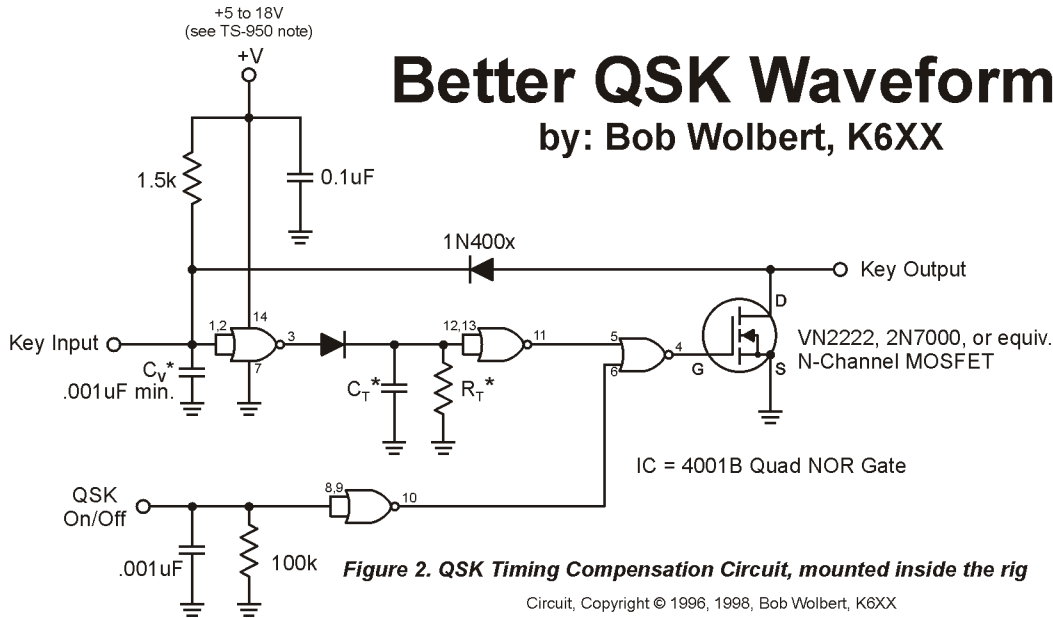


# Better QSK Waveforms

by: Bob Wolbert, K6XX



**TS-950 users note:** You *must* connect to a +15VDC supply line, rather than to a +5VDC line. Otherwise, the VOX/T-R line may trigger falsely. This mod must be used with an AUX Key input (see: <http://www.jps.net/k6xx/kanrite.htm#auxkeyin>). Finally, this mod will NOT function TS950 series unless a 1/4" stereo phone plug (empty or otherwise) is installed in the KEY jack on the pack panel of the radio.

## Capacitors, Connector(s) & Notes

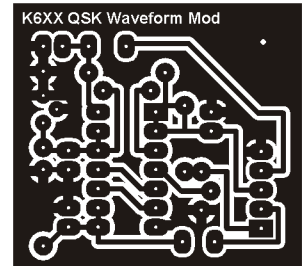
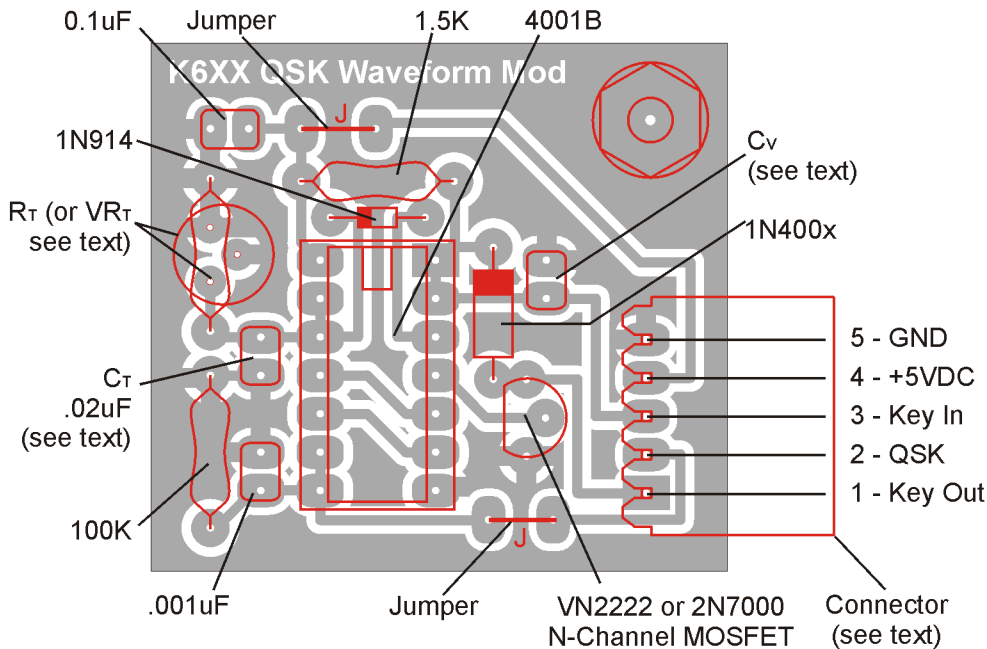
- .001uF monolithic - Mouser 21RX510
- .02uF monolithic - Mouser 21XR420
- 0.1uF monolithic - Mouser 21XR310

(Optional) 5-Pin .025" Rt-Angle PC-Mtg Shrouded (male) Header connector, Mouser 571-1033613, mating plug is with Mouser 571-1022413 (this mating plug, requires five 571-875236 female receptacles).

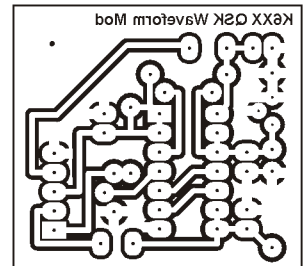
You may find it helpful to have a couple single-pin connectors for the DC and the KEY IN lines as well. Mouser 571-7874992 single-pin housings (with 571-877567 receptacles) mate with 571-1021073 push-in pin or with a single pin from Mouser 517-6111TN.

\* Starting value, Cv & Ct must be found by trial and error. Start with .001uF at Cv and increase if non-QSK keying needs to be heavier.

For Ct, start with .02uF-.022uF and about 500k for Rt. Or use a 1M pot at Rt and adjust it until the proper weighting is achieved. Then replace the pot with a fixed resistor of equal value. Note that pads are also provided for a permanently mounted trimpot (Mouser 72-T7RYB-1M or 594-75H-1M), if you wish to replace Rt with a variable device altogether.



Full-Size (1X) PC board layouts  
1-1/2" x 1-3/8"



**Foil-Side of PC board, showing X-Ray view of component placement. All components mount on the NON-FOIL side of board.**