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### SEPTEMBER MEETING HIGHLIGHTS

Theresa and Leonard Wilfret were our hosts this month at their shop and Jeff Cormier, Dick Trough and Theresa Wilfret were the presenters. The focus this time was on routers, how they are best used and tips on using them properly.

One of the things we wanted to hear was what folks liked about the routers, bits and jig they already have. Unfortunately, the LCWW “management team” (if they can be even very loosely called that) were all committed to other things this time. So George Kuffel was our leader (and he took great (even typed) notes).

Theresa did a presentation on using a word processor program to create scroll saw or even router templates. This article appears latter in the Newsletter.

Jeff and Dick started us off by discussing some of the maintenance and safety issues you should note regarding routers.

First, do not overtighten the collet (especially if there is not a bit in it). Collets are generally made of hard steel and overtightening can break them. You should also remove and carefully clean the collet in your router. They are made of unfinished steel so can develop rust. On removal, if you have rust, carefully clean it using fine sandpaper or steel wool. Then give it a coat of light machine oil (ATF transmission oil is acid free and really cheap). The shanks of router bits are made of either HSS or carbide—both harder than the collect. Always tighten the collect around the bit, but never be too aggressive. A broken collect can spit out a bit going 20-30,000 rpm. Not something you want to be in front of.

Another great suggestion is to clean the motor of your router. As they suck in air for cooling, they can collect lots of wood dust over time. This is especially the case if they are enclosed in a table mount.

To do this, first remove the bit and collect (after unplugging the router, of course). Also, if easy to do (and for most routers, it is easy), remove the

complete base. What you are left with is the motor housing. Using compressed air, lightly and carefully blow out any dust in the windings. Most routers have replacable brushes that contact the collimator of the motor. In most cases, these can be removed and cleaned as well or even replaced if needed. Most router makers offer brushes for the motors (e.g., Sears router brushes are available for models going back into the 1970’s).

You can lubercate your router bearings with graphite. This is available in many forms, but the easiest to use is lock lubercant. It is very light oil with suspended graphite.

Given that your router is all tuned up after inspecting and cleaning the collect, cleaning and lubricating the motor and reassembling everything, just what do you put in it? Router bits!

There are litterally hundreds of manufacturers and thousands of router bits available. The standard of buying the best you can afford applies to lots of woodworking tools, including the router bits you acquire.

A member mentioned that MLCS ([www.mlcswoodworking.org](http://www.mlcswoodworking.org), 1-800-533-9298) has a good selection. We found that they carry some 66 different profiles, all in carbide and very reasonably priced. You can get a fairly comprehensive set of 64 profiles for about \$190.

And here’s a tip from our pros. Don’t buy cheap bits. Today, there is no reason to purchase HSS router bits unless you are going to throw them away after each project. While you can re-sharpen a HSS bit, it is not worth the cost. You can also have a carbide bit sharpened for the same price. The carbide bit will last up to 10 times longer.

Comming Up . .

**LCWW Annual BBQ.** Wednesday, October 27. Doors open at about 5:00 p.m. and food will be served begining at about 6:00 p.m. You need to buy a ticket for \$10 per person and they will be available at the October meeting at Gary Roock’s shop or you can get them from Barry or Bubba. PPG Family Center.

## WORD PROCESSOR FOR TEMPLATES

Long time member Theresa Wilfret was not only our host at the September meeting, she did a presentation on using a word processor for creating a template for scrollwork or routers.

While just about any word processor will work, like most of us, you use the tool you know to do the job that needs to get done. Theresa knows Microsoft Word and that is what she uses to produce templates for scrollwork. Her procedures work for both IBM compatible and Macintosh computers running Microsoft Word 98 or later.

The procedure is straight forward, first, just open a blank document in MS Word.

Next, select File/Page Setup/Paper Size/Landscape/Apply to Whole Document/ and click the OK button. Mac users just need to select Landscape.

Then, type the name or word you wish to make a pattern for your scroll saw. Then select the word(s).

