

Southern Turners Project Sheet

Counter Bell

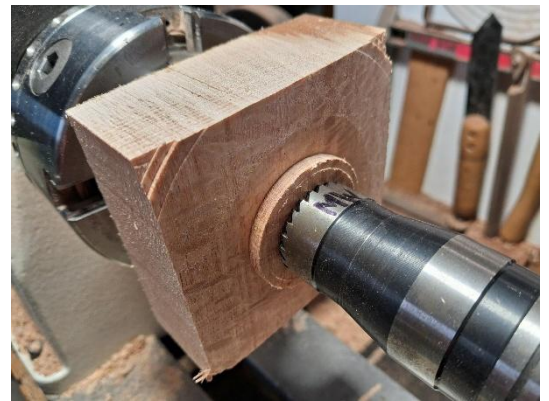


On the surface this project appears simple, but on closer inspection includes ways of holding onto your work that newer turners may not have considered. This project has been designed to only use chuck jaws, centres, etc. that most turners would have available. As with most projects there are numerous ways to approach this based on the equipment you have available.



1. Prepare two pieces of timber around 80 x 80 x 35-40mm, plus a third piece around 20 x 20 x 100-150mm for the finial. To get started, mark centre on one of the main pieces and friction fit it between closed chuck jaws and your preferred live centre. Don't be concerned about the mark left by the live centre, this will end up in the tenon that will be turned away later.

2. Start by turning a tenon on the piece. Don't be overly aggressive with your cuts, as the tool is often 'cutting air', and is only held with a friction fit. If you're not comfortable doing this on a 'square' piece of timber the corners can be rounded off first. When sizing the tenon, you have a visual reference of the ideal size, by comparing it to the closed jaws on the other side.



3. Re-mount your timber and turn the base (and most of the side) of the project. At this point you're turning a mortice to hold the piece in expanded jaws. It's a small piece, and there's not a lot of room for hollowing (in the next step) so keep the mortice shallow, 2-3mm is plenty. Sand and finish the base now, as you won't have access later.

4. Now it's time to hollow the base, and finish off the sides. Make sure to create a lip for the top to sit in. Keep in mind the relatively small mortice, and make light cuts. Complete any sanding and/or finish and the base is completed.



5. Repeat steps 1-2 for the lid, and mount it in the chuck. Turn the inside of the lid, and part of the top. For the overall design, try to keep this wider than the base. The aim is to create a snug fit with the base, but don't make it overly tight, in use, it needs to be easily opened. Sand/finish this now, as the tenon is turned off in the next step.



6. Next step is to re-mount the base, and pressure fit the lid. Most of the external turning can now be completed with tailstock support. Sand and finish most of the lid now, as access to the central part will be lost in the next step.

7. Next step is to tape the two pieces together and finish of the lid without tailstock support. Make sure your tools are sharp, and cuts are light, as the tape is the only support for the lid. The base is also being held on a relatively shallow mortice. Complete any sanding/finishing of the lid now. Next step is to allow for the finial to be fitted. An easy method is to drill a small recess with a Forstner bit, so you know the diameter to turn the base of the finial. You may also want to create a flat area on top of the lid.



8. Now it's time to turn the finial. Using standard chuck jaws, mount the blank on the internal jaws (see picture). First tighten the jaws to a loose grip on the blank, and then push it in with the live centre before fully tightening. As with any tenon grip, make sure it doesn't bottom out on the jaws. This will help to keep the piece centred.

9. The finial can now be turned, sanded and finished. Keep the tailstock support in place for as long as practical. Once the tailstock support is removed, be very delicate, as there's limited support. Turn the base of the finial to match the recess established in step 7, and try to undercut it so it sits nicely on the lid.



Job done, time to sharpen tools for the next project!

