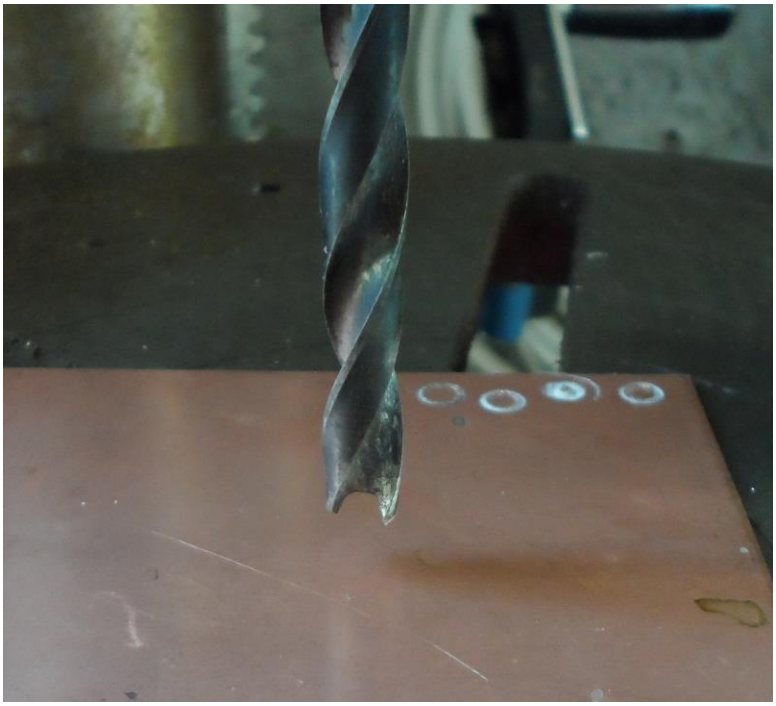
Easy prototyping of PCB boards

Looking for a way to easily make “Manhattan” style PCB breadboards I re-discovered the “Islander” – see reference 2 below, but was unsuccessful in finding a way to purchase one. Then I found Andy Davies’ You-Tube video describing his home made land cutter. Not wanting to wait for a ¼” drill bit to break of its own accord, I sacrificed the dullest 7 mm bit in my drill box.

First I clamped the bit horizontally into a vise and slotted the end of the bit using my angle grinder fitted with a thin steel cutting disc. I then evened out the two points by placing a machinist’s square along the bit and checking the gap. Using a small stone in a Dremel I very gradually removed the tip of the high point until both were of equal height. Then I evened out the thickness of both points. I sharpened the points with the Dremel and then a wet stone. Cutting tool manufacture is beyond my field of competence, but the end result was surprisingly good.



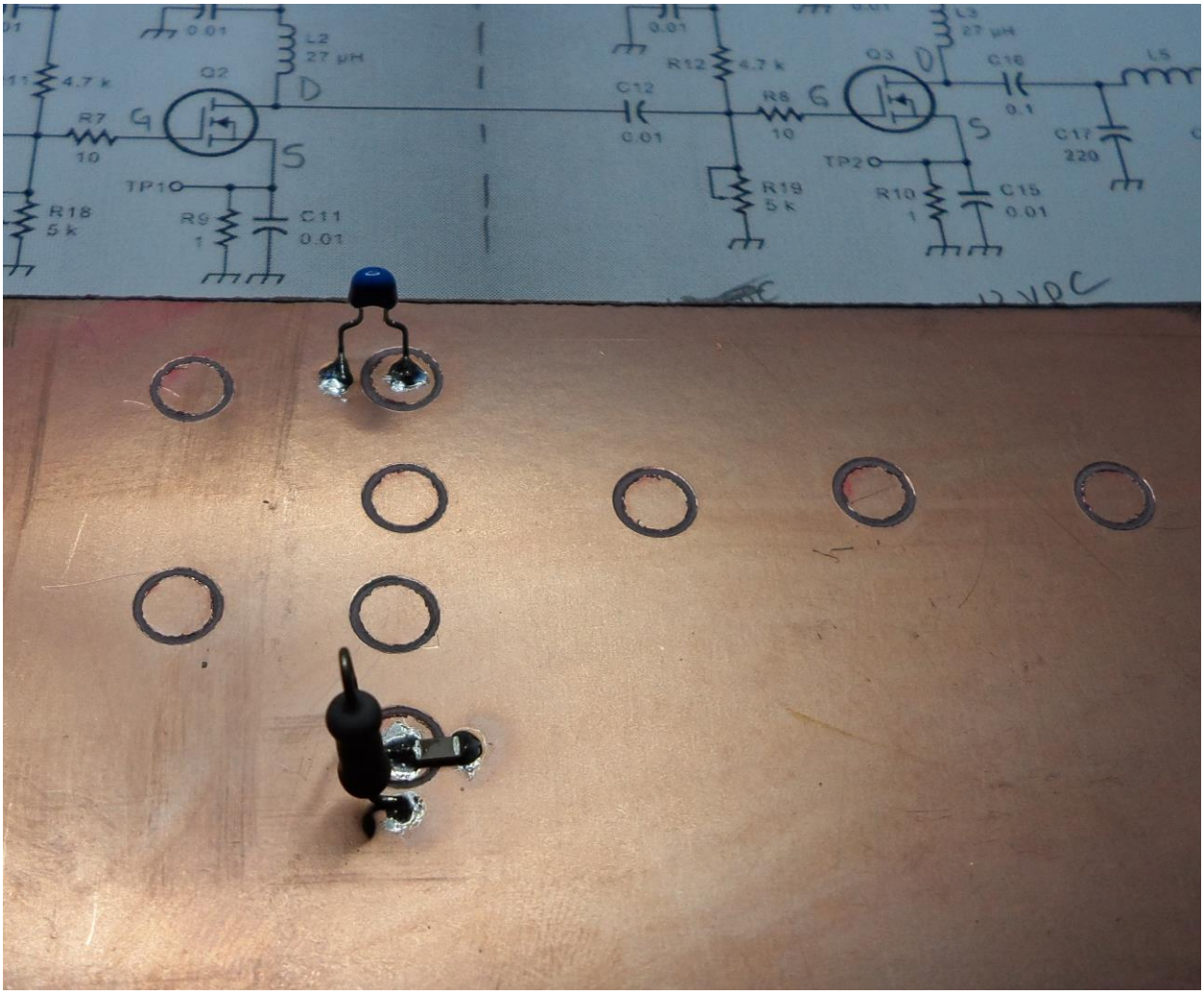
The PCB **must** be clamped down to the drill press table. Set the drill press stop using a piece of steel slightly thinner than the PCB stock.

The photo, below, shows my first results. There are some minor burrs around the edges of the copper. I will try and find a friend who actually knows how to sharpen a drill bit and, hopefully clean up the cut.

As you can see, I have soldered a few components on the trial board. I used both through-hole and an SMD part. Components went on easily.

You must wear proper eye protection when machining, especially true for hardened steel.

Earl, 4Z4TJ, 20 -10-2015



References:

1. Circuit board 'Land' cutter.

AndyDaviesByTheSea
https://www.youtube.com/watch?v=RKdsXU5iIF0

2. **Islander Pad Cutter**
A diamond-tipped end mill to cut 5mm pads into copper ground plane

http://www.njqrp.org/islanderpadcutter/