The critical step is choosing a good font for the pattern. Choose a font on the formatting toolbar. Note that a thicker font may be easier for scrollwork. (Examples: Allegro BT, Bernard MT Condensed, Monotype Corsiva, Garamond, Rockwell). All of these fonts come standard with personal computers available today. If you don't have these, they can be downloaded from the Internet. Use whatever font you want but keep in mind that complex fonts (e.g. Old English) are going to be more difficult to cut than simpler ones (e.g. Arial).

Theresa suggests that you select at least a 72 point type face size for letters one inch in height or type the height number in the font size box on the formatting toolbar. Fonts are measured in a printers term called "points". One point is 1/72 inch so 72 points is one inch tall. All this means is that if you want 1/2 inch lettering, choose 36 points, 1-1/2 inch lettering requires 108 points, and 2 inch lettering needs 144 points, etc. As computers use so-called TrueType fonts, you can vary this down to as little as 1/144th inch if needed.

Next select Format/Font/ and check Outline for lettering and click OK. This gives you a font where the font is an outline rather than filled in.

What you want to do is select the word by highlighting, then select Format/Font/Character Spacing/Scale to 150% to widen the letters. You can also use so-called "kerning" to close or open up the space between characters.

Select Format/Font/Character Spacing/Condensed. Select various points and spacing between letters (kerning) to bring letters closer to each other and slightly

overlapping such as 6, 12 or 18 points. The kerning will make it easier to cut with a scroll saw.

Then adjust the Scale, Spacing (kerning), and Font Size until the desired effect is achieved. You may have to print a couple of different versions to get just the right size.

If you have a color printer, Chuck Middleton has suggested that you print in red as this shows up well when cutting under a standard light.

The final step is to print your pattern but always save the file before you print. This will save time when scrolling words for several projects. *Theresa Wilfret.*

## INTERIOR BOWL SANDING

From [www.woodezine.com](http://www.woodezine.com)

(Thanks John English)

Do you need to sand the interiors of your hollow vessels, but don't want to risk your fingers doing the job? Here's a simple solution from master turner Ellis Hein, author of *Woodturning Projects to Set Your Mind Spinning*. It's a small shop-built sander that chucks into your 1/2" variable speed drill.

You'll need the following supplies and tools to complete the sander:

1/2" x 10" dowel rod (1)

1-1/2" x 4" plastic pipe (1)

#6 x 1/2" wood screw (1)

Hacksaw (or other fine kerf saw)

Countersink bit

1/2" electric drill

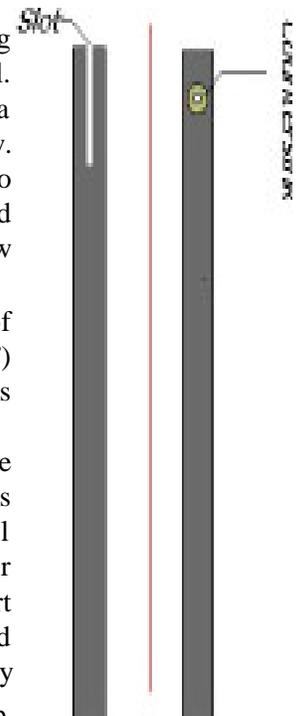
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Begin construction by cutting a 1" long slot in the end of the dowel. Turn the dowel 90 degrees and drill a pilot hole for a 1/2 in. x #6 wood screw. Note that this hole is perpendicular to the slot, and about 1/2" from the end of the dowel. Countersink for the screw head. (Figure 1—>).

Cut an assortment of grits of cloth-backed sandpaper to size (1-1/2") paper in half, to make it 4" long. (This will be a coarser grit to start with).

Slide the doubled strip into the slot in the end of the dowel, grit sides out, and position it so that equal amounts of paper protrude on either side of the dowel (see page 3). Insert the #6 screw into the pilot hole and screw it through the sandpaper. If any

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of the screw protrudes beyond the backside, file or grind it flush.

