BY MARC SPAGNUOLO

Get the Most From Your Router

Good, clean bits will take you a long way toward success.

The router is, simply put, a multi-tasking workhorse in the woodshop. But you would be surprised by how many folks don't get the most out of their router experience. After all, this hand-held powerhouse has the potential to create, and an equal and opposing power to destroy. While the concept seems simple – a metal bit spins in circles as you drag the unit along a piece of wood – it can be harder than one might think to achieve perfect and consistent results.

I vividly remember my first experience with a router. The shellac on my woodworking wings was still wet and I decided it was time to get serious about edge profiles and joinery. I dropped some hard-earned cash on the same router I saw David Marks use in his DIY Network show, "Woodworks": the Dewalt DW621.

I had visions in my head of graceful roundovers, crisp chamfers and perfectly cut mortises. Unfortunately, the reality was a little less magnificent. Between the tear-out, the burn marks and the occasional piece of airborne wood, I was feeling discouraged.

Taking a step backward I decided to hit the books and reinforce the fundamentals of good routing. Armed with that knowledge, I returned to the shop and began to achieve the results I had originally hoped for. Since then, the router has become one of the most useful and versatile tools in my arsenal.

Over the years I've learned numerous tips, tricks and insights that I wish I was aware of when I first fired up that router. Here are some of my favorites.



Bit arsenal. *If you do a lot of routing, you'll surely build up a large collection of bits in a short time. Keep them neatly organized and clean, and they'll always be ready for the routing job at hand.*

Online EXTRAS

To watch a video of The Wood Whisperer as he demonstrates ways to create burn-free routed edges and explains how flush-trim bits improve your work, go to:

popularwoodworking.com/09

What Bits to Buy?

Buying a set of router bits can be incredibly daunting for an experienced wood jockey, let alone a noob! Woodworkers everywhere ask themselves, "Should I buy a set or individual bits?" and "Why does one 12-piece set cost $30 while another set costs $200?"and "What about those 100-piece sets with the too-good-to-be-true prices?" Well forgive me for generalizing folks, but when it comes to router bits, you get what you pay for.

An inexpensive bit made with cheap steel just can't compete with a high-quality carbide bit in terms of balance and longevity. But let's not throw out the good wood with the sawdust! Bargain bits do have their place. The real dilemma is knowing which bits you'll use the most in your work.

Unfortunately this is something you don't always know ahead of time. My recommendation is to buy an inexpensive 12- or 20-piece set, use it for a few months then see for yourself which bits get the most action. Now you have a much better idea of which bits are worth buying from one of the better-quality manufacturers.

PHOTOS BY THE AUTHOR

Another great thing about this tactic is that you now have a nice assortment of bits at your disposal. The day will come when you need a special bit for a special situation, and you'll be glad you have that 20-piece set sitting there ready and waiting.

The Flush-trim Bit

If there is one bit that provided that "Aha!" moment for me, it was the flush-trim bit. If you aren't familiar, a flush trim bit is nothing more than a straight bit with a mounted bearing that's the same diameter as the bit.

If you attach a pattern to a workpiece, you can easily create an exact copy of the pattern's shape within seconds. This helps us produce identical table legs, flushes up overhanging veneer after the glue-up, trims edge banding flush with the surface and can even help batch out those fancy picture frames in time for the holidays!

One other use for a flush-trim bit that we can't overlook is for joinery. With the help of a simple shopmade template, you can produce the perfect mortise all day long.

Don't Bite Off More Than You Can Chew!

When you use a tool for the first time, do you generally go slow or do you just ram it in there? Seems like the answer should be obvious, but you'd be surprised how many people I've seen slam a router into wood like there's a prize waiting at the board's center.

Inevitably the router takes off on its own and the wide-eyed student is left holding on for dear life! Don't let this happen to you! When routing a workpiece, think about how you can make the operation safer by taking multiple passes. It does create a little more wear and tear on your bit but the benefit comes in the form of a crisp, clean, tear-out-free cut and the special added bonus of keeping all your fingers.

Spiral Bits

Spiral bits are also a cool variation of the straight bit and they excel at creating mortises. The curved cutting surface produces a clean cut in much the same way a bench plane cuts more easily if skewed. Because of the spiral design, these bits are available in two styles: up-spiral and down-spiral.

An up-spiral bit is likely to stay cooler as it naturally brings the sawdust up and out of the mortise. Less debris means less friction and less friction means a cooler bit.

The one negative side effect of the up-spiral is that it has a tendency to tear out the fibers near the top of the mortise. This isn't a big deal if your tenon has a decent shoulder on it, but if you are creating a through-mortise, you'll want the cleanest edge possible. That's where the down-spiral bit comes into play. So most of the time, up-spiral is my bit of choice, and I use down-spiral only where the edge will be visible or if the wood is especially prone to tear-out.



Flush trimming. *All of these bits are flush-trimming bits. Notice that you can get bits with the bearing on the top or bottom, in different sizes, and with different shank diameters. What you buy depends on your router and routing needs.*

More Router Tips

Here is a shotgun blast of handy tips:

If you have the option, buy 1/2"-shank bits. They are less likely to vibrate and should produce cleaner cuts.

Stay away from high-speed steel bits. Carbide stays sharp significantly longer!

Keep the router moving. It's OK to go slow, but try not to stay in one place too long. You'll burn the heck out of your wood and the excessive heat will dull your bit before you know it.

A dirty bit feels like a dull bit. Keep your bits clean by scrubing them with a toothbrush and a mild cleaning solution such as Simple Green or even a little soap and water. Dry the bits thoroughly afterward (I use a blow drier).

If you can, try to buy a router with some sort of dust collection. Keeping the chips out of the path of the bit yields a cleaner cut. And as always, less dust in the air means less dust in our lungs.

As handy as these tips are, they only tell a small part of the router story. In fact, I consider these to be "gap filler" tips. So it's a good idea to purchase a good book, or perhaps a DVD, to really get into the meat of the subject. Although there is really no substitute for hands-on practice, I find that a strong background knowledge makes the learning curve easier. Before you know it, safe, effective, and creative routing will just be a routine part of your woodworking bag of tricks while wood missiles, tear-out and burn marks will be a thing of the past. **PW**



Keep it clean. *If your bit isn't cutting well, it might not be dull, just dirty. Clean your bits after use with a toothbrush and a mild cleaning solution.*

Marc is a professional woodworker as well as the creator and host of The Wood Whisperer (thewoodwhisperer.com). The Wood Whisperer (an instructional Internet woodworking show) represents Marc's three passions: woodworking, technology and education.

About This Column

Our "Wood Whisperer" column features woodworking thoughts and ideas, along with shop techniques from Marc Spagnuolo. Most columns have a corresponding video related to the techniques or views expressed in the column available at popularwoodworking.com/video.