

## **Kanga US**

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The RCX1-6 Converter is a basic converter for 6 Meters. It is intended to be used with the microR2 40 meter receiver, but any 7 MHz receiver can be used as the IF.

Build and test the oscillator section first. That includes all the components around Q4 along with R13, R14, R16 and C17. Then build and test the mixer section to the output (q2 and Q3 and associated components. Finally build the front-end preamp.

W1 on the PC board should be shorted for the preamp to work.

Note that the trimmer caps now supplied look different that the ones in the photo.

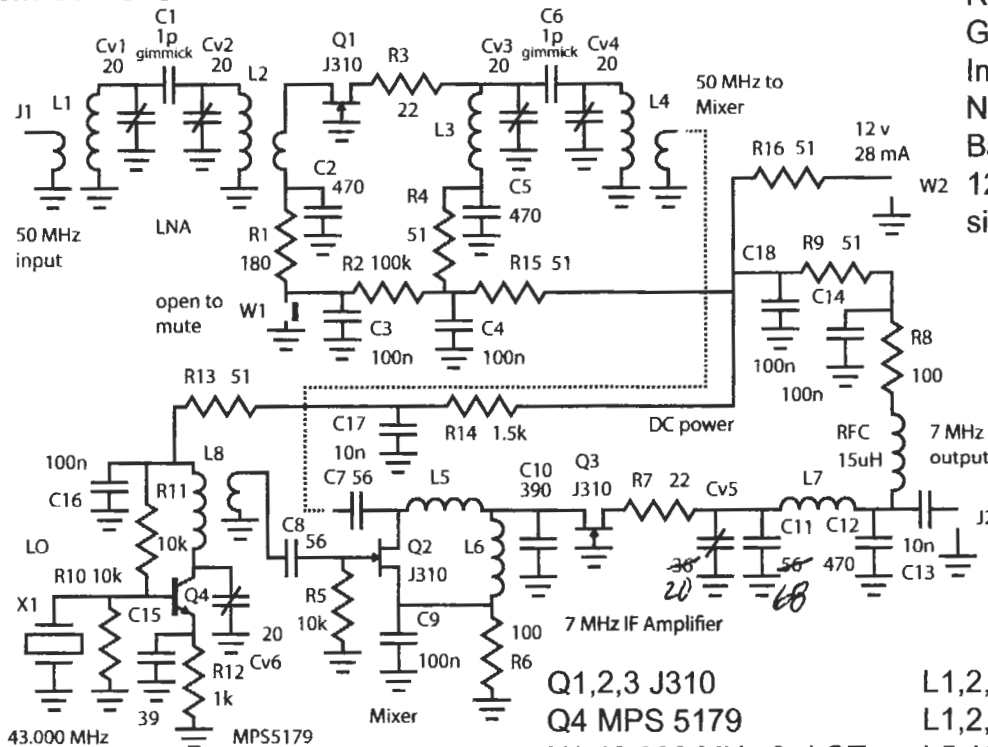
Have fun on 6 meters!

73 – Bill – N8ET  
Kanga US

# 6m Converter Instructions

## Rcx1 6m Converter Specs

Gain 12 dB  
 Image Rejection >75 dB  
 Noise Figure 6 dB  
 Bandwidth 300 kHz  
 12 volts at 28 mA  
 size 1 11/16" x 2 3/8"

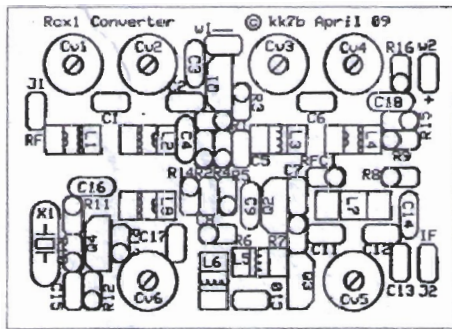


- R1 180
- R2 100k
- R3,7 22
- R4,9,13,15,16 51
- R5,10,11 10k
- R6,8 100
- R12 1k
- R14 1.5k