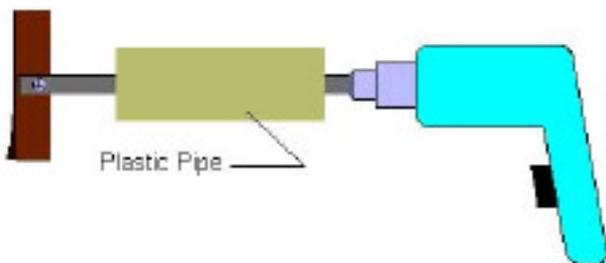
Slide the 1-1/2" plastic pipe onto the dowel. This is your handle, which will help you control the movement of the sanding head. Now, chuck the end of the dowel into a 1/2" drill, as shown in Figure 3, above. Roll the sandpaper around the dowel by turning the drill chuck forward while holding the sandpaper. (This way the sandpaper doesn't try to unroll itself when you run the drill.) Insert the business end of the jig into the vessel, switch on the lathe and pull the trigger on the drill.

The flapping sandpaper will cause some vibration, so I like to hold the drill with my right hand, while my left hand holds onto the plastic pipe to steady the dowel. Move the stick back and forth to sand evenly along the length of your turning.

The wood fibers of the dowel will be compressed by the drill chuck and will allow the dowel to loosen up over time. Stop the lathe and the

drill often to tighten the chuck.

Changing grits or strips is simple. Remove the screw, pull out the old sanding strip and insert the new. If you ground off the point of the screw, use a bradawl or nail to reach through the pilot hole and punch a hole in the sanding strip. Then install the screw, tighten it and you're ready to go again!



### MORE ON ROUTERS

When working with larger router bits it is necessary to slow down the bit. In addition to safety concerns, the router's speed can affect the finish. If the router is burning the wood or leaving a rough finish, try turning down the speed. If the router is chattering the wood's surface or leaving marks, try turning the speed up.

Routers without variable speed controllers can be slowed down with a router speed selector. These devices are designed to work with the motor to drop the speed without damaging the router. Avoid variable speed controllers not specifically designed to work with a router. You can find variable speed controllers at many woodworking specialty stores. Of course, many modern routers come with variable speeds and the best ones have a "slow" start up, making the entry into the wood much safer.

One of the things we didn't get to cover in the last meeting was what router do you like. Barry's favorite is the Porter-Cable brand. While Porter-Cable makes a wide variety of routers and router accessories, his favorite is the 693LR.

The unit is actually a kit that consists of a 1-1/2 HP unit with an additional plunge base. In other words, you can remove the standard fixed base and attach a plunge base to the basic motor. This means that you don't have to purchase a second router just to do plunge work. While plunge routing is something I do occasionally, it is not the thing I do most often. So changing the base (which takes a couple of minutes) is not a serious detriment in my work.

Another nice feature is that it comes standard with both 1/4" and 1/2" collets so I can use any bit I own. It also pretty rugged as I loaned it to the Millennium Park crew for three weeks. It came back running like it always had.

The downside is that it is not a "slow start" unit, which I would have preferred, but at less than \$225 (street price), I think it was a bargain. Accessories include a D handle, but you can easily fabricate your own.

However, if you have a table routing arrangement, you need a dedicated plunge router, so the Porter-Cable 693 would be inconvenient at best.

By the way, many routers today are rated at 1-3/4 to over 3 HP. This is strictly marketing as no electric motor will deliver more than about 1-1/2 HP from a standard house hold 120 volt 15-20 amp circuit. It is just not possible to shove more amps and volts to the motor.

What the advertisements say is that the inflated HP ratings are "peak" HP. If you actually ran your so-called 3+ HP router at that rate, it would burn up in a few seconds (or throw all your breakers). The worst of these are ratings for shop vacuums at 5+ HP. Read the fine print. In order to generate that kind of power, you'll need something like 30 amps and 440 volts. Not at my house.

**Don't forget that we have a great BBQ coming up. Buy your tickets at the NEXT meeting or call Bubba (912-9030) or Barry (477-8474) if you need one.**