

Kanga US

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The 6 meter CW source is a stable, clean low power (10mw) CW source. It can perform a variety of functions. It can be used as a low power 6 meter CW transmitter, as a local oscillator for a converter or receiver, or a clean signal source for your test bench. The frequency is VXO controlled. The variable capacitor that comes standard with the kit is a board mounted trimmer which is convenient for setting one frequency. An optional off board mounted variable capacitor is available which can be panel mounted to allow fast QSY across the range provided by the VXO (approximately 65 kHz).

The unit is small enough and has a very low current consumption so makes a good transmitter to use for portable experimental 6m cw work

I have not built it yet, so I can't tell you much about how it sounds. Feedback is welcomed!

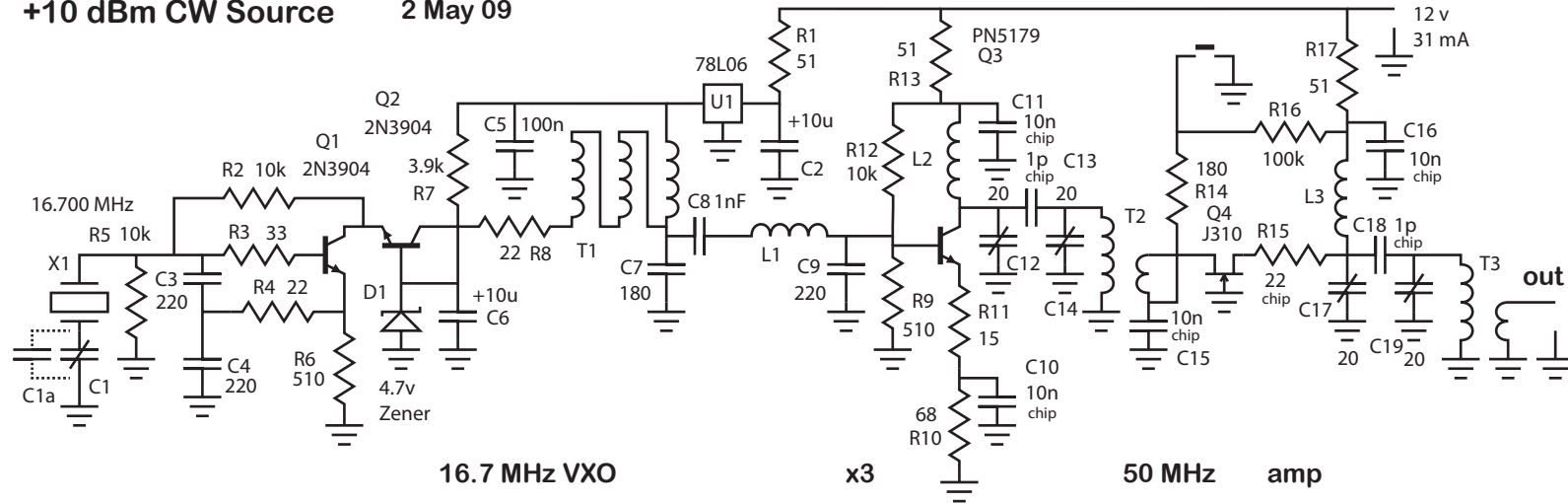
Have fun on 6 meters!

73 – Bill – N8ET

Kanga US

**50 MHz
+10 dBm CW Source**

**Rick Campbell KK7B
2 May 09**



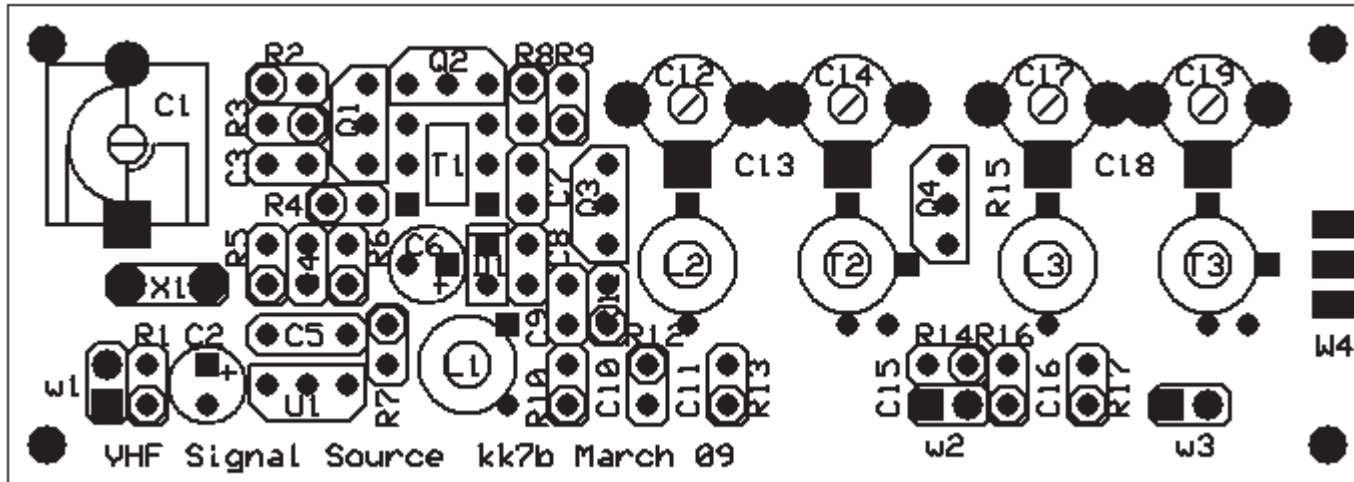
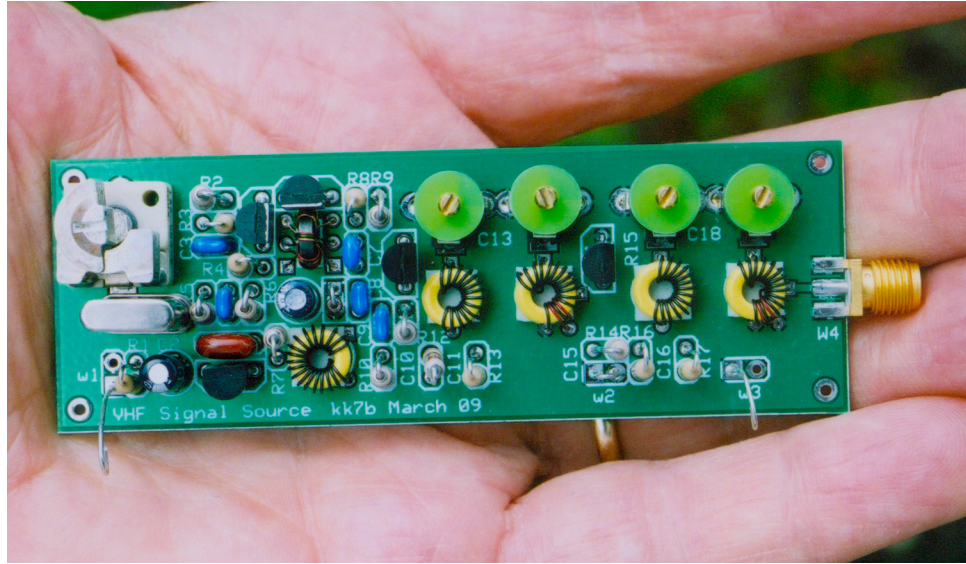
Output lowers gracefully to +7 dBm at 9 volts with no change in frequency. Below 8 volts 78L06 voltage regulator drops out.

