

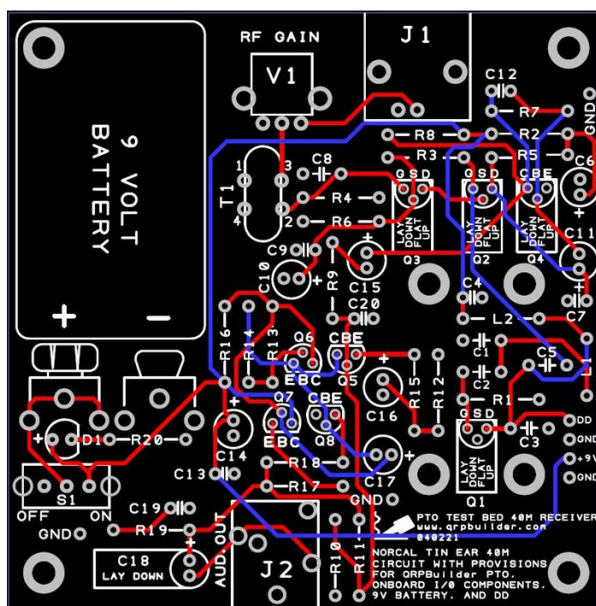
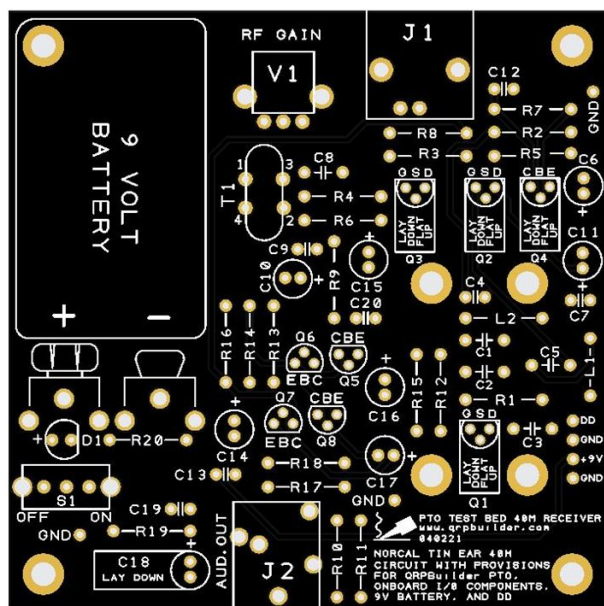


