

Alignment/Tune-up Procedure:

This product has factory preset frequency adjustments. There is no frequency field adjustment for this product. In field operation, frequency is locked to the base station and controlled by the VCTCXO adjustments to offset any possible errors.

Frequency stabilization:

A voltage controlled temperature compensated crystal oscillator (VCTCXO) is utilized as a frequency reference for all of the transceiver local oscillators. This crystal oscillator is specified to a frequency stability of $\pm 2.45\text{ppm}$. The synthesizer lock status is constantly monitored by the microprocessor and transmission is disabled whenever an out of lock condition is detected. The mobile is locked to the base station during operation. The mobile receiver constantly monitors the received signal from the base station and makes necessary frequency adjustment on the VCTCXO to correct any frequency errors between the mobile and the base station.

Suppression of Spurious Radiation:

Spurious and harmonic suppression is achieved by proper design with various filters and sufficient use of metallic shields. Rigorous testing at the factory ensures continuous compliance.

Limiting Power:

Each mobile is individually calibrated at the factory to ensure max power of +23dBm and min power of -50dBm by employing proper frequency and temperature compensation schemes for both the TX and RX automatic gain control (AGC) amplifiers.

Limiting Modulation:

The audio input is sampled, digitally limited, and then filtered to amplitude and frequency limit the signal applied to the modulator. The device supports the ANSI J-STD – 008 for CDMA operation. The device has an operating temperature range of –30 to +60C. The functions include Compandor, PLL lock detector, filtering of received data, audio signal filtering for signals.