

全成电子有限公司
TSUEN SHING ELECTRONICS LTD

TUNE-UP PROCEDURE

(The base station MURS)

1. TRANSMITTING

1.1 TX VCO ADJUSTMENT

- a) Connect the DC voltmeter to the test point "TP1
- b) Press the PTT Button.
- c) Adjust L22
- d) Specification: 0.8Vdc to 2.5V @ CH1

1.2 FREQUENCY ADJUSTMENT

- a) Connect the frequency counter to ANT point
- b) Adjust VC1.
- c) Specification: TX Frequency +/- 500Hz

1.3. TX POWER CHECK

- a) Connect the RF level meter to the ANT point (RF Impedance: 50 Ω)
- b) Press the PTT button.
- c) Check the TX Power.
- d) Specification: $\leq 1.6W$ MURS: $\leq 2.0W$

1.4. MAX.DEVIATION ADJUSTMENT

- a) Connect the deviation meter to the ANT point
- b) Apply the audio signal 1KHz, 40mVrms to the test point "TP5"(MIC input).
- c) Observe the dipped signal on the scope.
- d) Adjust VR2
- e) Specification: 2.5KHz Dev +/- 0.2KHz

1.5. MODULATION SENSITIVITY ADJUSTMENT

- a) Connect the deviation meter to the ANT point.
- b) Apply the audio signal 1KHz, 4mVrms to the test point "TP5"(MIC input).
- c) Adjust VR2.
- d) Specification: 0.9 - 1.5KHz Dev

1.6. CALL DATA MODULATIN SENSITIVITY CHEC

- a) Press the Call Button and observe the deviation meter to check the deviation.
- b) Specification: 1.5KHz +/- 0.3KHz

2. RECEIVING

2.1 RX VCO CHECK

- a) Connect the DC voltmeter to test point "TP1"
- b) Check the DC voltage
- c) Specification: 0.8Vdc to 2.5V @ CH1

2.2. How to adjust the IF sensitivity, low-frequency distortion and power output:

- a. To connect the speaker output terminal to the IF input terminal of radio communication analyzer.
- b. To turn T1 to adjust the audio output is min and distortion is max.
- c. To observe, then the audio signal outputs 12dB, now IF input is $< 25\text{dBm}$.
- d. To observe audio output power is $\geq 150\text{mW}$.

2.3. How to adjust high-frequency RX sensitivity and image suppress

- a. To connect the output terminal of speaker and antenna input terminal to the radio communication analyzer.
- b. To adjust L17 to make the RX sensitivity is $\leq -4\text{dBu}$ and image suppression is $> 50\text{dB}$.
- c. To adjust VR1 to make the RX squelch turn on sensitivity is $= -4\text{dBu}$.

Others:

1. Press 'MON' key to make the unit to receive thin signal.
2. Press 'UP' and 'DOWN' key to detect the frequency point relatively, which displaying.
3. Check the cosmetic and telecommunication function.

TUNE-UP PROCEDURE

(The hand held MURS)

1. TRANSMITTING

1.1 TX VCO ADJUSTMENT

- a) Connect the DC voltmeter to the test point "TP1".
- b) Press the PTT Button.
- c) Adjust L2
- d) Specification: 0.8Vdc to 2.5V @ CH1

1.2 FREQUENCY ADJUSTMENT

- a) Connect the frequency counter to ANT point
- b) Adjust VC1.
- c) Specification: TX Frequency $\pm 500\text{Hz}$

1.3 TX POWER CHECK

- a) Connect the RF level meter to the ANT point (RF Impedance: $50\ \Omega$)
- b) Press the PTT button.
- c) Check the TX Power.
- d) Specification: $1.5\text{W} \pm 0.2\text{W}$

MAX.DEVIATION ADJUSTMENT

- a) Connect the deviation meter to the ANT point
- b) Apply the audio signal 1KHz, 40mVrms to the test point "TP1"(MIC input).
- c) Observe the dipped signal on the scope.
- d) Adjust VR1
- e) Specification: 2.5KHz Dev +/- 0.2KHz

MODULATION SENSITIVITY ADJUSTMENT

- a) Connect the deviation meter to the ANT point.
- b) Apply the audio signal 1KHz, 4mVrms to the test point "TP1"(MIC input).
- c) Adjust VR1.
- d) Specification: 0.9 - 1.5KHz Dev

CALL DATA MODULATIN SENSITIVITY CHECK

- a) Press the Call Button and observe the deviation meter to check the deviation.
- b) Specification: 1.5KHz +/- 0.3KHz

2.RECEIVING

2.1 RX VCO CHECK

- a) Connect the DC voltmeter to test point "TP1"
- b) Check the DC voltage
- c) Specification: 0.8Vdc to 2.5V @ CH1

2.2. How to adjust the IF sensitivity, low-frequency distortion and power output:

- e. To connect the speaker output terminal to the IF input terminal of radio communication analyzer.
- f. To turn T1 to adjust the audio output is min and distortion is max.
- g. To observe, then the audio signal outputs 12dB, now IF input is <25dBemf .
- h. To observe audio output power is $\geq 150\text{mW}$.

2.3. How to adjust high-frequency RX sensitivity and image suppress

- d. To connect the output terminal of speaker and antenna input terminal to the radio communication analyzer.
- e. To adjust L5 to make the RX sensitivity is $\leq -4\text{dBu}$ emf and image suppression is $> 50\text{dB}$.
- f. To adjust VR1 to make the RX squelch turn on sensitivity is $= -4\text{dBu}$ emf.

Others:

1. Press 'MON' key to make the unit to receive thin signal.
2. Press 'UP' and 'DOWN' key to detect the frequency point relatively, which displaying.
3. Check the cosmetic and telecommunication function.

TUNE-UP PROCEDURE

(The driveway transmitter)

1. TRANSMITTING

1.1 TX VCO ADJUSTMENT

- a) Connect the DC voltmeter to the test point "TP1
- b) Connect 9V supply.
- c) Adjust L5
- d) Specification: 0.8Vdc to 2.5V @ CH1

1.2 FREQUENCY ADJUSTMENT

- a) Connect the frequency counter to ANT point
- b) Adjust VC1.
- c) Specification: TX Frequency +/- 500Hz

1.3 TX POWER CHECK

- a) Connect the RF level meter to the ANT point (RF Impedance: 50 Ω)
- b) Connect 9V supply
- c) Check the TX Power.
- d) Specification: 1.0W \pm 0.2W

1.4. MAX.DEVIATION ADJUSTMENT

- a) Connect the deviation meter to the ANT point
- b) Apply the audio signal 1KHz, 1Vrms to the test point "JP1-4"(Voice input).
- c) Observe the dipped signal on the scope.
- d) Adjust VR1
- e) Specification: 1.5KHz Dev +/- 0.3KHz

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审核:

批准:

日期: 02年8月21日

日期:

日期: