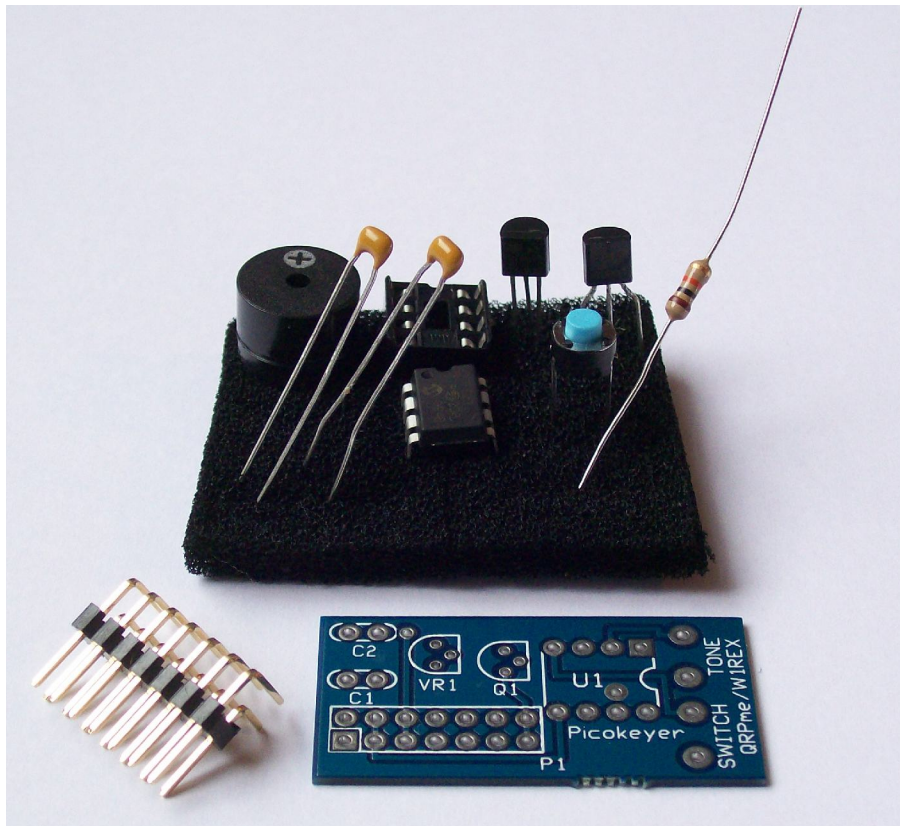


PicoKeyer Module Builder's Guide - Ver. 1

www.QRPme.com

This nifty little gadget adds a fully featured CW memory keyer to the SUPER Tuna transmitter. Either straight or paddle keys can be used. The PicoKeyer module plugs into J8 of the SUPER Tuna and takes its keying input from the SUPER Tuna's key jack. The speed of the keyer is controlled by the 'FUN' potentiometer. (so that's what it's for!)

Before starting to build the kit, it is a good idea to read the entire set of instructions to get a good overall picture of the construction process. Check that all the parts are present using the list of materials. Should any parts be missing or defective, please alert the staff at QRPme.

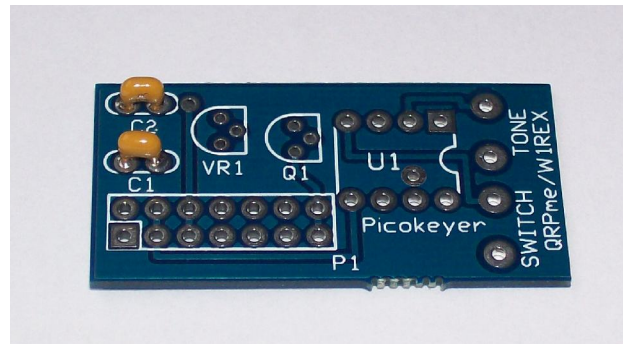


PicoKeyer Module List of Materials

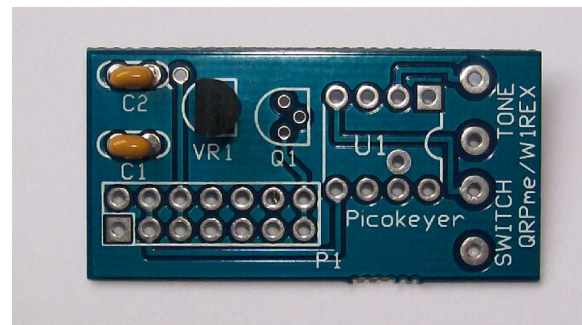
R1 = 10K (Brn-Blk-Org)
C1 = .33uF (334)
C2 = .1uF (104)
VR1 = 78L05ACZ
Q1 = 2N7000 MOSFET

U1 = 8 pin DIP socket & PicoKeyer Chip
H1 = 2x7 Header
SW1 = tactile switch
Small speaker
PicoKeyer PCB

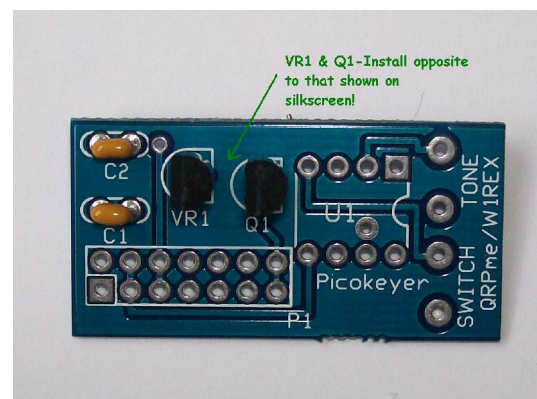
Capacitors - install capacitors C1 (.33uf, 334) and C2 (.1uF, 104).



