

TIP 77— Converting a Sherline Lathe into a Precision Disk Sander/Jimmy Cancino

As promised I would like to share a neat little conversion I devised to quickly convert my Sherline lathe into a precision disk sander. All that's needed is two Sherline ¼ in. tool posts, a sturdy aluminum plate and a few Sherline face plates.

As you can see the aluminum plate is held in place with the tool posts mounted on the crossslide (Figure 1).

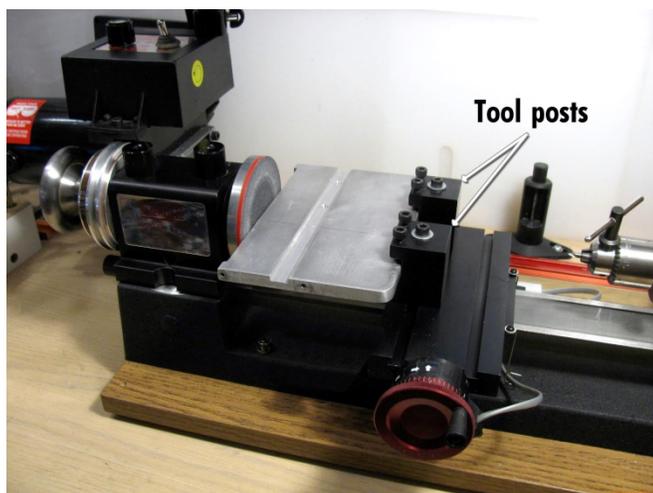


Figure 1—Shows a general 3/4 view showing the dual tool posts (P/N 40180) mounted on the crossslide and 1/4 in. cast aluminum plate, alternatively, a steel plate could be used.

I faced-off the faceplate to ensure it was nice and square relative to the spindle shaft. The faceplates would benefit from being blank, without slots. Then I stuck the faceplates to a disk-shaped piece of Lexan using thin double-sided adhesive tape, but with a slotless faceplate the user could mount his abrasive using double-face tape without having to resort to the acrylic discs (Figure 2). I avoid using double-sided tape that is rubbery, thick or spongy to ensure firmness and dimensional stability.



Figure 2—Shows a side view along with several faceplates (P/N 4007), faced and lined with 0.100 in. acrylic and several grits of abrasive sanding films ranging from 150 grit to 8 microns (K&S Flexi-Grit) held with double-faced 0.004 in. 3M adhesive film.

The greatest advantage is the ability to slow the speed way down when contouring plastic or acrylic parts—an invaluable feature for modelers working with such materials (Figure 3). And this setup definitely beats those wobbly miniature disk sanders that, no matter the price, well... wobble.

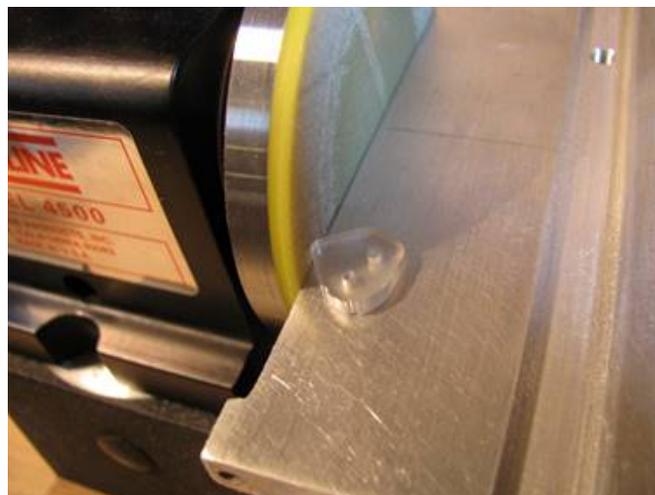


Figure 3—Contouring a piece of acrylic.

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The beauty is that I can convert from lathe to sander in less than 30 seconds, and that this setup can turn really slow, avoiding heat buildup especially when using styrene and acrylic. It can even be used wet.

I love this setup. It serves me well, and does so, on a regular basis. I used K&S abrasive film but pretty much any abrasive paper or fil can be used. Once worn, just peel off and soak in solvent to get rid of the gummy, glue residue and voilà! Ready to mount another abrasive onto it!