

Native Pens

Advanced Pen Blank Preparation

This document describes two basic methods for preparing your blanks with the use of a face sander; these are The Shaft Jig Method and The Fence Method.

The Fence method utilises the fence that is supplied with your face sander. The sanding method uses the blank sides as the guide for facing off the blank. The method relies on an accurately drilled hole in the blank and a nice square parallel blank to get a good result.

The Shaft Jig method uses a sliding jig with a shaft to mount the blank onto. This method uses the brass tube itself as the guide for facing off the blanks. If the drill wanders when you drill the blank you are still able to sand the ends square being guided by the tube. This is my preferred method.

Many Pen Makers including myself prefer to machine sand their pen blanks rather than using a Pen Mill. The method I have been using utilises both machine sanding and the Pen mill, however the mill is used as a finishing tool and the bulk of the material is removed through sanding. With sanding there is less chance of damaging the end grain of the blanks.

An accurately machine sanded blank may also have more accurate face than a milled one.

Method I – The Shaft Jig.

This method employs a sliding Shaft Jig with a 1/4" shaft held perpendicular to the sand disc face.

Equipment.

Basic shaft jig is shown here on my disc sander. It has a 1/4" shaft approximately 65mm long. The gap between the sanding disc and the end of the shaft is about 3mm.

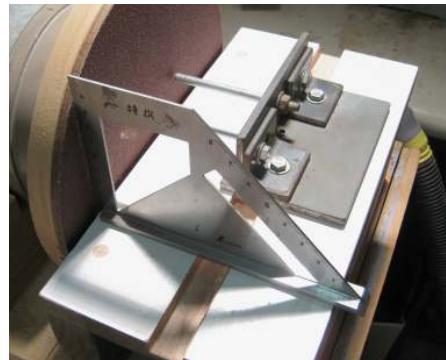


This jig is a shop built one, made from some 6mm steel plate bolted together. On the underside it has a plastic slider that sits in the table guide. Note: the plastic slider must be a snug fit in the table guide; any movement will cause the jig to wander.

Set-up.

Before sanding your blanks, the first thing to do is check that everything is nice and square.

1. Start by checking that the disc sander table is square to the disc face and that the table guide is parallel to the disc.



2. Next, check that the shaft on the Shaft Jig is square to the sanding disc in both the vertical and horizontal directions. I do this using a piece of hardwood that is sized to fit between the jig and the disc and has a square cut end.

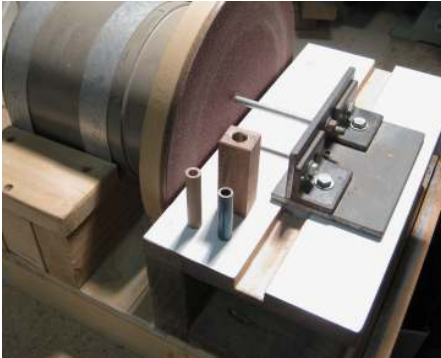


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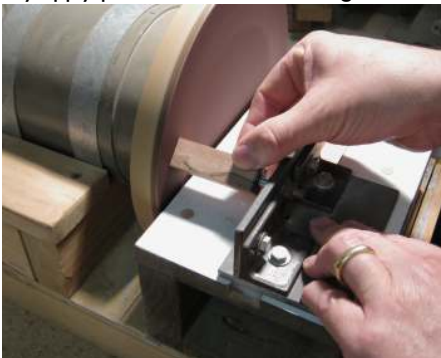
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Sanding.

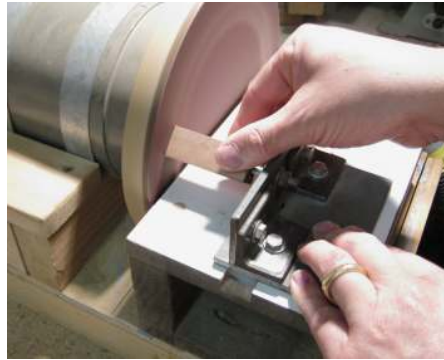
The basic method is to slide the blank onto the shaft through the brass tube. For 7mm pen kits the tube should slide straight on. For larger diameter pen kits a milling bush will be required to support the blank while sanding.



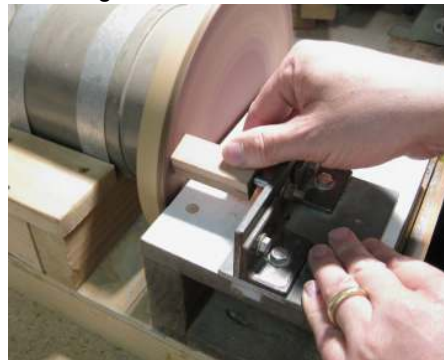
1. Slide the pen blank onto the shaft, with the milling bush if required, and position away from the sanding disc.
2. Start the sanding disc then gently slide the blank forward until it contacts the disc, ensure you are holding the jig in place with your other hand. Then gently apply pressure to start sanding the blank.



3. After a short period, 1-2 seconds, pull the blank away from the disc and rotate it through 90°. Repeat the sanding process by sliding the blank forward and gently applying pressure to remove material.



4. Continue to sand, pull back, rotate 90° and sand. After 3-4 sands check that the blank face is not getting too hot as this can cause heat checks in the timber end grain surface.



5. Again, Continue to sand, pull back, rotate and sand. Keep sanding and checking until the brass tube of the pen is just visible. Stop sanding, end for end the blank and repeat the process for the second end.



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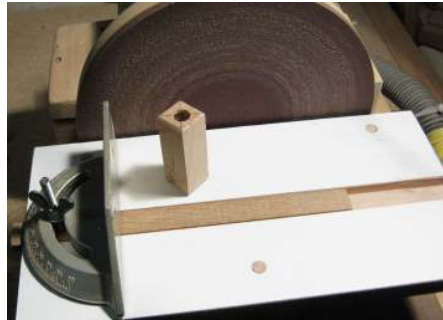
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Method 2 - The Fence.

This method uses the fence normally supplied with your disc sander.

Equipment.

A typical fence is shown here. They will normally have a sliding leg that fits into the guide on the Disc Sander table and an adjustable fence for sanding mitre angles etc.



2. Hold the blank up against the fence and gently slide it toward the sanding disc before gently applying pressure to start sanding.



Set-up.

1. First thing to check is that the sliding leg of the fence is a good fit in the table guide. If the leg is able to move around in the guide then something must be done to firm this up. Sometimes a piece of masking tape along the face of the leg is enough to close up any gaps.
2. Next, as with the Shaft Jig Method, check that the table face is square to the sanding disc and that the table guide is parallel to the disc.
3. Finally, check that the adjustable fence is square to the sanding disc.



3. After a short period, 1-2 seconds, pull the blank away from the disc and rotate it through 90°. Repeat the sanding process by sliding the blank forward and gently applying pressure to remove material.

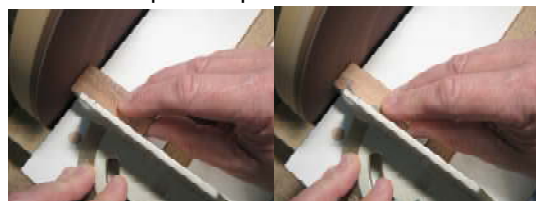


4. Continue to sand, pull back, rotate 90° and sand. After 3-4 sands check that the blank face is not getting too hot as this can cause heat checks in the timber surface.
6. Again, Continue to sand, pull back, rotate and sand. Keep sanding and checking until the brass tube of the pen is just visible. Stop sanding, end for end the blank and repeat the process for the second end.

Sanding.

The sanding process for this method follows the same basic steps as with the Shaft Jig.

1. Ensure the fence and blank are clear of the disc then start the sander.



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Finishing.

As a final step I like to give the blank ends a very light mill using a Pen Mill. The aim of this is to clean up the end of the brass tube and remove any sanding marks from the blank end.

Note: this is a very gentle process and only an extremely small amount of timber is removed.

1. If required, slip the milling bush onto the shaft of your pen mill then slide on the blank.



2. Start the battery drill with the mill away from the end of the blank, and then gently mill the blank end. As stated earlier this should barely skim the blank surface.



3. When finished, the blank should have a light milled circle on the end and the brass tube should be bright in appearance.



Completed Pen.

Sierra Gold and Gun-Metal Grey kit with Pohutukawa.

