

# 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...

## **Raised Panel-Making Fixture**

*From Wayne F. via e-mail*

*I am building your Colonial Dry Sink that was in the Sept/Oct 2001 issue. Can you please explain how you build the raised panels?*

*As you face my table saw, the blade tilts to the left. Do I put the fence to the left and then place the board flat or do I stand the board on its edge. How do I know the position of the wood's width from the blade in relation to the edge?*

*Any help would be appreciated as I am trying to get this ready for a Christmas present for my mother.*

Start by tilting your saw table or blade to 15-degrees off perpendicular (in your case, tilted to the left, from 11 O'clock to 5 O'clock). Position your rip fence to the RIGHT of the blade.

Make a wooden "sled" that's shaped like a lower-case "h", except with its "hump" on the left side and the vertical "leg" on the right. The inside dimensions of this "hump" should match the thickness and height of your rip fence.

Position the "sled" over the rip fence and mount your panel to it with clamps...or with screws from the back side (CAUTION: Be sure no screws are in a line with the sawblade when cutting)

Adjust your fence position and sawblade's depth-of-cut to achieve the panel profile you want. You'll have to make a series of trial cuts, followed by more adjustments with identical thickness scrap wood until you achieve your desired profile.

Check out this link <http://www.woodshoptips.com/tips/041403/index.htm> for a drawing of this special fixture.

**DANGER:** Table saw panel raising can be a dangerous operation because you can't use upper sawguards during this operation. That's why you need to build the "sled". This way, you can push the "sled" and keep your hands out of harm's way while making the cuts.

## **Repetitive Drilling Of Cylindrical Stock**

*From Pat H., Lexington, SC*

***I am trying to find a way to do repetitive drilling of centered holes on a piece of round stock with my MARK V. Is there a jig or method I can make to ensure center alignment ? For example, I want to drill 3/16th holes in a piece of 1-1/4" round stock 36" long...starting at 4 inches up from the bottom, then at 8, 12, 16, 22 & 24 inch intervals. Thank you for any advice and suggestions***

You can form a V-Block on your MARK V worktable by using your Rip Fence. Here's how. Set your MARK V up in Drill Press mode and tilt your worktable to 45-degrees.

Next, install your Rip Fence on the worktable. It will serve as half of a "V-Block" that's formed where the Fence meets the Table surface. If you're planning to drill all the way through your stock, you'll need a "sacrificial" piece of 3/4" stock against your Rip Fence face and another laying on the worktable surface. This way, when you drill all the way through, you won't be drilling into your Fence or Table surface.

Insert a bit into your Drill Chuck. Move the worktable in-and-out until the point of your drill bit aligns perfectly with the location where the bottom edge of your Rip Fence meets the worktable surface. You now have a "V-Block" fixture to hold your workpiece while you bore a long row of perfectly-centered holes. There you have it!

To be sure all of your holes are properly spaced, lay all of your workpieces on your benchtop with the ends in perfect alignment. Then, use a carpenter's square to scribe lines across the tops of all workpieces at once. When you drop your workpieces into the "V-Block" set-up, align the bit point with your scribed lines and drill away. That should do it.

## **"Chewed-Up" Router Cuts On The Shopsmith MARK V**

*From Sally F. via e-mail*

***I have recently purchased the Router Attachment for my Mark V. I attempted to use it on a scrap piece but ran into some problems. As is the case with any first-time use of a new piece of equipment, I proceeded as cautiously as possible. Unfortunately, things didn't go too well.***

***The bit (I was using a Dovetail Bit) chewed up the wood pretty badly. I placed it on the highest possible speed (fast is the setting I believe) and moved the piece as slowly as I could. But the result was still the same. So, I took out the Dovetail Bit and replaced it with a Straight Cutting bit thinking that I had "bit off more than I could chew" with such an advanced bit.***

***The same thing happened. The board was chewed up. I even tried to rout the piece one small segment at a time. I suppose I could use sandpaper to clean up the chewed up parts, but from what I've seen of routers, I know there's something better there!***

***Could it be the Shopsmith Router Attachment simply isn't fast enough for what needs doing? Do I need to purchase the Speed Increaser? I'd like an alternative if there is one!***

The most likely answer is that you're feeding your workpiece in the WRONG DIRECTION. As you're facing the machine (in your working position), the workpiece should ALWAYS be fed INTO the rotation of your router bit...that is, left-to-right.

