

a. Activate 5 kHz markers. Check that markers indicate ± 5 kHz. Check on PTR.

b. Activate 600 Hz markers. Check that markers indicate ± 600 Hz at range 1.8. Check on PTR.

VI Deviation Accuracy

EQUIPMENT: Standard generator; HP mod analyzer. Turn on 3 kHz LP and 300 Hz HP filters, set to FM avg. UNIT: Set SQUELCH to threshold RANGE 6.

a. Set unit and standard generator to 452.35 MHz. Set standard generator output to 100 mV. Cable standard generator output to HP mod analyzer. Adjust standard generator deviation to read 3.54 kHz avg on mod analyzer. Cable standard generator output to unit RF IN/OUT jack. Check that unit meter and scope read 5 KHz $\pm 10\%$ of full scale. Record on PTR.

AM Modulation Accuracy

1. EQUIPMENT: Standard generator; HP modulation analyzer. UNIT: Change to AM mode, RANGE 6. 452.35 MHz, BW NAR.

a. Cable standard generator into mod analyzer. Activate standard generator internal audio. Set standard generator to 452.35 MHz 100 mV out. Adjust modulation to read 21.2% average. Cable standard generator output into unit RF IN/OUT jack. Change standard generator output to 10 mV. Check that unit reads 30% modulation, on unit meter and scope $\pm 10\%$ of full scale. Record on PTR.

Relative Signal Strength Accuracy

1. EQUIPMENT: Standard generator – no modulation set to 452.35 MHz. UNIT: FM mode, SQUELCH open, RANGE 6, 452.35 MHz.

a. Set standard generator to 30mv output. With SIGNAL STRENGTH, adjust horizontal position so that beginning of trace (left side) is aligned with the left edge of the scope graticule. Switch unit to LOW SIGNAL STRENGTH mode. Check that trace is at \approx full deflection. Check on PTR. Change standard

generator output to 100mv. Switch unit to HIGH SIGNAL STRENGTH mode. Check that trace is at \approx full deflection. Check on PTR.

VIII. POWER METER AND POWER FUNCTIONS

A. Reverse Power Protection

1. EQUIPMENT: RF simulation box. UNIT: Switch to GEN mode.

a. Cable RF simulation box to unit RF IN/OUT jack. Press activate button on RF simulation box and check that unit switches from GEN to RCV and WATTS mode (simulates 200 mW). Check on PTR.

B. Load Overtemp Alarm

1. EQUIPMENT: Power Cart

a. Key in VHF 100 watts. Check that load overtemp LED and alarm are activated ≥ 10 seconds. Check on PTR.

C. Power Meter Accuracy

1. EQUIPMENT: Power Cart. UNIT: Change to each power tx frequency.

a. Cable VHF (150 MHz) power into unit. Key in 25 watts. Check unit power meter accuracy $\pm 10\%$ of full scale. Change to VHF 100 watts. Check accuracy of unit wattmeter $\pm 10\%$ of full scale. Cable UHF (450 MHz) power into unit. Key in 10 watts and check accuracy of meter $\pm 10\%$ of full scale. Record on PTR.

IX. GENERATOR OUTPUT LEVEL

A. Output Level Accuracy

1. See ATS printout.

X. AC SCOPE COUPLING

1. EQUIPMENT: Standard generator, set to 152.35 MHz @ 1 mV. UNIT: RCV 152.35 MHz, FM FREQ ERROR, SQUELCH OPEN, RANGE 6.

a. Center scope trace on unit. Offset standard generator by 3 kHz. Pull AC coupling knob. Check that trace centers. Check on PTR.