QRP Builder PTO/TinEar Option 1 proto board

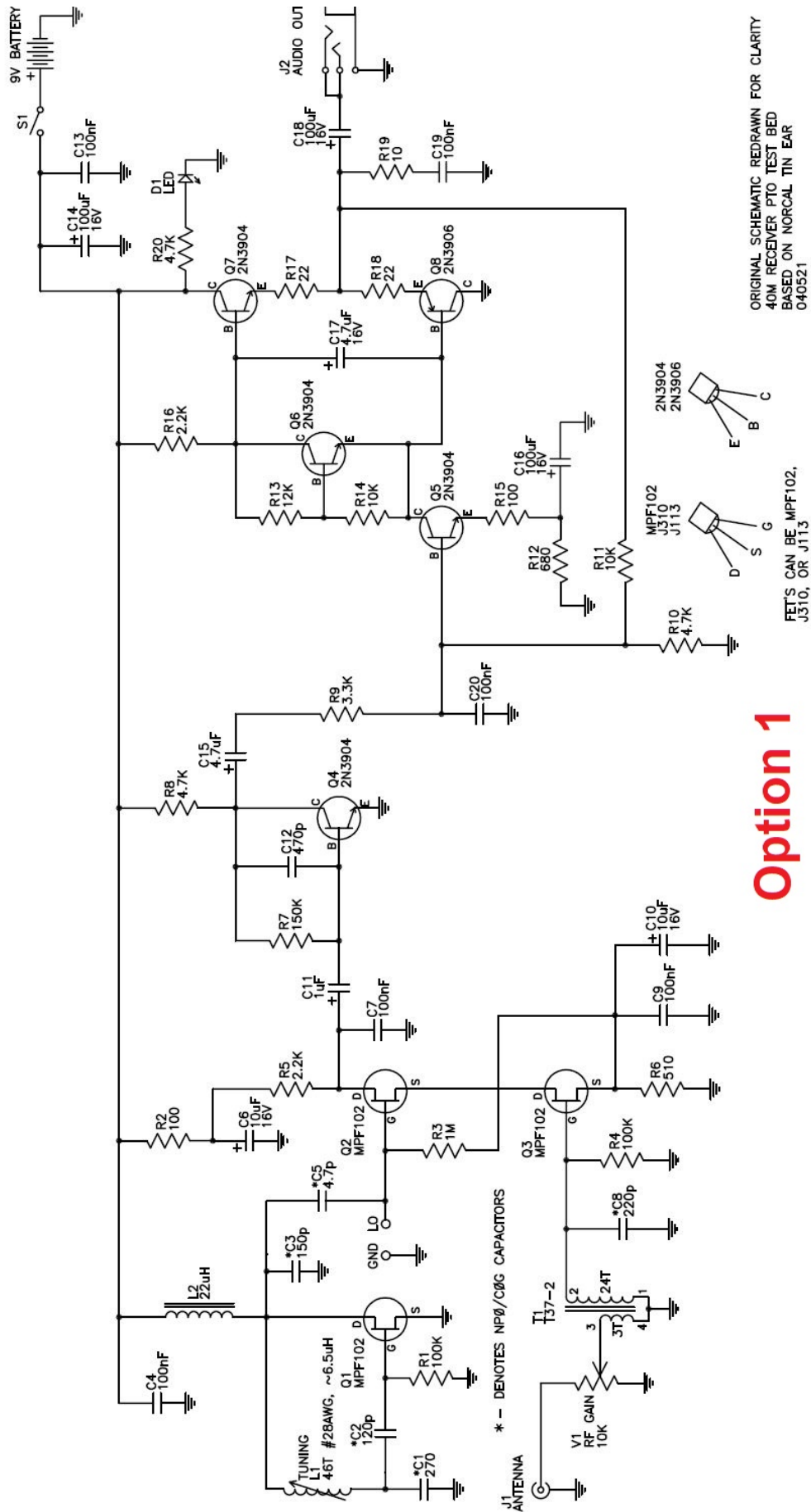
During the design of the PTO mechanism, I layed out a 3.12" x 3.12" board based on the Norcal Tin Ear as a test circuit. I have a number of these boards available to anyone that would like to experiment with a PTO. I used the original circuit and component designations, but I added some components and features listed below to make it easier to use. You can use the original Tin Ear documentation to source the components and for assembly instructions.

Additions include:

- Added onboard 9V battery clips, Mouser # 534-593 and 534-594
- Added R19, 4.7K resistor for the LED dropping resistor, A-2027
- Added D1, power on LED, Tayda A-705
- Added S1, slide switch for power, Tayda # A-659
- Added BNC female, like eBay # 363834631291
- Added 3.5mm pcb phone jack, Tayda A-069
- Added 10K vertical pcb pot, Tayda A-1850
- Added another GND pad for the 3 turn winding on T1, 24t pads 1&2, 3t pads 3&4
- Added pads for input and power pads to digital display
- Mounting holes for my PTO



You can use your own PTO design, the original TinEar soda straw design, or the PTO at https://qrpbuilder.com/pto_mechanism. For my PTO, I used the .37" dia. coil form with 36 turns of 26AWG close wound to match the calculated 6.5uH of the original TinEar design and the brass threaded slug. Ending up with 6.990-7.258 MHz coverage.



ORIGINAL SCHEMATIC REDRAWN FOR CLARITY
 40M RECEIVER PTO TEST BED
 BASED ON NORCAL TIN EAR
 040521

FETS CAN BE MPF102,
 J310, OR J113

Option 1

Notes:
