

## **TUNING PROCEDURE**

### **1. Required test equipment**

1) Power supply

has to be variable from 5 to 10v and to 3A current.

2) Frequency counter

has to be able to measure up to 500Mhz

3) Power meter

It has  $50\Omega$  impedance and has to be able to measure up to 10 Watts

4) Modulation meter

has to be able to measure up to 50Mhz and S/N ratio must be more than 50 dB

5) Digital voltmeter

Input impedance must be more than  $1M\Omega$

6) Spectrum analyzer

has to be able to measure up to 2000Mhz

7) Signal generator

has to be able to measure up to 1Ghz

8) Dummy Load

With  $50\Omega$  impedance, It has to have 20-30dB attenuation.

9) Audio Distortion meter

has to be able to measure at least less than 3%

10) Audio Generator

has to be able to measure from 10 to 100Khz

If your Radio Communication Tester includes above equipment, just prepare excluded

equipment.

## **2. Alignment Procedure**

This radio is adjusted to meet all condition in production except special case.

Readjustment is not requirement.

### **The preparation before adjustment.**

- 1) Set the Power Supply voltage to 7.4V and then connect to the radio.
- 2) Connect the connector to Radio Antenna terminal.
- 3) Connect the radio to test equipment.

### **PLL Synthesizer**

- 1) Measure the voltage of Control voltage with High impedance voltage meter.
- 2) Adjust TC3 to tune the set frequency.
- 3) Confirm if it is 0.8V+/- 0.3 at RX channel 16
- 4) Confirm if it is below 4.0V at TX channel.

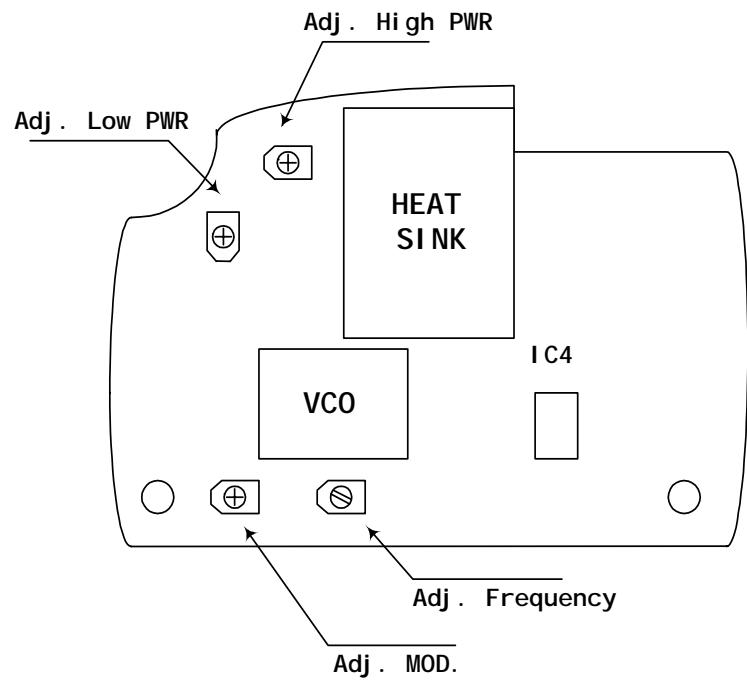
### **Adjustment of Transmitter**

- 1) Adjust RV2 to tune the set high power.
- 2) Adjust RV1 to tune the set low power.
- 3) Set Audio Generator to be 1kHz 120mVrms and connect to Radio External Jack.
- 4) Adjust RV3 to tune desired Maximum modulation.

### **Adjustment of Receiver**

- 1) Set SSG RF level to -47dBm @1kHz 60% Dev.
- 2) Adjust SSG RF Level and confirm if 12dB Sinad is below -119dBm.
- 3) Check the SINAD level to open Audio at SQ level 01
- 4) Repeat the above in other channels.

### **\* Adjustment Point**



VHF 50 RF BOARD