Feeding the workpiece in the opposite direction (WITH the rotation of the bit) can result in what's called a "climb-cut"....which will almost always produce the problems you describe (there are exceptions to this rule, but they're few and far between). Not only will your results be less than desirable, "climb-cutting" is also a very dangerous proposition that could lead to the workpiece being grabbed and thrown.

The MARK V is plenty fast for most home shop routing operations, providing you take your time and feed your workpiece slowly and steadily into the rotating Bit. If you find yourself in a production situation where speed is critical, the use of a Speed Increaser will allow you to work faster with improved efficiency.

### **Squealing MARK V just needs a good Belt !**

From Jim S. via e-mail

*I have a Shopsmith MARK V which has set idle for several years. I have just started using it again, and today, I noticed that the belt would squeal when I ran the motor up to Table Saw speed. Any suggestions? Also...do you have any suggestions for acquiring a tachometer so that if needed, I can reset the motor speed? I did notice that after I replaced the first belt, the Speed Dial didn't seem to rotate just right, almost as if it were binding. What way would be best as far as replacing the belt ? Does Shopsmith offer a kit?*

You could try some belt dressing if a slipping or dirty belt is the only problem. However, I believe you have more problems than just a slipping belt...and attempting to re-set the speed is NOT recommended. This is where your other problems come up.

It sounds to me like your Speed Dial may have been turned without the machine running. This would have caused damage to either the rack on the speed control quadrant and/or popped-off the head of the retaining screw at the eccentric. Loss of this screw head would allow the Idler shaft to be pushed out of the headstock, possibly causing the POLY-V belt to rub the headstock casting during normal speed changes. Either way, moving the Idler shaft out of position or damaging the rack teeth on the quadrant will make the speed dial difficult to turn.

I suggest that you call Technical Services at 1-800-762-7555. They can walk you through an analysis of your problem and the procedures for re-adjusting the Speed Change system.

## **Self-professed *cheap husband* needs advice on sanders**

*From Cheap Husband via e-mail*

***My wife is a beginning woodworker and wants a “sander” for her birthday. What type is good for a beginner and how much money should I spend on one?***

That's a pretty open-ended question. There are a multitude of sanders available...most designed to serve special purposes. Shopsmith's 6" stationary Belt Sander is a great all-around machine for sizing project pieces, sanding wide surfaces or edges smooth and a host of other operations.

Our Strip Sander is a great choice for rapid sanding of areas (such as inside curves) that are difficult to get into. Our Disk Sander will smooth edges and outside curves wonderfully. And our Drum Sanders are also ideal for sanding inside curves and similar areas. All of the above-mentioned sanders are designed for use with the Shopsmith MARK V.

Beyond these, there are also portable Belt Sanders, portable Pad Sanders and more. Of the portables, the Random Orbit Pad Sander is probably best because it will remove stock fairly quickly without leaving swirl marks (Good ones are usually available for around \$50 to \$80.)

If you have a MARK V, you already have a Disk Sander and should probably add some Drum Sanders for small work and a Shopsmith Belt Sander for surface smoothing and rapid stock removal. If you don't own a MARK V and have limited funds, the Random Orbit Disk Sander is a good all-around choice.

Just remember....sanders are a lot like cars...they're purpose-built. Just as you wouldn't try to haul a piano across town in a 2-seat sports car, you also can't sand tight inside curves with a random orbit pad sander (this is a job for a Strip Sander or Drum Sander)...or remove lots of stock quickly from workpiece surfaces with a stationary Disk Sander.

Hope this answers your questions.