

## Alignment instructions

### **WARNING**

Any repairs or adjustments should be made under the supervision of a qualified radio-telephone technician.

### **TRANSMITTER**

#### **1. Power Supply Voltage**

The power supply voltage should be set for 4.5 VDC measured at the radio during transmit. Periodically check the power supply voltage during the alignment procedure.

#### **2. Frequency Setting**

- A. Connect a frequency counter or Communications Service Monitor to the antenna connector through an RF power attenuator (20 dB minimum attenuation).
- B. Depress the PTT switch.
- C. Adjust the C73 trimmer capacitor such that the output frequency is equal to the channel frequency with a maximum error of +/- 200 Hz.
- D. Release the PTT switch.

#### **3. Output Power Alignment.**

- A. Set the power supply voltage for 4.5 VDC.
- B. Connect a Communications Service Monitor or watt meter and dummy load to the antenna connector.
- C. Depress the PTT switch.
- D. There are NO adjustments for the transmitter output, This measurement will give you an indication that the transmitter is working.
- E. Release the PTT switch.

#### **4. Modulation Adjustment.**

- A. Connect an audio generator.

The audio frequency should be set at 1 KHz.

- B. Connect an FM deviation meter or Communications Service Monitor to the antenna connector through an RF power attenuator (20dB minimum attenuation). Set the monitor to read peak deviation.
- C. Depress the PTT switch.
- D. Adjust RV 1 for +/- 2.5 KHz maximum deviation.
- E. Release the PTT switch.

## **RECEIVER**

NOTE: Insure that the proper channel has been selected before proceeding with the alignment procedure.

### **1. Power Supply Voltage.**

The proper voltage for testing is 4.5 VDC.

### **2. Receiver Alignment**

- A. Connect an RF signal generator or Communications Service Monitor to the antenna connector.
- B. Connect a SINAD meter and oscilloscope across the speaker terminals.
- C. Set the output level of the RF signal generator for -47dBm, the generator should be set for +/- 1.5KHz deviation of a 1KHz tone.
- D. Set the audio output level for 0.5Vrms, by adjusting volume.
- E. Adjust L1 for maximum audio output.