- C1 15 pF PC mount air variable
- C2,C6 10 uF or 6.8 uF 16v electrolytic
- C3,C4, C9 220pF NPO miniature disk ceramic
- C5 100nF poly
- C7 180pF miniature disk ceramic
- C8 1000pF miniature disk ceramic
- C10, C11, C15, C16 10nF 1206 chip ceramic
- C12, C14, C17, C19 20pF green film trimmer
- C13, C18 1pF 0806 chip ceramic

- L1 20t #28 T25-6 approx 1uH
- L2, L3 14 turns #28 T25-6
- T1 6t trifilar FT23-43
- T2, T3 14 turn primary 2 turn secondary #28 T25-6

- Q1, Q2 2N3904
- Q3 MPS 5179
- Q4 J310
- D1 4.7 volt zener
- U1 78L06
- X1 16.700 MHz crystal

- R1, R8, R13, R15, R17 51 ohm 1/4 watt
- R2, R5, R12 10k 1/4 watt
- R3 33 ohm 1/4 watt
- R4 22 ohm 1/4 watt
- R6, R9 510 ohm 1/4 watt
- R7 3.9k 1/4 watt
- R10 68 ohm 1/4 watt
- R11 15 ohm 1/4 watt
- R14 180 ohm 1/4 watt
- R15 22 ohm 1206 chip
- R16 100k 1/4 watt



50 MHZ +10dBm CW Source			
Part	Value	Digikey	Mouser
C1	15 pf bd mounted variable		
C2	10 or 6.8 uf	P807-ND	
C3	220pf NP0		581-SR151A221J
C4	220pf NP0		581-SR151A221J
C5	100n	P4525-ND	
C6	10 or 6.8 uf	P807-ND	
C7	180pf NP0	P807-ND	581-sr151a181j
C8	1000pf disc		140-50P2-102K-RC
C9	220pf NP0		581-SR151A221J
C10	10n 1206 chip		140-CC502B103K
C11	10n 1206 chip		140-CC502B103K
C12	20p trim	SG3003-ND	
C13	1pf 0806 chip	490-1372-1-ND	140-CC501N1.0C-RC
C14	20p trim	SG3003-ND	
C15	10n 1206 chip		140-CC502B103K
C16	10n 1206 chip		140-CC502B103K
C17	20p trim	SG3003-ND	
C18	1pf 0806 chip	490-1372-1-ND	140-CC501N1.0C-RC
C19	20p trim	SG3003-ND	
R1	51 ohms	51qbk-nd	
R2	10k	10kqbk-nd	
R3	33 ohms	33qbk-nd	
R4	22 ohms	22qbk-nd	
R5	10k	10kqbk-nd	
R6	510 ohms	510qbk-nd	
R7	3.9k	3.9kqbk-nd	
R8	51 ohms	51qbk-nd	
R9	510 ohms	510qbk-nd	
R10	68 ohms	68qbk-nd	
R11	15 ohm	15qbk-nd	
R12	10k	10kqbk-nd	
R13	51 ohms	51qbk-nd	
R14	180 ohms	180qbk-nd	
R15	22ohm 1206 chip		263-22-RC
R16	100k	100kqbk-nd	
R17	51 ohms	51qbk-nd	
D1	1N5230B		512-1n5230B
TR1	2N3904		512-2N3904TF
TR2	2N3904		512-2N3904TF
TR3	MPS 5179		512-PN5179
TR4	J310		512-J310D26Z
U1	78L06		512-KA78L06AZTA
T1	FT23-43 6T trifilar		
T2	T25-6 14T 2T #28		
T3	T25-6 14T 2T #28		

Sheet1

L1	T25-6 20T #28		
L2	T25-6 14T #28		
L3	T25-6 14T #28		
XTAL	16.7MHz		
PC Board			