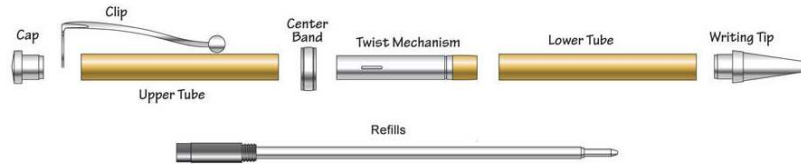


Native Pens

Turning a Simple Pen

The method to follow shows the process Native Pens uses to make a simple Fancy Slimline Pen. The pen kit parts are shown in the diagram below.



Required Accessories.

1 x Fancy Slimline Pen Kit
1 x 20mm x 20mm x 125mm Timber Pen Blank.
1 x 1/4" Mandrel.

3 x Slimline Bushings.
1 x 7mm Brad Point drill bit.
1 x 7mm Pen Mill

Preparing the Blanks.

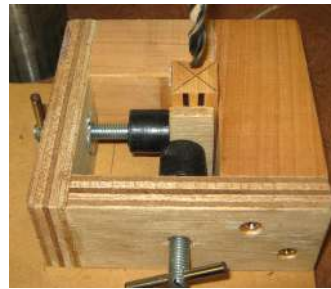
1. Cut the timber blank to 20mm x 20mm x 125mm.



2. Mark the sides of the blank so you can keep the grain matched through the length of the pen.



5. Set up the first blank in a drill press or similar. Ensure the blanks are held firmly and are square to the drill bit.



3. On a bench saw or bandsaw cut the blank into lengths approximately 4mm longer than the Upper and Lower tubes. The centre of the cuts are the "matched ends".



6. Carefully drill out the blank using a 7mm drill bit. Make small advances with the drill, backing it out often and allowing the shavings to clear out of the drill flutes.



4. Mark the centre of the matching ends. The holes are drilled from these ends so the grain remains matched even if the drill wanders along the grain while drilling. Once marked give the corners a sand to remove any wood fibres. This helps ensure the blanks clamp square for drilling.

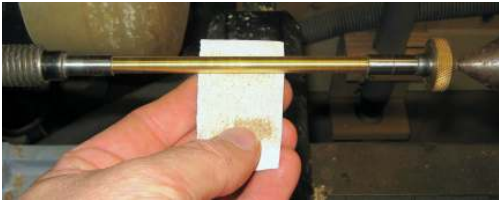
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7. Repeat the process on the second blank.



8. Next, place the Upper and Lower tubes from the pen kit onto your mandrel. Support the mandrel with the tailstock then, with the lathe running at a fairly high speed, up to 2000rpm, sand the tubes to key up the gluing surface. Use an old piece of sand paper.



12. Insert the brass tube into the blank from the matched end. Work it in and out a couple of time while turning it to ensure a good even coverage of CA inside the blank. Then push the tube in to approximately 1-1.5mm under flush with the matched end.



9. Once sanded, insert the tubes into the blanks to ensure there is an un-obstructed fit and that the tubes slide in freely.



13. Check to ensure that both ends of the blank have glue coverage around the tube ends. If it looks a little dry you can wipe a bit of CA around the tube at the end with you finger and allow it to wick back along the blank inside. Allow the CA to cure overnight.



10. To glue in the tubes use a medium CA adhesive and wear gloves. This should be done in a well-ventilated area to avoid the CA fumes. First apply a small amount of CA to the inside of the first blank hole at the matched end. Run it around the entire hole circumference. Stand the blank on end so the CA runs down through the hole.



14. Once cured, hold each blank in a vice or similar. Using a battery drill on high speed carefully run the Pen Mill into the brass tube to clear out any CA. If there is CA build-up in the end of the tube the mill can be difficult to start. Back the Mill out to clear away the CA.



11. Apply CA to the brass tube in beads around the tube. Rotate the tube in your fingers to get a fairly even spread.

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15. Next, using gentle downward pressure, start to mill the end of the pen. Take care and take your time as excessive pressure can cause the mill to grab, which can cause very small splits in the timber. Mill the blank until the brass tube is reached. Back the mill away from the blank as you mill to check progress. Repeat this for each end of the two blanks.



