

## New to Woodturning and Confused with all the Choices?

This brief paper covers a number of things I wish someone had told me when I was just a beginning woodturner. This advice could have saved me considerable money and a lot of frustration. I'll cover topics such as which lathe to buy, which kind of chuck to buy, the importance of mentoring, the most essential woodturning and sharpening tools, and a bit about sanding and finishing.

One question often asked by new members of the AWA (Arizona Woodturners Association) is about woodturning tools. I brainstormed with several Club members as to which five tools you need the most when starting out. Of course, this is subjective and really depends on what area of woodturning interests you. I am going to give you my opinion, which is based on my experiences.

Why is that valid? Because I am a generalist. After eight years of woodturning I find myself President of the AWA, a club of 250 members that hosts a bi-annual symposium, the Desert Woodturning Roundup, and hosted the American Association of Woodturners National Symposium in 2014 in Phoenix. I do not consider myself a good woodturner. Yes, I do demo's for clubs and I can make just about anything. I am an executive during the day and turn wood for relaxation. I grow bored easily and can't stand production work. So in the woodturning world, I think that makes me a generalist. That is, I will make anything until I perfect it (in my mind or my wife's) and move on. Normally the first attempt has issues and is not so good, but by the beta version I am happy with the results. Maybe I'm not the best qualified person to write this article as I don't get to turn enough; that is, certainly not every day and sometimes not even every week or month. However, as one of our Board members said to me "You have every tool known to mankind." Before we start, there are many ways to solve a puzzle and different solutions that will give you a similar finished product.

Next we come to the why of this article. Partly because I can save you a lot of money by suggesting five tools that I use 99 percent of the time. I will even cheat at the end and give a top-10 list. However, the real reason is found in these e-mails from new club member(s):

*"Thanks Chip. I am relatively new to woodturning and would appreciate this. I took some beginning classes at Rockler and joined the club in order to learn more. After attending a couple of meetings I quickly realized how little I know and also realized some of the guys are pros. My intention was to build some salad bowl sets for my kids just like my grandfather made for his grandkids. I have now destroyed a fair amount of maple and regressed to just making pens. The only thing that keeps me going is the encouragement I have received at the meetings, that is, to just keep trying. Still, it would be great to have some more tips and or lessons. Thanks for everything see you at the next meeting." -- Anonymous*

*"I have been turning about 3 years, A mentor would have been great ... and still would be. I have asked and got help for specific issues when I have needed them. Now whether in your mentors group or as a separate class it would be helpful (to me and I hope others) on identifying unknown woods. I have been embarrassed to often not having my wood identified correctly." -- Another Anonymous*

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Numerous request, such as these, also made me realize our monthly meeting is not enough training for our new members. We need a mentor program. This pending program is still in the infantile stages, but we have Club members stepping up and volunteering. Mentoring will be a benefit of a paying your AWA annual dues. It also supports our status as a 501(c)3 non-profit.

I personally am not shy, and if something interests me I ask the member and go over to their house. However, many members are embarrassed with their skills and not willing to do that. For example: we have another club member who turns out great finishes yet doesn't think he is very skilled. I have actually purchased a piece of his work because I admired it. I encourage you to participate in the AWA President's Challenge each month or put pieces on the critique table.

Back to what tools you need to start out. First if you don't start on a decent lathe, your turning experience will be horrible, or at least super frustrating. My father in law is an example of someone who was interested in turning wood. He went to Harbor Freight and bought a cheap, sloppy Chinese lathe. You couldn't even move the banjo without a wrench. I don't know about you, but I move my banjo a lot when turning. You should too, if you're supporting your tools properly. I told him, after one teaching session, that the lathe was garbage and to throw it out. You are doing yourself a disservice not starting on a decent lathe.

My recommendation for a first lathe is a variable-speed mini lathe. Why variable speed? Humans are lazy; variable speed makes it super easy to adjust the speed of the piece you are turning, for safety. Recently at a demo I had to turn on a lathe on which you manually had to move the belts on the pulley system to change speeds. I had a hard time adjusting the speed and at numerous times found myself turning at the incorrect speed for what I was doing. When I turn any item there are times when I need to turn slow (roughing the wood to balance it), fast once roughed for good clean cuts, and slow again when sanding.

A little disclaimer here, I am not sponsored or have ownership in any woodturning tools or items for sale, besides what I make myself, which are usually given as gifts.

