

Make Your Own Custom Screwdriver

Tools you will need:

- Lathe and turning tools (parting tool, detail/spindle gouge, spindle roughing gouge)
- Drill press or a Jacobs style chuck for your lathe
- 5/8" drill bit
- Outside calipers

Wood:

Pick a suitable dry, hard wood such as cherry, walnut, hard maple, cocobolo, purpleheart, etc. Dimensions: 1 3/4" square x 6" in length (these dimensions can be varied to suit personal preferences or a particular design).

Steps:

1. You may wish to pre-drill the blank before turning to ensure correct alignment. You will need to drill a 5/8" hole 3 1/2" deep. You can do this one of two ways: on a drill press by squaring the ends of the blank, clamping it to the table and drilling vertically, or by drilling on the lathe. Drilling on the lathe can also be done after all turning is completed, provided you drill exactly. To drill on the lathe before shaping handle: place a Jacobs style chuck in the headstock with the 5/8" bit. Mark the centers of both ends of block. Place the tip of the bit into the center of what will become the driver end of the handle. Next bring up the tailstock with a live center to engage the other end of the wood block. Hold the block of wood with the left hand, turn on the lathe at a low speed (under 600 RPM), and slowly crank the tailstock handwheel to begin drilling. Clear chips frequently. If you have pre-drilled the hole you will need a cone-style live center for the tailstock side of your lathe to fit into the hole. Another option is to simply turn a short piece of wood in the shape of a tapered cork to fit into the hole while turning. The blank will be mounted with the drilled opening on the tailstock side of the lathe.
2. Once the blank is mounted securely on the lathe and rounded, the next operation is to fit the brass ferrule (included in your parts package). This is most easily accomplished by using a parting tool and outside calipers. Measure the length of the ferrule and create a tenon of that length at the tailstock end of the lathe. The diameter can be measured with the outside calipers to create a tight metal-to-wood fit. Take the handle off the lathe and drive the ferrule (beveled edge towards the drilled opening) on to firmly seat against the shoulder of the wood.
3. Remount the handle and turn to the desired shape and size. Always be aware of the length and diameter of the drilled hole, making sure to leave enough wood for sufficient strength. Sand the completed turning to remove all torn grain and scratches.
4. Remove the handle from the lathe and drive the knurled metal insert into the wood, flush with the surface. The two internal slots in the insert must be pointed outward in order to accept the metal shaft that holds the bits. For added strength, apply epoxy inside the hole prior to driving the insert into the wood. Be sure that no glue will block the passage of the bit holder when it is inserted into the handle.
5. Cut off the waste material at the headstock end of the handle. Finish off by sanding the end of your handle. You can apply no finish at all, and allow a natural patina to develop from usage, or apply a drying type oil finish such as pure tung oil, Nordic Oil or Sam Maloof Poly/Oil Finish from Rockler.