

Alignment Procedures

Standard Alignment Conditions

Power Supply:	6.0 V DC
Antenna Impedance:	50 ohm
RF Signal Modulation:	FM, 1 kHz sine wave with 3 kHz deviation
Channel:	465.2750 MHz
Audio Loading:	16 ohm
Audio Output Power:	50 mW

1. Modulation Limit tuning

Input audio signal (1kHz sine wave, 35 mV) through the mic jack to the transceiver.
RF signal will be transmitted.
Monitor the frequency deviation of the RF signal.
Adjust VR1 until the frequency deviation is at 4.2 - 4.3 kHz.
The frequency deviation should be tuned at the beginning of the alignment procedures.

2. Frequency tuning

Press PTT to transmit RF signal.
Monitor the frequency of the transmitted RF signal.
Tune the TCXO X201 until the RF carrier is at (465.2750 ± 0.0005) MHz.

3. Squelch tuning

Input RF signal = 465.2750 MHz, frequency deviation = 3 kHz, modulating signal = 1 kHz
Connect the transceiver to the RF generator and monitor the audio output from the earphone jack with a SINAD meter.
Hold down MONITOR key and reduce the generator output power in ½dB step until the SINAD meter shows 10 dB.
Rotate VR201 anti-clockwise until the audio signal is muted. **Slowly** rotate VR201 clockwise until the audio signal is **JUST** resumed.
Reduce the RF generator output power until the audio signal is muted. Increase the output power in ½dB step until the audio is just resumed. The SINAD meter should read 8-12 dB. Otherwise, re-align VR201 following the above steps.