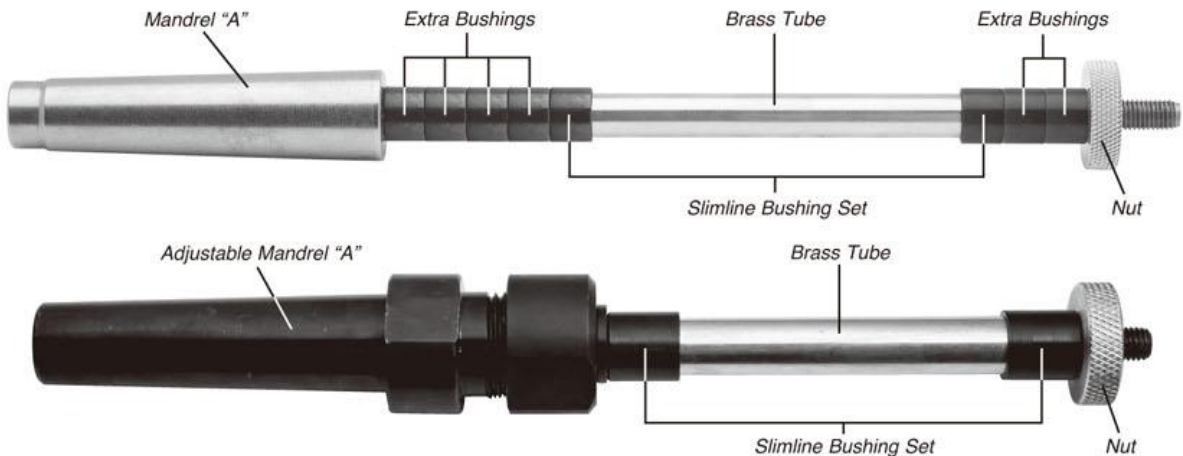


## Scratch awl kits Assembly Instructions

### Blank Preparation

1. Cut the blank about 1/8" longer than the Brass Tube to allow for "blow-out" or hole elongation.
2. Drill the blank with a 7mm drill bit at a speed of 900 to 1200 RPM.
3. Polish the Brass Tube with 220 grit sandpaper to remove oxidation and roughen the tube. This can be done by hand or by chucking it in a drill press or portable hand drill.
4. Prepare to glue with medium CA (cyanoacrylate) glue or two-part fast drying epoxy.
5. Apply the glue to the outside of the tube with a liberal amount around the tube end that is inserted first. Do not apply glue to the inside of the blank, as this will cause the glue to get inside the Brass Tube and ruin the tube.
6. Insert the tube with a twisting motion into the blank until the tube is equidistant between both ends of the blank. Wipe off any excess glue on the ends of the blank. Allow the glue to dry.
7. Using a barrel trimmer, disk, or belt sander, trim the ends of the blank until you can just see the bright brass ends of the tube. The face of the ends must be perpendicular to the Brass Tube and parallel with each other. It is imperative to match the length of the trimmed blank to the original length of the Brass Tube and that the inside of the Brass Tube is clean and free of any glue.

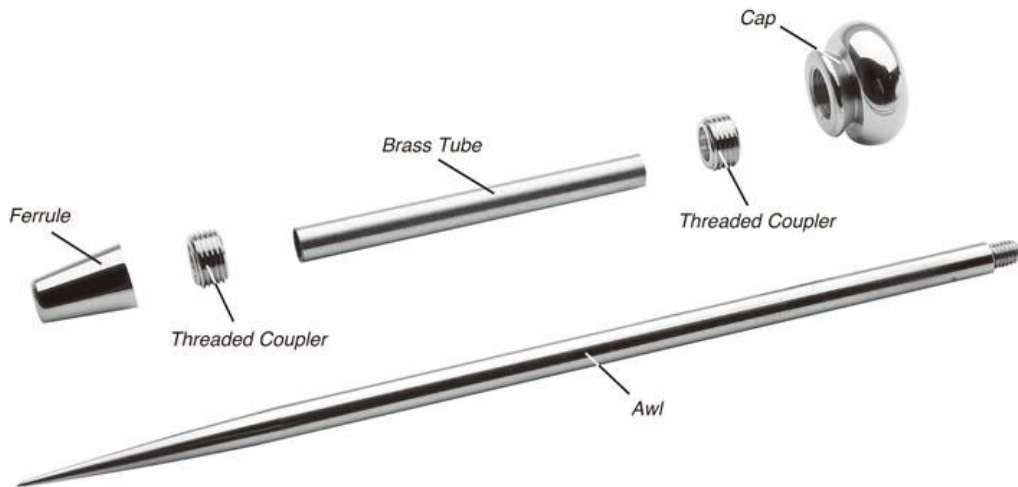


### Turning the Blank

1. Assemble the blank on the mandrel with the bushings placed as shown in the picture above. Note that all of the bushings are the same size.  
**Note:** Either Wood Spacers or extra Bushings may be used to fill the extra space on the mandrel.
2. Tighten the tailstock and then tighten the mandrel nut that holds the blank. Do not over-tighten the tailstock or mandrel nut as this may cause the mandrel to flex, causing the blank to go out of round.
3. Measure 1/4" from the ends of the Brass Tube and make definitive marks. Using a sharp parting tool, remove all of the wood from the 1/4" mark to the end of the blank. Be very careful not to damage the Brass Tube.
4. Turn the blank to the desired shape. The diameter of the blank at the butt end of the awl handle should be 9/16" (14.3 mm). The diameter of the blank at the point end of the awl handle should be 1/2" (12.9 mm).
5. After turning, sand the surfaces in progressive steps of 220, 400, 600, and 1000 grit. If a higher finish is desired, micromesh sandpaper may be used.
6. Apply the finish of choice and polish.
7. Remove the blank from the mandrel.

## Scratch Awl Assembly

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### Assembly

Read the assembly instructions completely before assembly.

1. Press one Threaded Coupler over each exposed end of the Brass Tube. The Threaded Couplers have a larger diameter stepped area on the inside which makes it easy to fit the Threaded Coupler onto the Brass Tube.
2. Thread the Awl into the Cap.
3. Insert the Awl through the butt end of the Brass Tube and thread it onto the Threaded Coupler.
4. Slide the Ferrule onto the Awl point and thread it onto the Threaded Coupler.