

# Working with Acrylics

The results you get from a finished acrylic blank far exceed any effort required to turn them.



PEN KITS & ACCESSORIES

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## Drilling the Blanks

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Drilling acrylic blanks is easily accomplished if a few simple steps are followed. Start by cutting the blank allowing a little extra length on each piece. Often when drilling plastic the drill bit can catch, cracking the blank as it exits. Avoid this by not drilling through the bottom of the blank, and then cut off the excess at the end. Be sure to clear the flute approximately every centimetre as you drill.

## Gluing the Tubes into the Blanks

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Sand the outside of your brass tubes. Sanding cleans the tubes and provides the glue with a better grip. CA glue and Epoxy are the most popular choices. When turning plastics in general, some blanks are more opaque than others. You may want to paint your tubes to keep the brass tubes from showing through, thus giving an unwanted brassy glow on parts of your project that are turned closer to the tube.

Use a small amount of thick CA glue on the outside of the tube or the inside of the hole. Use enough glue to coat the entire surface. If you use too much glue, it will get inside the tube. Glue inside the tube needs to be removed and is most easily done before the glue sets. After the glue sets, use a box knife, Dremel tool, or similar device to remove it. The fit of a pressed-in part with the tube is very tight, and any excess glue is likely to cause cracking during the final assembly.

## Turning the Blanks

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Aggressive cuts and acrylics don't mix. The best way to turn an acrylic is to use a fingernail bowl gouge or a skew in proper form to give you a "shear" cut. Using a shear cut, you will slice the material from the blank instead of scraping it off. Cutting will cause less impact to the blank and require less sanding. *(It is not recommended to use any of the carbide tipped tools to turn these, as they function as scrapers and will not work well on the acrylic.)*

If you don't have a proper form with a skew or don't have a fingernail gouge, a standard spindle gouge will work. However, be certain to keep your tools sharp and use light cuts, or chipping may occur. As you reach final dimension, you will want to slow up a little and start gently working out any remaining chips or grooves. If you have chipping that is too deep, you may use a drop of thick CA glue to fill the chip seamlessly. You will then want to turn the CA glue back to flush and finish polishing as usual.

## Polishing

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Sand to 400 or 600 grit, then switch to Micro-Mesh and polish through all the grades. You may wish to stop the lathe once in a while and use your sandpaper or Micro-Mesh (depending which step you're at) to sand the length of the blank to remove rotational scratches in the blank. If you get scratches that don't come out, drop back a step or two in the process and start again. Depending on your results, you may wish to use a plastic polish or buff to further shine the barrels.

**Note:** Be careful not to overheat the blank by setting your lathe on a high speed. This can cause the blank to melt.