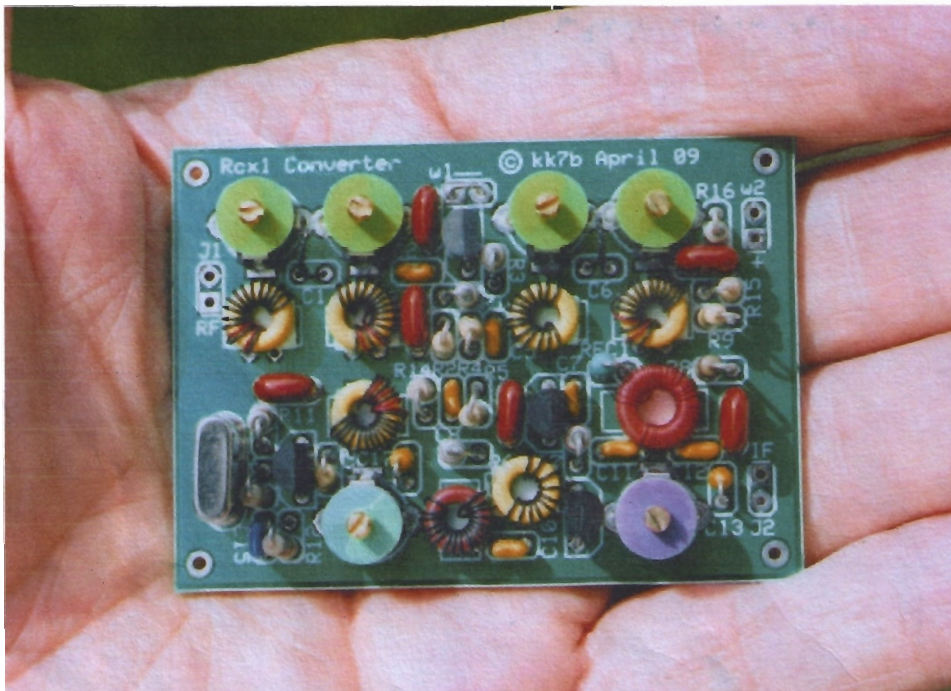
- L1,2,3,4 14 turns #28 T25-6
- L1,2,4 secondary 2 turns #28
- L5 10 turns #28 T25-6
- L6 18 turns #28 T25-2
- L7 38 turns #32 T30-2
- L8 secondary 4 turns #28

- Q1,2,3 J310
- Q4 MPS 5179
- X1 43.000 MHz 3rd OT
- RFC 15 uH molded

- C1,6 1p gimmick
- C2,5,12 470p
- C3,4,9,14,16,18 100n
- C7,8, ~~X~~ 56p C11 -68p
- C10 390p
- C13,17 10n
- C15 39p



gimmick: make a loop in 2" of #28 enamelled wire and tightly twist. Scrape ends and solder into board. Then cut even with top of green cap. Zoom in on photo for detail.



Alignment: preset 6 trimmers to half mesh. Connect to 40m receiver and tune Cv5 for maximum noise. Then tune Cv6 for more noise. Connect 6m antenna and tune for maximum band noise, starting with Cv3, then Cv4, then Cv1 and Cv2. Done.

73 de kk7b May 09

<b>RCX1 6 Meter Converter</b>			
<b>Part</b>	<b>Value</b>	<b>Digikey</b>	<b>Mouser</b>
C1	1p gimmick		
C2	470p		581-sr151A471j
C3	100n	P4525-ND	
C4	100n	P4525-ND	
C5	470p		581-sr151A471j
C6	1p gimmick		
C7	56p		581-sr151a560jar
C8	56p		581-sr151a560jar
C9	100n	P4525-ND	
C10	390p		581-sr151a391j
C11	68p		581-sr151a560jar
C12	470p		581-sr151A471j
C13	10n	P4513-ND	
C14	100n	P4525-ND	
C15	39p		581-sr151a390jar
C16	100n	P4525-ND	
C17	10n	P4513-ND	
C18	100n	P4525-ND	
CV1	20p	SG3003-ND	
CV2	20p	SG3003-ND	
CV3	20p	SG3003-ND	
CV4	20p	SG3003-ND	
CV5	20p	SG3003-ND	
CV6	20p	SG3003-ND	
L1	T25-6 14T#28 sec 2T #28		
L2	T25-6 14T#28 sec 2T #28		
L3	T25-6 14T #28		
L4	T25-6 14T#28 sec 2T #28		
L5	T25-6 10T #28		
L6	T25-2 18T #28		
L7	T30-2 38T #32		
L8	T25-2 16T #28		
Q1	J310		512-J310D26Z
Q2	J310		512-J310D26Z
Q3	J310		512-J310D26Z
Q4	MPS 5179		512-PN5179
RFC	15uh molded		434-22-150
R1	180 ohms	180qbk-nd	

Sheet2

R2	100k	100kqbk-nd	
R3	22 ohms	22qbk-nd	
R4	51 ohms	51qbk-nd	
R5	10k	10kqbk-nd	
R6	100 ohms	100qbk-nd	
R7	22 ohms	22qbk-nd	
R8	100 ohms	100qbk-nd	
R9	51 ohms	51qbk-nd	
R10	10k	10kqbk-nd	
R11	10k	10kqbk-nd	
R12	1k	1kqbk-nd	
R13	51 ohms	51qbk-nd	
R14	1.5k	1.5kqbk-nd	
R15	51 ohms	51qbk-nd	
R16	51 ohms	51qbk-nd	
X1	43.000 MHz 3 <sup>rd</sup> overtone		
PC board			