Record reading on PTR.

b. Cable MOD OUT to EXT VERT. Switch to MOD mode. Adjust 1 kHz level to obtain 10 kHz on unit meter (x18 range). Switch off 1 kHz source. Activate audio synthesizer in X1, 3333 Hz. Adjust synthesizer level to obtain 2.5 kHz on meter (x6 range). Switch on 1 kHz source. Switch to SINAD mode, and check for a meter reading of -12 dB (± 1 dB). Record on PTR.

V. HIGH FREQUENCY SYNTHESIZER

A. Lock Requirements

1. UNIT only.

a. Verify lock by watching A3 LED (LED OFF indicates lock) at the following frequencies: (lock should occur within 3 seconds of frequency change).

11 to 101 MHz (in 10 MHz steps), 100 to 260 MHz (in 20 MHz steps), 260 to 500 MHz (in 30 MHz steps), 499 to 999 MHz (in 100 MHz steps). Check in GEN & REC. Check on PTR.