

## 8. ALIGNMENT INSTRUCTIONS

### WARNING

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

#### 8-1. TRANSMITTER

##### 8-1-1. Power Supply Voltage

The power supply voltage should be set for 6.0 V DC measured at the radio during transmit. Periodically check the supply voltage during the alignment procedure.

##### 8-1-2. Frequency Setting

- A. Connect a frequency counter or Communications Service Monitor to the antenna connector through an RF power attenuates (10 watt minimum rating, 20 dB minimum attenuation).
- B. Depress the PTT switch.
- C. Adjust the TCXO such that output frequency is equal to the channel. Frequency with a maximum error of  $\pm 300$  Hz.
- D. Adjust CT-301 for  $\pm 300$  Hz.
- E. Release the PTT switch.

##### 8-1-3. Output Power Alignment

- A. Set the power supply voltage for 6.0 V DC.
- B. Connect a communications Service Monitor or a wattmeter and dummy load to the antenna connector.
- C. Depress the PTT switch.
- D. To be convinced for 1.8 watt output power with a maximum error of  $\pm 0.2$  watt.
- E. Release the PTT switch.

##### 8-1-4. Deviation Adjustment

- A. Connect an audio generator to the microphone jack J1G. The audio frequency should be set at 1 KHz
- B. Connect an FM deviation meter or communication Service Monitor to the antenna connector through an RF power attenuates ( 10 watt minimum rating, 20 dB minimum attenuates ). Set the monitor to read peak deviation.
- C. Depress the PTT switch.
- D. Adjust the audio generator level 100 mV rms.
- E. Adjust RV701 for 2.2 KHz maximum deviation.
- F. Release the PTT switch.

## 8-2. RECEIVER

Note : Insure that the proper channel has been selected before proceedings with the alignment procedure.

#### 8-1. Power Supply Voltage.

The proper voltage for testing is 6.0 V DC.

#### 8-2. Receiver Alignment

- A. Connect an RF signal generator or Communications Service Monitor to the antenna connect.
- B. Connect a SINAD meter and oscilloscope across the speaker terminals.
- C. Set the output level of the RF signal generator for -47 dBm the generator should be set for 1.5 KHz deviation of a 1 KHz tone.
- D. Set the audio output level for 0.6 Vrms by adjusting volume.
- E. Reduce the output level of the RF signal generator for produce a 12 dB SINAD indication