

MURS Transmitter Tune-Up Procedure

As part of the manufacturing process, the unit will be powered on and the transmitter will be enabled. A computer will control the microcontroller to adjust the DC control voltage applied to Y300 (12.000MHz VCTCXO) to align the 12.000MHz frequency reference to within ± 10 Hz.

The PC will then be used to command the unit to transmit a continuous “0101” data pattern and adjust I303 (digital potentiometer) so that the modulation is between 3300Hz and 3599Hz.

The power output for the PA(Q300) is set during factory tests by adjusting the DC voltage on pins 15 and 16. A PWM waveform gets filtered by an RC filter (R332 and C317) to achieve this DC voltage. During factory alignment, the duty cycle of the PWM signal applied to pin 2 of R332 is adjusted until the output power reaches 2.0W. This duty cycle setting is set at the factory and isn't capable of being modified by the user.