

K2 Modifications for use with the KPA100

June 12, 2002 Rev. A (applicable to all K2 Rev. A RF boards) - Wayne Burdick, N6KR

The changes described here will ensure that your K2/100 transceiver meets FCC spectral purity requirements on 10 meters, especially when used at medium (11-50 watt) power levels. Not all K2s require these changes, but as a precaution, we strongly recommend making them. If you have already built your K2 you will find that only the K2's top and bottom covers (but not the rear panel/heat sink) need be removed to make these changes.

If you decide you would like to make these changes to your stock QRP K2, a parts kit is available for \$15.00 plus shipping. **Order P/N E850093** (10M and VFO/ALC mod kit). You can write this order information in the comments section at the bottom of our regular order form, or contact sales@elecraft.com. *Please do not order this mod kit from Scott or Gary in support (we're trying to keep them focused on their regular tech support duties.)*

Part I is a modification to the 10/12-meter band-pass filter that improves rejection of out-of-band signals on both transmit and receive.

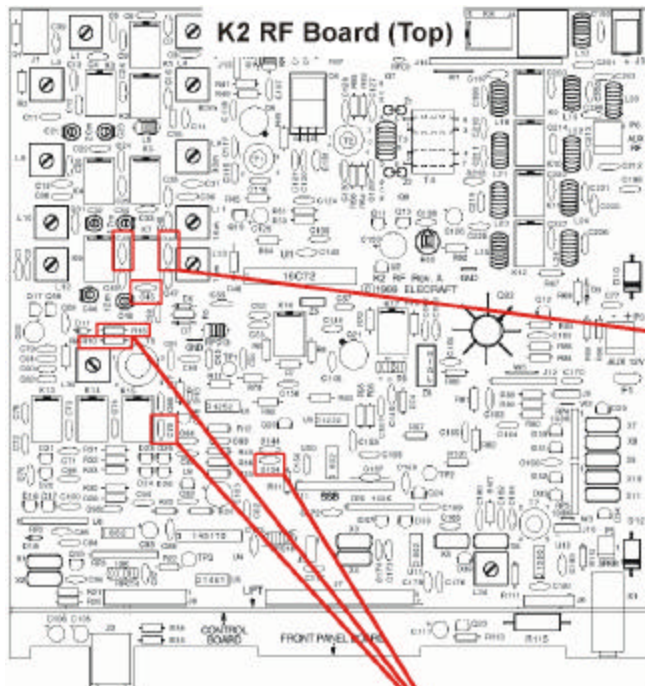
NOTE: If you have already built your K2, be sure to re-align the 12M/10M BPF section after you complete this mod.

Part II is a modification to the VFO ALC circuit; it prevents a VFO buffer (RF-U3) overdrive condition that may occur on some K2s when switching to 17 or 10 meters. Spurious signals are further reduced by decreasing the VFO drive at U10.

Refer to the illustrations on the next page when locating components and making these mods.

Parts Inventory: *Note the changes below in the RF board parts list (Appendix A), manual instructions (see page references below), and RF board schematic (Appendix B).*

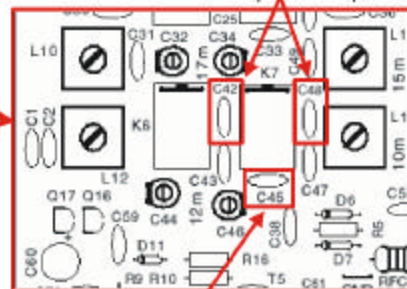
	Ref. Desig.	Old Value	New Value	Elecraft Part #	Assembly Instruction	RF Board Schematic Location
Part I - 10/12M BPF Mod TNX to: Bob Friess, N6CM	C45	2 pF	1 pF	(#E530068)	p62, left col.	Sheet 3, left
	C42,C48	220 pF	330 pF ("331")	(#E530043)	p62, left col.	Sheet 3, left
Part II - VFO ALC Mod TNX to: John Grebenkemper, KI6WX	C154	270 pF	100 pF ("101")	(#E530016)	p49, left col.	Sheet 2, bot. left
	R10	1K	470 Ω	(#E500003)	p47, rt. col.	Sheet 1, right
	R16	10K	100K	(#E500006)	p47, rt. col.	Sheet 1, right
	D8	n/a	1N4148 diode	(#E560002)	n/a (new)	Sheet 1, right; add D8 with cathode to Q18-S (source), anode to GND



