P4900M Product Tune Up Procedure

The P4900M radio system is calibrated using an automated system in the factory. A software program directly controls the power output level of the radio and measures the power output on an RF Power meter. The software then records to control value for each given power level in non-volatile memory. The steps followed by the control program are as follows:

1) Telnet into radio unit
2) Set power control variable to maximum
3) Record power output level and save into memory
4) Set power control variable to minimum
5) Record power output level and store into memory.
6) Perform a curve fitting function to calculate the intermediate power control variables for each power in 1 dB increments from minimum to maximum.
7) Verify and adjust each control variable until actual power output level is correct within ½ dB.
8) Save control variable table into FLASH memory.
9) Repeat steps 1-8 for all other frequencies.
10) Exit telnet session.

The frequency of each channel is controlled by a TCXO for the reference frequency for a synthesizer that is accurate to within +/-2.5 ppm and requires no tuning.