16. Once milled, remove any burrs on the inside of the brass tube. This will also aid with assembly of the finished pen.



17. The blanks are now ready to mount on the mandrel in the lathe.



Turning the Pen

1. Set up the pen blanks on the mandrel. This pen uses 3 slimline bushings. One at either end, with one between the blanks. Other bushings may be required at each end to allow the mandrel nut to be tightened. Insert the mandrel into the Morse taper of the headstock then bring up the tailstock into the mandrel end. Care should be taken to only support the mandrel with the tailstock. If the tailstock is too tight it can bend the mandrel. At this stage you can decide which end of the blanks will be the writing tip end.



2. Once set up you can start turning the pen.

Roughing out the blanks.

Use a roughing gouge or similar with the lathe running at a fairly high speed. Turn off the timber until the blanks are round.



Stop the lathe and check the blanks for any defects exposed in this stage. If there is a defect you can decide to keep it and continue as it might be turned off before the pen is finished or to turn the wood off the tubes then start again. Remember, a small defect can be hidden behind the clip during assembly.



Start to shape the blanks.

Change to a smaller chisel and start to shape the pen. Depending on the grain of the timber it is good practice to always turn toward the ends of the blanks. This way any chipping at the blank end from starting the chisel can be avoided.

Native Pens

Turning a Simple Pen



Again remove the timber from between the tapers. Taking care to make shallow cuts. Turn the pen until and your basic shape is reached and the blanks are generally 0.5mm larger than the bushings. This way there is some timber left for sanding.



A good method for doing this is to turn a shallow taper at the end of each blank, always working toward the blank end.



Once the tapers are cut the timber between can be quickly removed without worrying about cutting toward the ends. At this point, if you are going to have any shape in the pen, you should stop turning close to your final desired diameter.



Final Shaping.

Using the turning chisel you are comfortable with, start to create the final shape for your pen, again taking care to turn toward the ends of the pen blanks. As you get close to the bushing diameter take care as a chip at the blank end could drop below the bush diameter. It may be necessary to reduce the sideways travel speed of your cut near the ends.



Once again turn the tapers on the blank ends, leaving the end diameter of the blank about 1-0.5mm larger than the bushing.



Sanding the Pen.

1. Start from a grit suitable for the timber. Dust extraction is recommended. Ensure the sandpaper is always moving both side to side and up and down. If the sandpaper is still for even a moment it can leave sanding rings around the pen, which can be very difficult to remove. Some timbers require you to stop the lathe and then sand them longitudinally to remove ring scratches.



2. Use a soft foam block to help finish the shaping of the pen if required.



3. Continue sanding through all the grits to your desired surface level. Native Pens sands through to 600grit, then finishes sanding with fine steel wool. At this stage your pen is ready for your desired finish. The pen blanks are now the upper and lower barrels of your pen.



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Finishing the Pen.

1. While on the mandrel, apply your desired finishing system. There are a number of finishing options available, the most common are:

Hard friction applied Wax.

Lacquer or Varnish.

CA.

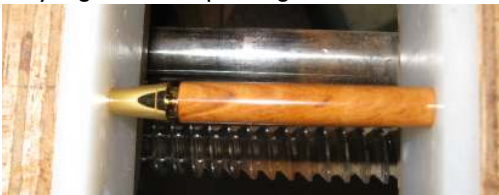
Native Pens uses a polished CA finish, if you are interested in learning about this finishing technique please contact us.



2. Once finishing is complete, remove the pen from the mandrel and lay the pen barrels and pen parts out on a soft surface. Arrange them as the pen will be assembled. Be sure to keep the matching grain ends of the barrels correctly aligned.



3. Using a Pen press or bench vice, press the writing tip into the lower barrel. Take care to ensure the tip is correctly aligned before pressing it in.



4. Then press the twist mechanism into the lower barrel. Be careful not to push this in too far. Again, ensure the twist mechanism is correctly aligned before pressing. If you do push it in too far, the 7mm Pen Disassembly Tool can be used to remove the writing tip and twist mechanism so you can re-set the mechanism.



5. Remove from the press and insert the refill. Ensure it extends enough for comfortable writing. If not, press the twist mechanism in a little further and re-check.



6. Next, slip the clip over the cap then press the cap into the upper barrel. The clip can at times be quite tight on the cap, it may be necessary to press it on using a suitable piece of tube. Note: don't use a brass pen tube as you need to get the tube off.



7. Finally, slip the centre band over the twist mechanism, and then push the upper barrel on with a twisting motion. Your pen is now complete.

