

BS 500 TUNE-UP PROCEDURE**1. MODE TX /RX VCO ADJUSTMENT**

- a. Set the CH1. (FREQ: 462.5625MHz) in power on.
- b. Connect DC voltmeter to the test point TP1.
- c. Press the PTT button.
- d. Adjust CV-51 to meet DC 1.0V +/- 0.2V for TX VCO.
- e. Release PTT button to go to RX.
- f. Check RX VCO level DC 1.0V +/- 0.2V.
- g. R/TX VCO difference is +/- 0.2V

2. FRS TX FREQUENCY ADJUSTMENT

- a. Keep the unit at CH1
- b. Press the PTT button to TX
- c. Connect the frequency counter to ANT-1 point.
- d. Adjust CV401 trimmer to meet frequency at 462.5625MHz +/- 200 Hz at CH1.
- e. Limit is 462.5625MHz +/- 200 Hz at room temperature.
- f. In -20 to 50 C, the limit is +/- 1.16 KHz.

3. TX POWER CHECK

- a. Connect the RF level meter or spectrum analyzer in ANT-1 point.
- b. Press the PTT button at CH1
- c. Check the TX power
- d. Limit is below 200mW ERP

4. MODULATION SENSITIVITY CHECK

- a. Connect a deviation meter at ANT-1 point
- b. Apply an audio signal 1KHz, 150mV to the MIC input.
- c. Check that maximum modulation is 2.1KHz +/- 0.3KHz
- d. Maximum modulation limit is below 2.5 KHz.

5. CALL DATA MODULATION SENSITIVITY CHECK

- a. Press the CALL button and observe the deviation meter.
- b. Check that modulation is 1.25KHz +/- 0.5KHz

6. RX SENSITIVITY CHECK

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- a. Set SSG condition as below
 - 1) Standard modulation: 1.25 KHz
 - 2) Audio signal: 1KHz.
 - 3) SSG RF level: -47dBm
 - 4) Frequency (CH1): 462.5625
- b. Connect voltmeter and SINAD meter at SPKR 8 ohm.
- c. Check distortion and RX audio level.

Distortion limit is below 5%

Audio level limit is 1.1V +/- 300mV.
- d. Reduce SSG level until -119dBm or -120dBm.
- e. Check the SINAD meter at 12dB point. Sense limit is -118dBm above.
- f. Check audio mute at low RF signal.
- g. Squelch point for audio mute is +/- 3 dB at -12db SINAD.