You cannot go wrong with a variable-speed Jet Mini or Midi Lathe. I have one to this day in my shop and use it for small items such as pens, jewelry, and small bowls. The swing is 10 inches, so small bowls are easily turned. (Swing is the maximum circumference of a bowl or platter that can be turned.) I bought a lathe-bed extension for a turning project, but never use it now.

If you want to get serious and buy a full-size lathe, then the Powermatic 3520B is, in my humble opinion, the best deal and most versatile lathe on the market. There are many other nice lathes that do all the same things, but most cost 2-3X of the Powermatic. I have kids to send to college, so the Powermatic was my logical choice. I looked online for the best deal on a new one, and had it drop shipped to my home. This was the best deal I could find. However, now I would suggest you go online to find your best price and then see if one of your local woodworking stores will match the price. Jet and Powermatic annually have a 15 percent off sale as well. I did buy the Powermatic lathe extension and use it ALL the time for getting the tailstock out of my way.

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There are many lathes on the market and a lot of folks settle just fine with a mid-size Jet Lathe with a 16 inch swing. Whatever lathe you are looking at, try and turn on it first. Also, consider the height of the lathe and if you can adjust it. This can make your back much more comfortable, which will help many of you with the chronic problem of TMB (to many birthdays).

You don't have to have the Powermatic, but it will tackle almost all you ask of it. I have three lathes in my shop, but use the Powermatic or Jet mini 99 percent of the time. Probably 90/10 is their usage ratio. The vibrations of bowl turning are dampened by the heavier mass of larger lathes. Most people will quickly want a bigger lathe once they become more experienced. They will then be selling their used mini or midi at a loss. Not a bad loss, as lathes tend to hold their value, but still a loss. Or you will be like a lot of us and have two lathes.

The next thing is how do you hold turning items on the lathe? Again, this is personal preference and there are many ways to skin a cat or mount a piece of wood for turning. Did I mention that I am human and therefore lazy? Most turners end up using four-jaw chucks to hold their wood when they turn. In my opinion, this should be your second purchase following your lathe; but made the same day.

The best four-jaw chuck on the market, in my opinion, is the VicMarc, which comes standard with dovetail jaws. Why do I prefer dovetail jaws? Dovetail jaws hold workpieces very firmly and when used correctly can even hold finish turnings without marring them. I don't believe any other type jaw can match this capability, and many seasoned turners agree with me. I started with OneWay chucks and still use them, but they are ALL converted to dovetail jaws (which were expensive to convert).

I also probably have eight or more chucks. You don't need this many as jaws can be interchangeable, it just takes a couple minutes with an allen key. The budget equivalent is the Nova chuck, also standard with dovetail jaws, and lots of club members have turned on them for years. They have a maximum speed stamped into the side of them and I turn faster than that A LOT.

I seldom use a face plate to turn, but many woodturners who turn segmented bowls use them a lot. Most lathes come with a face plate, so you probably won't have any expense to try one out.

Please be safe and start all your work between centers until its balanced, then move it to the chuck or face plate. Since we are discussing turning between centers and safety I would suggest you purchase a Steb Center drive. It has a spring loaded center and will usually slip and let a catch spin instead of rotating the workpiece so powerfully that the workpiece is forced off the lathe.

Speaking of safety you clothing and hair are important. If you have long hair, tie it back. You should not wear clothes that could get caught in the lathe. You should wear a turners smock, shoes, and a dust mask. I am guilty of turning in flip flops, but have found some gators from a fellow club member, that go over my shoes and keep the shavings out of my socks when wearing shorts. Lastly some kind of dust mask and face shield is important for your health. There are

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many choices out there. I have personally been using the older Trend Air Shield and won't turn without it.

So how do you finish the bottom of a bowl? You can certainly jam chuck most pieces. I live in the desert and we don't have lots of free extra wood laying around, so I don't jam chuck that much, as I don't want to waste wood, but this is the most inexpensive solution. This is also the first way you should learn to finish the bottom of your work. I would soon suggest a Vacuum chuck as you improve your woodturning skills. I went on-line and paid something like \$300 for my first vacuum system. However, there are local resources where I bought my second one used for \$35. By the way, the local one worked better, but if you buy used you want to make sure it will draw at least 21 inches of mercury at 3 cfm in order to adequately hold your work on when vacuum chucking the bottom of a piece. I also need to mention this is a delicate process, and you should cut into the piece not across it when vacuum chucked.