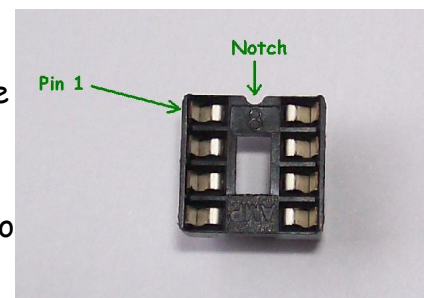
VR1 - 5 volt regulator -Oops! Missteak in the silkscreen on the PCB - install VR1 in the opposite orientation to that shown! VR1 should be marked with something like 78L05, the '05' denoting a regulated 5V output.

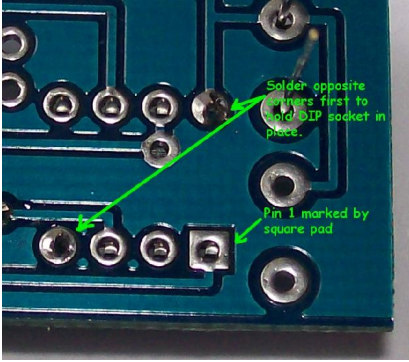


Q1 - 2N7000 MOSFET. Static sensitive part - handle with care! Another Oops! Install Q1 opposite to that shown on the silkscreen.



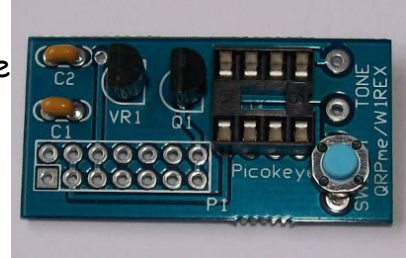
DIP socket and S1 - make sure to line up the notch of the DIP socket with the notch of the silk screen outline (U1) printed on the board. You may wish the dry fit the switch (S1) and the DIP socket to make sure they will fit OK. Once you are happy that they will fit, proceed to solder in place as described next.



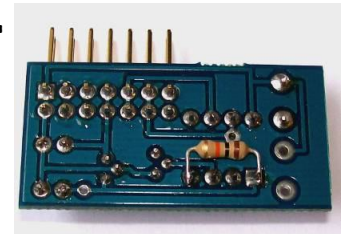


Hold the DIP socket flat with a finger, tack one corner of the socket, tack the opposite corner and then proceed to solder each of the other pins. Go back and re-flow the first two solder joints if needed. Solder S1. If you would prefer to use a larger, more convenient switch, this could be mounted on the side of the SUPER Tuna's can. Simply leave off S1, run a couple of wires from your switch and solder to

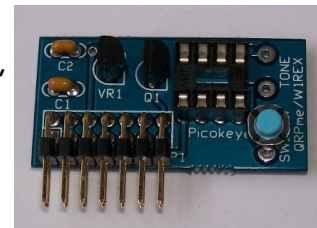
the two holes for S1. Make sure the switch is a momentary (push to make) type.



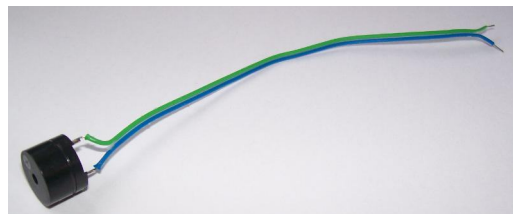
R1 - 10K ohm resistor (Brn-blk-org). This is used as a 'pull up' resistor for pin 4 of U1. R1 needs to be soldered on the back (non silk screened side) of the board. Solder the resistor across pins 1 and 4 of the DIP socket.



H1 - install the 2x7 header pin array. Use the same method as used for the DIP socket, solder one corner, making sure that the header is seated correctly, solder the opposite corner, and then solder the rest of the connections.

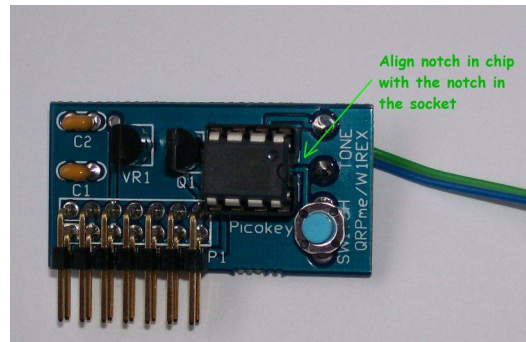


Speaker - Solder some wires to the speaker. Orientation of the wires is not important. The speaker could be installed inside the can of the transmitter, routing the wires through any convenient hole in the SUPER Tuna PCB. Solder the remaining ends of the wires to the holes marked 'TONE'.



U1 - PicoKeyer chip.

Check over all your solder joints, re-flowing any that don't look too good. Once you are satisfied that all is OK, remove the PicoKeyer chip from its packaging and insert it into its socket on the board. Be sure that the 'dot' or 'notch' on the chip lines up with the 'notch' on the socket.



Congratulations, you have finished building your PicoKeyer module! :)

Plug the module into J8 of the SUPER Tuna and apply power, remembering to remove the key shorting plugs! If all is well '73' in Morse code should be heard from the speaker.



For operating instructions, please see the documentation for the PicoKeyer-Plus available to download at www.hamgadgets.com