



# CWTD

## Chat With The Designers

Your Live, Online, Interactive Weekly Magazine  
for Hams, Homebrewers and Experimenters



### GPS-DO Project – Part 1:

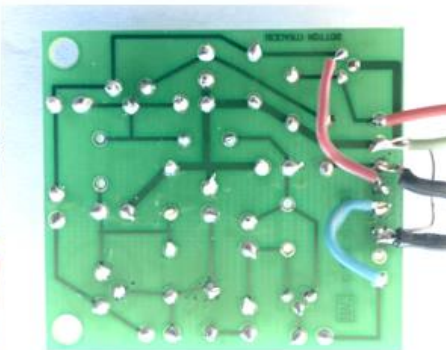
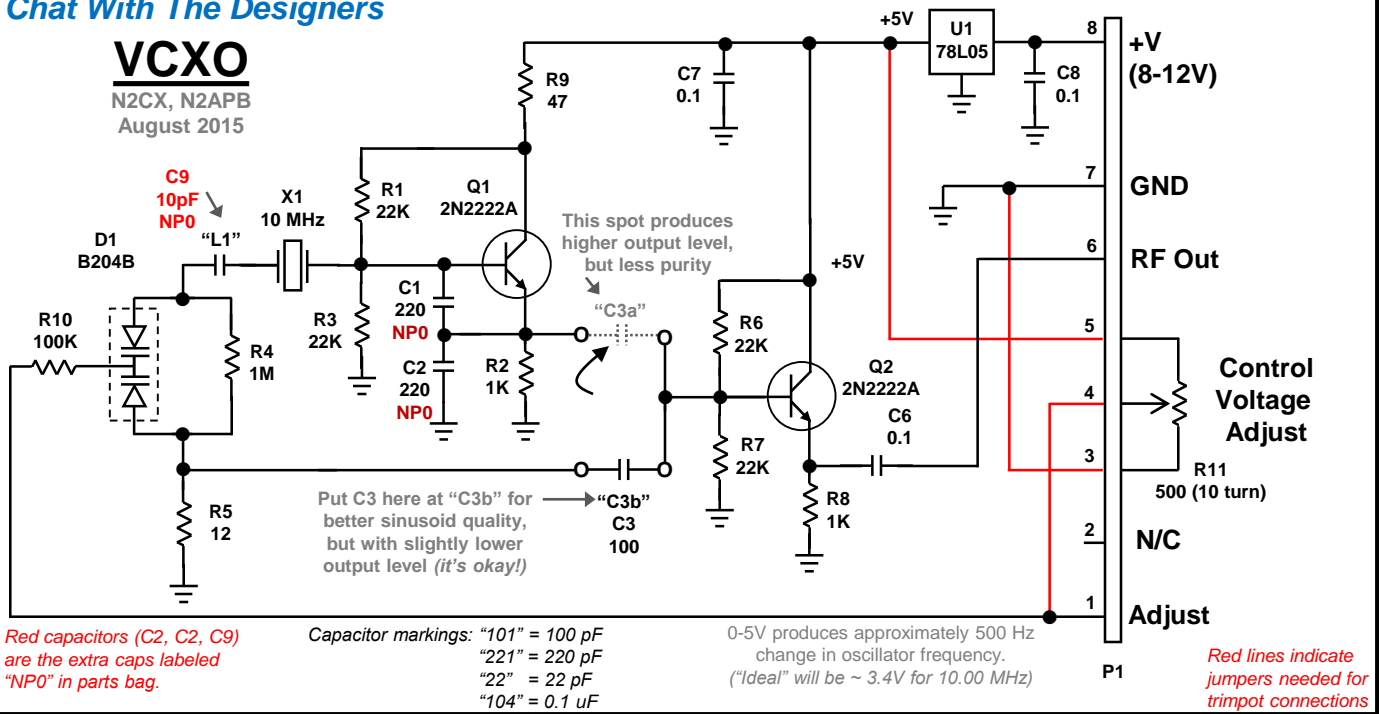
## VCXO ... Voltage Controlled Crystal Oscillator

Complete background, instructions and VCXO photos online at: <http://www.cwtd.org/frequency/>

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#### VCXO

N2CX, N2APB  
August 2015



The CWTD "VCXO" produces approximately 1-2V p-p at **RF Out** when C3 is in the top position (C3a on the pcb). This signal is quite ragged but very suitable for driving a balanced mixer like an SA612 (e.g., in mixing applications). When C3 is placed at the "C3b" position, a much more sinusoid-like 100-200 mV p-p signal is delivered at RF Out, which is more suitable for use as a "standard" 10 MHz oscillator standard in the shack.

**Construction** of the VCXO is straightforward – just use the schematic as a guide for placement of the components at the silkscreened locations on the board. Resistors are mounted "on end" with the top lead bent over and going into the hole next to the bottom lead.

Have fun with the VCXO! We'll experiment next with frequency stability in Phase 2 of our CWTD GPS-Disciplined Oscillator ("GPSDO") project.