# Four crystal and VXO modification for the DCxxB

This is my modification of a DC40B to allow four crystals and incorporating **K5USJ's** idea for the the XVO. I have included a 1:1 layout for those that can do a laser transfer pcb for the small single sided daughterboard, as well as the cover modifications to accommodate the four position dip switch and variable capacitor. Basically the four crystal daughterboard, and dip switch mount on the cover with two pins extending down to the original crystal position, that is replaced by a header socket to accept the pins. The 9-50 pf variable has a shaft cemented to it, that passes through the top cover. The tuning range for each crystal is about plus or minus 1.5 KHz.
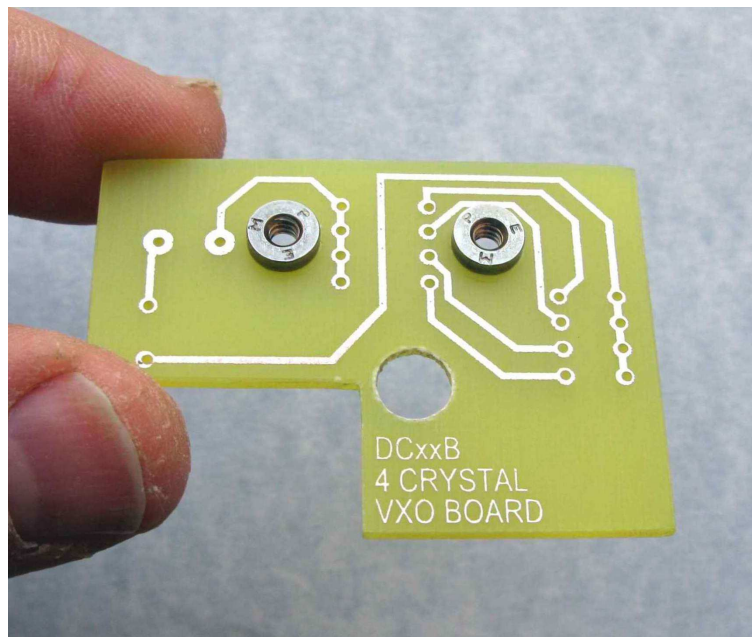
Here is the bare daughterboard with a couple of 4-40 PEM nuts. They could be substituted with a couple of 4-40 nuts. The .25" dia hole in the center is a clearance for C22.
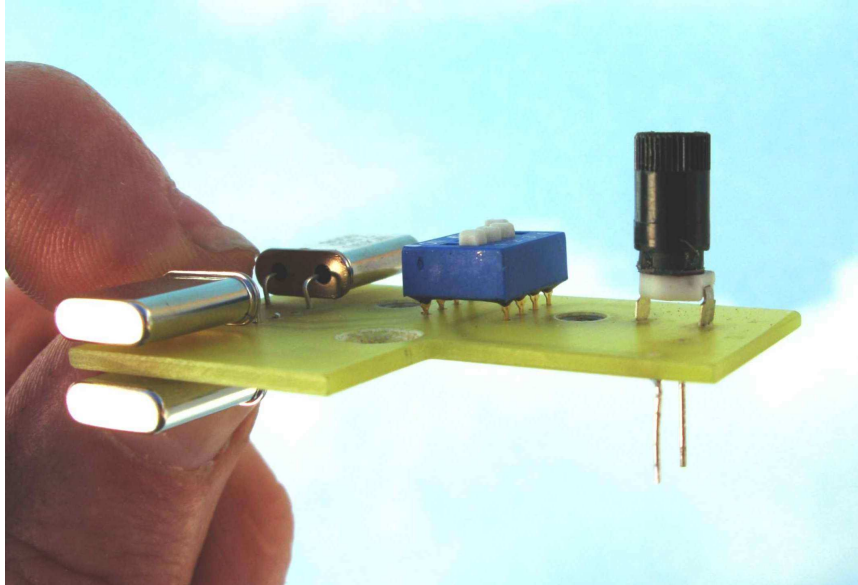
This is the populated pcb with the crystals and the 9-50 variable cap, Mouser # 24AA024. It has a shaft from a salvaged trimpot epoxied to the top of the capacitor.
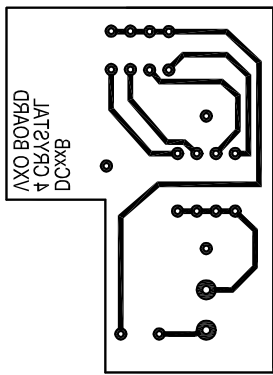


Checking internal clearances.

