

ELECRAFT KX3 Application Note

Transmit Carrier Null

(Preliminary)

Revision A, September, 2013
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Background and Cautions

All KX3 delivered have had this procedure completed prior to shipment in both KX3 Kit and KX3 Factory versions. Requiring the use of a suitable spectrum analyzer, the procedure documented here is intended for those who wish to experiment with the KX3. Elecraft strongly recommends that you save your KX3 Configuration using the KX3 Utility before you attempt this procedure. This will ensure that you can return the KX3 to its factory settings quickly and easily.

Test Equipment and Experience required

- Rigol model DSA815 or similar Spectrum Analyzer
- This procedure assumes the operator is comfortable adjusting and interpreting the results of a spectrum analyzer.

Set up the KX3:

1. Conduct TX Bias calibration. See KX3 Owner's Manual, Calibrate section, for the procedure.
2. Set the KX3 to 1.9 MHz ,CW mode and set Power to 3 Watts
3. Connect the KX3 to an appropriate 50 ohm dummy load or feed though power attenuator. If using a dummy load you will need a coupler to tap the RF for the spectrum analyzer.
 1. Alternative: Use a 30 db feed though 20 watt attenuator followed by a 10db pad into the spectrum analyzer.
4. Set the spectrum analyzer to center frequency 1.9 MHz span 200KHz
5. In the KX3 Menu, select item, TXCRNUL
6. Hold down the RATE Button to unlock the controls

For each band 6 meters through 160 meters, conduct the following steps:

1. Set the VFO to the middle of the band
2. Tap XMIT you should see a signal on the spectrum analyzer
3. Tap the RATE button to to change the resolution of the VFO A display as required.
4. Using the VFO A knob adjust for minimum amplitude signal on the spectrum analyzer
5. Tap the PRE button and again adjust for minimum amplitude signal on the spectrum analyzer.
6. Tap the ATTEN Button and adjust for minimum amplitude signal.
7. Alternate between the ATTEN and the PRE buttons until the signal is at least -70 dBc Below a 3 watt carrier approximately -40 dBm. You should be able with a little effort get it into the noise floor.

***** End of Procedure *****