K2 12M/10M BPF Mod

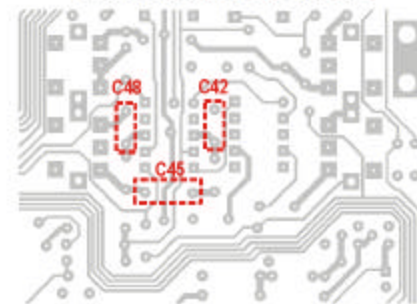
**K2 RF Board (Top)
Component Locations**

Change C42 & C48
from 220pF to 330pF

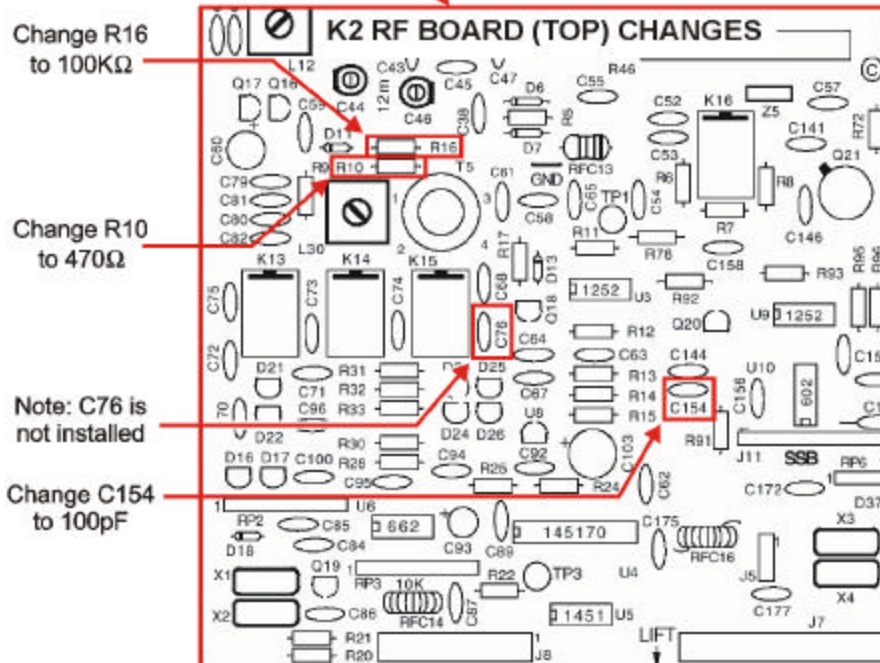


Change C45 from
2pF to 1pF

**K2 RF Board (Bottom)
Component Pad Locations**

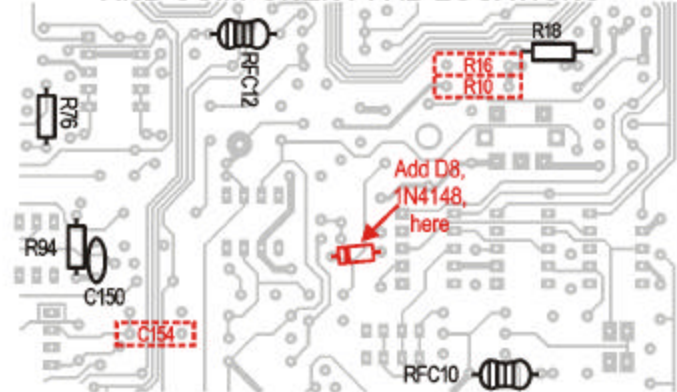


Pads which are contained within dashed boxes belong to parts on the top of the PC board which must be changed.



K2 VFO ALC Mod

**K2 RF BOARD (BOTTOM) CHANGES
AND COMPONENT PAD LOCATIONS**



Note: In the illustration above, C150, R18, R76, R94, RFC10, and RFC12 are installed on the bottom of the RF board as part of normal K2 assembly. Only D8 (1N4148) is new. Pads enclosed in dashed boxes indicate the pads for components on the TOP of the PC board which are to be changed.