RF PCB TEST PROCEDURE

1. Power on test Jig with DC6.0±0.1V(including LCD PCB and IF PCB in good state one for each within the Test Jig

2. Switch on the Unit under testing, set channel at 01, test RF PCB at point P1. Tune L1 until PLL voltage should be 1.2+/-0.2V; push down PTT, PLL voltage should be 1.0~1.8V. Switch to channel 14, check PLL voltage at 1.8~2.5V, push down PTT, PLL voltage should be 2.0~2.8V.

3. Power off then power on the unit under testing for once, push down PTT, tune VC1 until the reading on the counter at 462.56250±0.3KHz, Shift to CH14, push down PTT, the reading on the counter should be 467.7125MHz±0.3KHz, check the frequency to be locked by spectrum, power   18dB and ≦24dB

4. Apply Voice signal with "1KHz ,114DdBSPL" tune VR2 until Voice deviation at 1.8+0.2KHz.

5. No apply voice signal, set channel to 01, press and hold PAGE switch, check page tone deviation at 1.3~2.2KHz.

6. Check current consumption should be less than 350mA

IF PCB TEST PROCEDURE

1. Power on Test Jig with DC 6.0+0.1V(including LCD PCB and RF PCB in good state within the Test Jig)

2. Switch on the unit under testing , set Volume maximum, apply RF Signal with

Frequency CH1:   462.5625MHz

CH7:   462.7125MHz

CH8:   467.5625MHz

CH14: 467.7125MHz

Output level: -50dBm

Voice Deviation: 1.5KHz

Modulation Frequency: 1KHz.

3. Tune L17 until maximum Audio output and minimum distortion, check Audio output voltage higher than 1.5V and current less than 200mA, Tune volume to ensure audio waveform not to be cut, distortion should be less than 6%.

4. Tune RF output level until 12dB SINAD at Audio output, tune VR3 until Audio is just about to be mute,   check sensitivity should be higher than –110dBm at CH1,CH7,CH8,CH14.

LCD BOARD TEST PROCEDURE

1. Power on test Jig with DC6.0+0.1V,Switch on Volume SW, check LCD should be lit (There should be RF PCB and IF PCB after tuning and in good performance included in the Test Jig),Check Battery Display to be full .

2. Press down and hold MODE Key for 1.5S, check the CHANNEL number on the LCD should flash, check channel number on the LCD shifts by the sequence of CH1.CH2....,CH14, CH1, once for each pressing "UP"key and by the sequence of CH1,CH14......,CH2,CH1, once for each pressing "DOWN"key.

3. Press down MONITOR" key, check Rx unit to be in the state of non-mute; press "Monitor"key for another time, check Rx unit to be in the state of mute.
4. Press "Page" key, check Page deviation should be at 1.3~2.3KHz.

5. Tune Power Supply voltage to DC4.8~5.0V, check the Batt Sign on the LCD should display blank and flash.

RF PCB QC TEST PROCEDURE

1. Power on Test Jig with DC6.0±0.1V(There should be LCD PCB and IF PCB in good performance within the Test Jig)
2. Switch on the unit under testing, set channel to 1, test P1 point on RF PCB, check PLL voltage should be at 1.2±0.2V.
3. Shift to channel 14, push down PTT, check PLL voltage at 2.0~2.8V.
4. Push down PTT SW, check frequency to be locked by spectrum, shift channels and check CH1,CH7,CH8,CH14 with frequency at fc+0.5KHz and power 18dBm and ≦24dBm
5. Apply voice signal with "1KHz,114dBSPL",check voice deviation at 1.8±0.3KHz.
6. No apply voice signal, set CH01, press on PAGE SW, check PAGE signal deviation should be 1.3~2.3KHz with frequency deviation meter.
7. Check current consumption less than 350mA.
8. Release PTT SW, tune volume to maximum, and apply RF signal with :
Frequency: CH1: 462.5625MHz
           CH7: 462.7125MHz
           CH8: 467.5625MHz
           CH14: 467.7125MHz
Output level: -50dBm
Voice Deviation: 1.5KHz
Modulation Frequency: 1KHz.

9. Check Audio output should be less than 1.5V and current less than 250mA, Tune volume to make sure Audio waveform not to be cut ,check distortion less than 7%.
10. Check sensitivity in CH1. CH7, CH8 and CH14 should be higher than 108dBm.

Tx UNIT TEST PROCEDURE

1. Plug in with 4x AAA batteries, check battery voltage should be 6.0V.
2. Check LCD should display CH1 and battery sign should be full (3 sections).
3. Press on PTT SW, check frequency on CH1, CH7, CH8 and CH14 should be fc+0.5KHz.
11. Press on PTT SW, check power on CH1,CH7,CH8 and CH14 should be more than 18dBm., and ≦24dBm
4. check current consumption should be less than 350mA.
5. Check LED above LCD should be lit constantly.
6. Apply voice signal with"114dBSPL, push down PTT SW, check transmission deviation should be 1.8±0.3KHz.
7. Push down "Page" key, check" Page" deviation should be 1.3~2.3KHz.

Rx UNIT TEST PROCEDURE

1. Plug in with 4×AAA batteries, check battery voltage should be 6.0V.
2. Check LCD should display CH1 and battery sign should be full.
3. Apply RF signal with:
   - CH1: 462.5625MHz
   - CH7: 462.7125MHz
   - CH8: 467.5625MHz
   - CH14: 467.7125MHz
4. Tune volume maximum, check audio output should be >110dBSPL and current consumption less than 250mA.
5. Tune volume to make sure audio waveform not to be cut check distortion should be less than 8%.
6. Check sensitivity on CH1, CH7, CH8 and CH14 should be higher than −108dBm.
7. Press down MONITOR" key, check Rx unit to be in the state of non-mute; press "Monitor" key for another time, check Rx unit to be in the state of mute.
8. Apply DC Power supply instead of Batteries, check battery sign on LCD should be full when power voltage higher than 5.7V and blank when power voltage to be 4.8~5.0V.

LCD AND KEY FUNCTION TEST

1. Power on the unit under testing, set volume maximum, check LCD displays CH1(namely channel1),press down "Mode" key and hold for about 0.5S,check the sign of CH1 flashes and speaker sounds with "Beep", check "up/down" key should be able to shift the present channel number(1-14).
2. Press on SCAN/MONITOR key until hearing the second sound of "Beep" after 1.5S,check channel number shifts at an interval of 0.5S automatically when there exist transmitting signal check the unit should set on the exact channel and stay in receiving state automatically
3. Check when pressing on "Page" key on one unit another unit setting on the same c□□hannel should   be   able   to   hear   a   sound   of
4. .
   When in stand by state. check the unit should stay at Receiving state (NON-MUTE STATE) after one pressing "Monitor" key. and turn to stand by state (mute state) with another pressing on   the   "Monitor"