

ALIGNMENT PROCEDURE AND PERFORMANCE TESTS

6.1 GENERAL

Receiver or transmitter alignment may be necessary if repairs are made that could affect tuning.

6.2 ALIGNMENT PROCEDURE

6.2.1 VCTCXO SETUP (Y801)

1. Apply 7.2 Vdc +/-0.1 Vdc to pins 3, 4, and 5.
2. Verify 2.5 Vdc +/-0.05 Vdc is on pin 10.
3. Set Y801 (the VCTCXO) to 14.400000 MHz +/- 6.0 Hz (+/-0.4PPM)

6.2.2 FREQUENCY AND CONTROL LINE VOLTAGE CHECK

1. Connect the test setup shown in Figure 6-1. Set the power supply for +7.2V DC.
2. Load the synthesizer with the channel frequency.
3. Connect a DC voltmeter at TP831 to measure the VCO control line voltage for a meter reading of ≥ 0.50 - ≤ 5.0 VDC for all desired frequencies of operation in both transmit and receive.

6.2.3 100mW TRANSMITTER POWER ALIGNMENT

1. Connect the test setup shown in Figure 6-1. A DC ammeter capable of measuring up to 2.0 A should be installed in the supply line.
2. Load the synthesizer with the desired channel frequency.
3. To Ground R719, turn counter-clockwise for minimum transmit current. Note the current and adjust R719 for 200 mA more current.
4. Key the transmitter and make sure that pins 3, 4, and 5 on the RF board are 7.2V.

(Do not transmit for extended periods.)

5. Adjust C542 for 100 milliwatts output power.