Daughterboard mounted in the top cover with two 4-40 flathead screws and 3/16" thick spacers to bring the dip switch flush with the top cover. Note the two pins to mate to the in-line pin sockets.
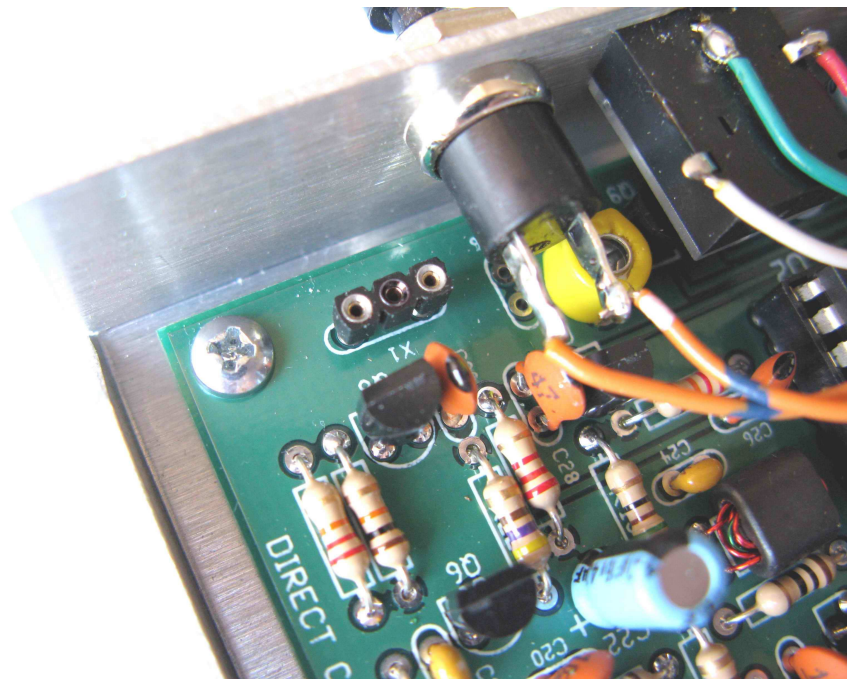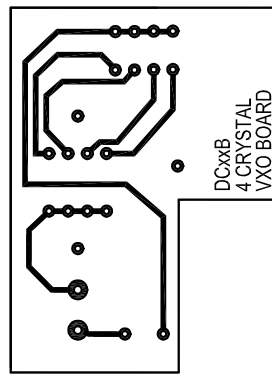


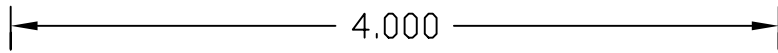The crystal is replaced with in-line pin sockets.
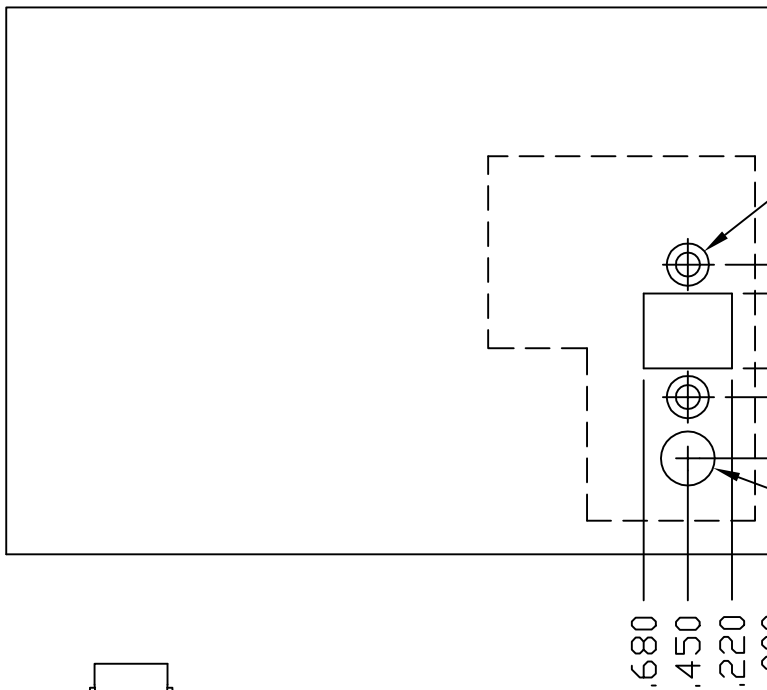
TOP

BOTTOM

DCxxB
4 CRYSTAL
VXO BOARD

|←——————— 4.000 ———————→|

Print this out with "No Scaling" and it should be 1:1

ø.136" THRU, CSK. ø.220 X 82°
2 PLACES

1.510
1.360

.970
.820

.500
ø.281

.000

.680
.450
.220
.000

ANTENNA 50 Ω

12.0-14.0 VDC
+ ⊙ -

**DC40B**
*Direct Conversion CW Transceiver*
**WWW.QRPKITS.COM**

1 - 7030
2 - 7038
3 - 7042
4 - 7050

ON
1 2 3 4

FUNCTION

TUNING
± 1.5kHz

wa4mnt   03/23/09