Off Center Squaring Pen Blank Jig

Contributed by: Eric Haardt

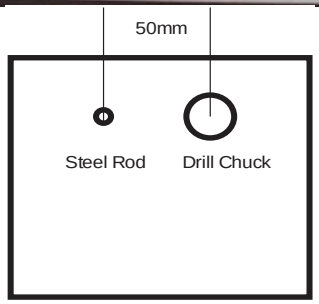
A.K.A. “Slowtracker”

Off Center Squaring Pen Blank Jig for Lathe by Eric Haardt (Slowtracker)

This is a fully customizable jig that I use to square pen blanks with the lathe

One of the main parts is a lathe disc sander made from 1/2 " thick plywood by 6" diameter fixed to a faceplate with screws.

The other part is a drill chuck with threaded end and a bolt to suit.



The last part is a heavy duty steel plate (I bought a mending plate 140 x 125 x 3.5 mm having 6 x 12.5 mm perforations).

The distance between the centers of perforations is aprox. 50 mm.

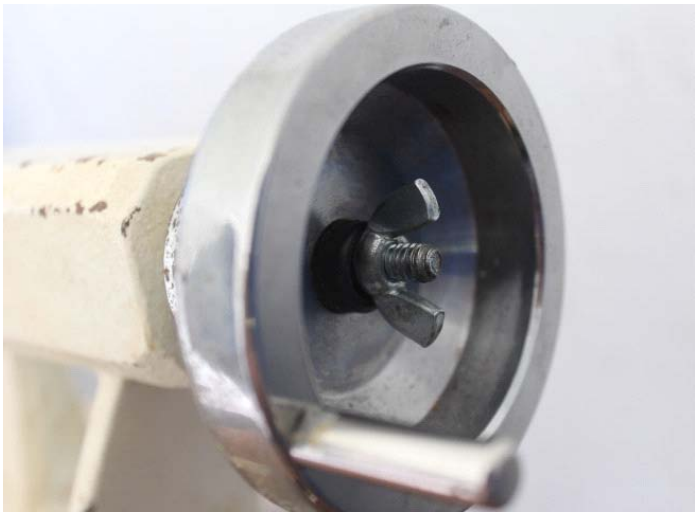
The jig is completed with 10" long x 1/4 " threaded rod, 2 washers and 2 x 1/4" wing nuts.

Additions:

- Transfer punch set or steel rods (to accept different sized blanks tubes).
- Piece of scrap wood to make a tailstock stopper.
- 80 grid sand disc

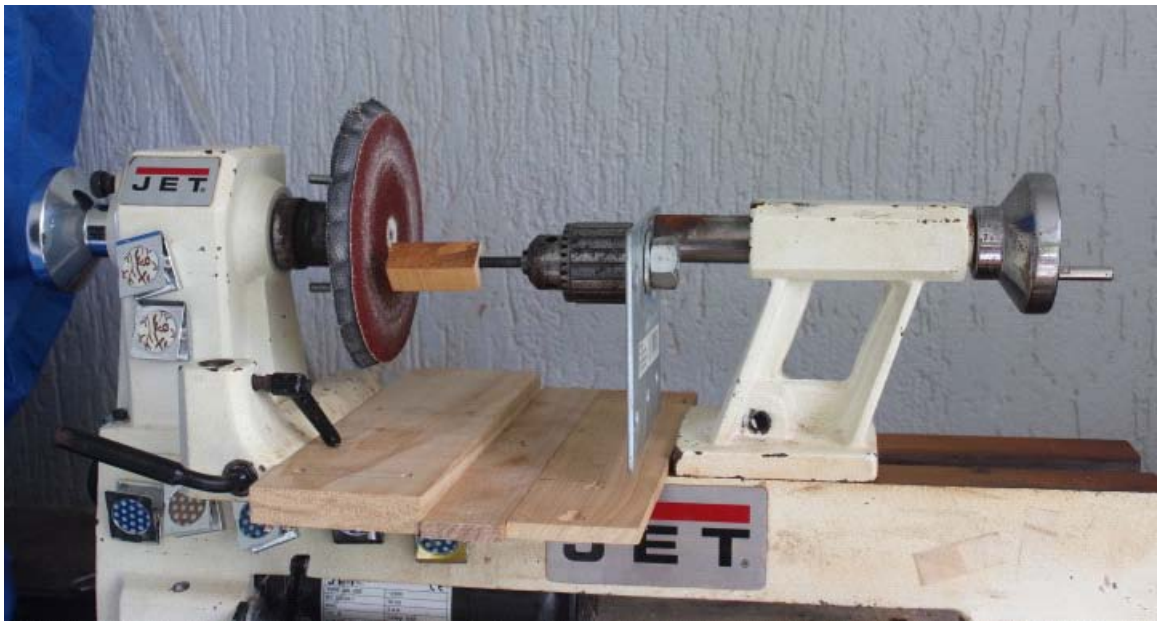
Other options:

- Instead of a drill chuck a bolt to accept the blank
- The steel plate size is not critical as long as it is flat and strong.



Operation:

1. Mount the sanding disc on the head stock.
2. Lock the tail stock hand wheel.
3. Always mount the jig so the pen blank is facing the rotating down section from the sand disc (Like a bench wooden sander).
4. Pass the threaded rod through the plate and tail stock.
5. Lock the tail stock hand wheel.
6. Tighten the wing nuts by hand and check the plate for movement.
7. Tighten the appropriate transfer punch to the drill chuck.
8. Always mount the jig so the pen blank is facing the rotating down section from the sand disc (Like a bench wooden sander).
9. Place the wood tail stock stopper block against the tool rest arm.
10. Move the tail stock to the stopper.
11. Fine adjust the tip of the transfer punch to approximately 5mm from the sanding disc with the tool rest arm.
12. Check for any loose movement.
13. Mark the pen blank on both ends for the sanding required.
14. Slide the pen blank on the transfer punch.
15. Move the tail stock in position against the stop.
16. Turn the lathe on at low speed about 500 rpm.
17. Softly push the blank to the revolving sand disc.
18. Stop the lathe and check the brass tube gap.
19. Repeat the last 6 steps as required.



No need to check the squaring, it is square!

(I use those small magnets on the lathe to hold the diferent grid sanding stripes when finishing a pen.) Thank you for reading this tutorial project