

Installation Instructions, N3BA VCTCXO board (Kenwood SO-2 substitute)

- Use your Kenwood owners manual to locate the PLL board for mounting of the new board. Unplug the rig and remove the covers as needed.
 - Remove the PLL board from the rig and place it on a flat, well-lit surface. Taking a photo of the board before removing it is good insurance- some of the connectors can go back in multiple sockets. Make a sketch and mark the wires, if necessary.
 - Straighten the 5 pins on the TCXO board and insert into the holes provided on the PLL board (from the component side, of course).
 - Press down the board to within 1/8" approx of the surface of the PLL board- it should not touch! Use paper or other feeler gauge under the TCXO to assure there is no contact except for the 5 pins.
 - Turn over the board and solder the 5 pins. Use a small iron and heat only briefly. Cut off excess pin length if needed.
 - Cut the jumpers on the PLL board to disable and isolate the original reference oscillator. Again, the Kenwood manual will explain the process.
 - Reinstall the PLL board and terminate the connections, using notes from above.
 - Arrange the rig for safe access to the adjustment pot on the TCXO. Loose boards must be placed carefully so that no conductors come in contact with the chassis or other boards.
 - Attach an antenna, power up the rig, and listen to WWV on 10 MHz. Zero beat should already be very close to 10.000.00 on the display, but the trimmer on the TCXO can be adjusted for exact match (shouldn't have to move much).
 - A good method for very close calibration is to set the VFO for 10.000.00 and listen to the audio tones on the WWV signal. Listen to the tone for each beat of the clock in USB, then switch to LSB and compare the note. Adjust the TCXO trimmer so that the tone does not change when swapping USB/LSB.
 - Button up the rig and enjoy.
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