HANTONG ELECTRONICS FACTORY

Block 2, Laodong 2nd Industrial Area, Xixian, Baoan, Shenzhen, China
Tel.: +86-755-791-7824 Fax: +86-755-791-7944

TUNE-UP PROCEDURE

1. TRANSMITTING

1.1 TX VCO ADJUSTMENT

a) Connect the DC voltmeter to the test point 1 (TP1).
b) Press the PTT Button.
c) Adjust L18.
d) Specification: 1.2Vdc +/- 0.3 V @ CH 7

1.2 FREQUENCY ADJUSTMENT

a) Connect the frequency counter to ANT point.
b) Adjust CV1.
c) Specification: Tx Frequency +/- 200Hz

1.3 TX POWER CHECK

a) Connect the RF level meter to the ANT point (RF impedance: 50Ω)
b) Press the PTT button.
c) Check the TX Power
d) Specification: <72mW

1.4 MAX. DEVIATION ADJUSTMENT

a) Connect the deviation meter to the ANT point.
b) Apply the audio signal 1KHz, -20 dBm to the test point 7 (TP7 - MIC input)
c) Observe the clipped signal on the scope.
d) Adjust SVR2.
e) Specification: 2.5KHz Dev +/- 0.15KHz

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 (TP7 - MIC input).
c) Adjust SVR2.
d) Specification: 1.0KHz Dev +/- 0.15KHz

1.6 TONE DEVIATION CHECK

a) Connect the deviation meter to the ANT point.
b) Setting the CTCSS codes to channel 38
c) Press the PTT Button.
d) Specification: 0.6KHz Dev +/- 0.2KHz

1.7 CALL DATA MODULATION SENSITIVITY CHECK

a) Press the Call Button and observe the deviation meter to check the deviation.
b) Specification: 1.8KHz +/- 0.5KHz

2. RECEIVING

2.1 RX VCO CHECK

a) Connect the DC voltmeter to test point 1 (TP1).
b) Check the DC voltage.
c) Specification: 1.2Vdc +/- 0.6V @ CH 7

2.2 QUAD COIL ADJUSTMENT

a) Connect the DC voltmeter to the test point 3 (TP3).
b) Adjust the IFT1.
c) Specification: 1.5Vdc +/- 0.2V

2.3 SENSITIVITY CHECK

a) Connect the Sinnader meter to test point 5 (TP5).
b) Reduce the RF output level of signal generator to get the 12dB of Sinnader.
c) Specification: <-112dBm

2.4 SQUELCH THRESHOLD POINT ADJUSTMENT

a) Connect the DC voltmeter to test point 16.
b) Same setup as the Sensitivity Check.
c) Adjust the SVR1 to get the DC changing point.
d) Specification: 9dB +/- 3dB

2.5 SPEAKER OUTPUT LEVEL CHECK

a) Connect the Audio level meter to test point 5 (TP5).
b) Connect the 8Ω load to test point 5 (TP5).
c) Press the volume button till its maximum level.
d) Adjust the modulation deviation of RF signal generator.
e) Check the clipping start deviation & level.
f) Specification: Clipping start deviation = 0.9 +/- 0.3 KHz
Level = 1 +/- 3 dBm

NOTE:
1. Press PTT button continuously when checking TRANSMITTING parameters.
2. Press the Monitor button to disable the RX power saving when the RX is not stable.

3. OTHER PARAMETER CHECKING

3.1 LOW BATTERY DETECT VOLTAGE CHECK

a) Change the voltage until the Battery icon is flashing on the LCD.
b) Check the voltage.
c) Specification: 4.6Vdc +/- 0.3V