2. ALIGNMENT INSTRUCTIONS

WARNING

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

2-1. VCO

2-1-1. Power Supply Voltage

The power supply voltage should be set for 6.0 Vdc.

2-1-1. VCO Adjustment

A. Connect high impedance voltmeter between R143 and C167
B. Adjust L3 for 1.0V.

2-2. TRANSMITTER

2-2-1. 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.

2-2-2. Frequency Setting

A. Connect a frequency counter or Communications Service Monitor to the antenna connector through an RF power attenuates (5 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 ±300 Hz.
D. Adjust CT101 for ±300 Hz.
E. Release the PTT switch.

2-2-3. 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 1.5 watt output power with a maximum error of ±0.2 watt.
E. Release the PTT switch.

2-2-4. Deviation Adjustment

A. Connect an audio generator to the microphone jack JIG. 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 (5 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. Adjusted for 2.3 KHz maximum deviation.
F. Release the PTT switch.

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2-3. RECEIVER

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

2-3-1. Power Supply Voltage.

The proper voltage for testing is 6.0 V DC.

2-3-2. 12dB SINAD 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. Fixed L106 for maximum audio output.
F. Reduce the output level of the RF signal generator for produce a 12 dB SINAD indication.

2-3-3. Squelch Alignment

A. Connect an RF signal generator or Communications Service Monitor to the antenna connects.
B. Connect a SINAD meter and oscilloscope across the speaker terminals.
C. Set the output level of the RF signal generator for –125 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. Adjust RV101 for audio output disappears.