

ASK SMITTY

No woodworker (except *SMITTY*, of course) has ALL the answers. From time-to-time, everyone hits a snag, trying to figure out some sort of in-shop problem. Don't worry. *SMITTY* can help. Just use the special e-mail link directly below to send your questions to *SMITTY*. He'll do his best to get back to you soon, with the answers to those questions.

Here are the questions...and *SMITTY*'s answers for this issue...

Cutting plastics

From A. Boliver (e-mail question — city/state unknown)

I need to cut some clear plastic for a spice rack that I'm building. What's the best way to handle this? The plastic is about 1/8" thick and I need to cut some 2" x 26" strips.

Use your bandsaw or scroll saw.

DON'T REMOVE THE STICK-ON PAPER FROM THE PLASTIC BEFORE CUTTING.

Use a fine-tooth blade on the bandsaw. However, you'll have to be careful not to use too fine a blade if you're going to work with your scroll saw.

It's best to make a few test cuts with different blades, machine speeds and feed rates to find the combination that's best for the job you have to do.

Slow everything down as slow as possible. Feed the plastic into the cut slowly.

Once you've finished, hand-sand the edges as smoothly as possible, using 220 to 320 grit sandpaper.

BE CAREFUL NOT TO LET YOUR ABRASIVES WRAP AROUND THE EDGE & SCRATCH THE TOP/BOTTOM SURFACES OF YOUR PLASTIC.

When you've finished, you might even use some 400 to 600-grit wet-dry silicon carbide paper with some water to get it really smooth.

Once you've finished this process, you can try "polishing" your edges by passing the flame from a propane torch back and forth over the edges. Again, this requires some practice to get the technique just right. If you get the flame too close or dwell in a single spot for too long, you'll melt the plastic thoroughly.

Make some test "polishes" on some scrap pieces that you've sanded in EXACTLY the same way as your actual shelves, above....before trying this on one of your shelves.

Using a stacking dado set

From Frank Kuhn (e-mail question — city/state unknown)

I recently purchased a stacking dado set and am not really sure how to put the pieces together. I realize that there are two outside blades(left and right) and chippers in between.

- 1) Are the chippers placed in any sort of alignment? 45 deg. to each other? 90 deg?*
- 2) What about the shims? Is there any special place in the sandwiched blades for them? I notice that they are different thicknesses. Do they have a certain order in the stack or can they be placed anywhere?*

Sorry to have all of these questions but I thought it would be better to check first rather than kill myself by doing it “my way”.

No particular alignment is required...except that their cutting edges should be evenly “staggered” around the cutting circle, when assembled.

Insofar as shim placement, the same holds true...if you’re using the two outer blades plus two chippers and you need to use two shims, try to even out their placement...putting one shim between each outer blade and its adjoining chipper.

Repair parts for Shopsmith Model 10-ER machines

From Jack Recker (e-mail question — city/state unknown)

I just became the proud owner of a Shopsmith “antique”, Model 10-ER. Are parts and accessories available for this machine? It’s in excellent shape and has been sitting unused for about 30 years. I’d love to get it back into production.

A limited number of the arbor-mounted MARK V accessories (Drill Chuck, Drum sander, Disc Sander, Router Chuck, Molding Head, etc.) will fit model 10-ER machines. A few repair parts are also available, but not many. If you need a repair part, call our Technical Services hotline TOLL-FREE at 1-800-762-7555. If the part you need is not available, you’ll be sent to:

Battels Hardware & Tools
433 S. Waterman Ave. – Suite H
San Bernardino, CA 92408
(909) 888-1284

Battels had a very close relationship with Magna Engineering (the original manufacturer of the Model 10-ER machines) and has a fairly good supply of items for these machines. There is a good chance they can help you.

Maintaining a consistent diameter, end-to-end, on a turning

From Wayne Brimhall (E-mail question – city/state unknown)

I bought a rolling pin blank(square) to turn on my Shopsmith MARK V. How do I keep the diameter the same along the main part with the tool rest only 1/2 the length of the workpiece ?

Start by using a set of outside calipers (set to your desired diameter, of course) and your Parting Tool to make a series of parting cuts to your desired diameter about every inch along the length of your workpiece.

Then, turn your cylinder (between your parting cuts) as far as you can go with the tool rest (and table carriage) locked in the far left position. When you've reached the limit in this position, move the carriage and tool rest to the right and turn your next section, following the same procedure.

Once you've turned everything down as best you can, hold your 12" Shopsmith Sanding Disc (with paper attached, of course) in your hand and use it as a large "sanding block" to bring your rolling pin to final size and maximum smoothness as your turning rotates at a slow to medium speed between centers.

Installation of stairway moldings

From P. Moty (e-mail question – city/state unknown)

I am installing molding down a stairway. The molding I would like to install will run parallel to the chair rail molding. The angles of the panels will not be 45 and 45. I am having trouble getting the molding to align exactly. Do I have to use a compound cut, and if so, how do I calculate the angles?

To start with, I am assuming that your intention is to make some sort of "pseudo raised panels".....either above or below the rail of a stairway.....running parallel with an existing "chair rail" that's also running up this stairway.

First, you'll need to measure the angle of the stair rail (and treads) as they compare to the adjacent vertical wall with a sliding bevel, protractor or other similar tool. Based on our understanding of your situation, this angle is 54-degrees. (Its complimentary angle is 90-degrees minus 54-degrees — or 36-degrees)

Looking at the panels (or "frames"), as you face them going up your stairway, the top left corners of your frames (or raised panels) angle should therefore be 54-degrees. To cut your miters, you'll have to divide this by two and cut your miter angles at 27-degrees. This angle will be the same 54-degrees for the diagonally-opposed bottom right corners of your frames (or raised panel) angle.

In order to create a complete frame or panel of 360-degrees, the two opposing frame corners (top right and bottom left) will be the previous angle (in our example case, 54-degrees) times two (or 108-degrees) subtracted from 360-degrees. This would equal 252 degrees.

Then, divide this number (252) by two to arrive at the corner angle for each of the two remaining corners. In our case, this would be 126-degrees. As before, you would then divide this (126-degree) angle by two, to arrive at a 63-degree miter cut on each piece in each of these two corners.

So....to summarize. For each frame, you would make four 27-degree cuts....and four 63-degree cuts....totaling 360-degrees.

MARK V power requirements

From M. Turman (e-mail question – city/state unknown)

What AMP breaker does Shopsmith recommend for the Shopsmith MARK V ? I am setting up a new shop and would appreciate your help.

15-AMPS. We recommend that you use a time-delay or “slow-blow” fuse or breaker...since start-up amperage can reach near 40 AMPS. Also, use wire rated for 15-AMPS – 20-25-AMP wire would be even better – minimum 12-gauge.