We're finally talking woodturning tools in this section. However, this is subjective to what you want to turn. Most turners start turning spindles both for safety reasons and because the basics of tool handling are best learned on spindle turning. These are my five top tools:

1. 1/2-inch bowl gouge (American measurement; which is the diameter of the gouge shaft.)
2. spindle roughing gouge (the bigger the better)
3. detail gouge (sometimes called spindle gouge in either 3/8 inch or 1/4 inch).
4. parting tool (the thinner the better) and/or the diamond shaped.
5. medium scraper (the rounded edge type).

Later, when you have advanced in your turning, there are a few more tools you will want next:

6. 5/8-inch bowl gouge (later when you start to turn bigger bowls/items). Most people buy the Ellsworth bowl gouge with his grind, or reshape a standard-grind gouge to that shape.
7. Hunter brand carbide cutter for reaching far over into the bowl to finish the bottom. Note: this can also be done with a scraper or a traditional grind bowl gouge, particularly on smaller bowls. I just find the Hunter Tool the easiest.
8. negative-rake scraper (suggest you purchase the Thompson 1-inch curved standard scraper in 3/8" thickness and grind the negative rake yourself). Powdered metal tool is preferable.
9. Traditional (or Irish) ground 5/8-inch bowl gouge ground at almost 90 degree bevel works wonders on the bottom of a bowl.
10. Bedan -- I use this for rounding a tenon or cutting the dovetail on a tenon to hold onto the chuck.

The next logical question about tools is which manufacturer and I think this is subjective. An important consideration is the steel. Should you buy HSS (High Speed Steel) or some type of PM (fused Powdered Metal) steel? PM steel will hold an edge longer than HSS. I use both a lot. It really depends on your application. For a bowl gouge you're going to use a lot, I would suggest you send the extra \$10-15 per tool for the PM version. Currently I am partial to Crown

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and Thompson Tools. If I could have just one tool for bowl turning it would be a PM bowl gouge with a signature grind from David Ellsworth. It is the most versatile of the bowl gouges I own. I can turn a bowl without any problem with just that one tool.

The next item you HAVE to have is a grinding system to keep your tools sharp. The sharper the safer! You should set up your sharpening system next to your lathe. Earlier I mentioned that humans are lazy. If you have to walk across your shop you will not sharpen as often as you should.

Something that took me years to learn when sharpening was a soft touch. You should only be sharpening your bevel, not regrinding your tool (note: this is true for flat work with chisels as well). No more than one or two quick passes on the grinding wheel and you are back in business. A tool will last you years if sharpened correctly. I recommend an 8-inch slow speed grinder (use what you have if you already own a grinder) and a set of CBN (cubic boron nitride; superior to diamond for cutting hard steel) wheels to start with. CBN wheels do not need to be dressed nor balanced after initial installation and you can quickly add an edge to your tool and be back to turning. They grind so well and cool it is a challenge to ruin the temper on your tool, which is not the case with traditional wheels. Yes, they are expensive, but they will be the last wheels you buy and many of the woodturning clubs do "club buys" that make the wheels much more affordable. An important consideration in buying grinding wheels is whether or not you intend to sharpen PM gouges. Regular aluminum oxide grinding wheels will not properly sharpen PM steel. So, if you want to buy PM gouges, you logically must also purchase a CBN grinding wheel. CBN wheels also produce longer lasting edges on HSS.

Hands down the best tool on the market to help you sharpen your woodturning gouges (that aren't carbide) to a consistent profile is the Oneway Wolverine system. As you progress in your woodturning you might eventually start grinding your gouges freehand, but this approach is NOT recommended for beginning woodturners.

Then, there are the jigs so you can repeatedly have the same grind off your grinder. Most folks have the Ellsworth sharpening jig for their bowl gouges to put a fingernail grind on their gouges. This jig works in the Wolverine System. I am now personally hooked on Hannes Tool Sharpening System and use it in my shop.

I jig ground my tools when I sharpened when I first started turning, then went to freehand (after years of turning) when I took a Richard Raffan class and love the speed of sharpening free hand. Currently, on my bowl gouges I use the Hannes Tool Sharpening System for the repeatability of the grind. I keep mentioning bowl gouges because you will be using your bowl gouge (whether 1/2 inch or 5/8 inch) 90 percent of the time when turning a bowl.

You will then need a way to sand and finish your work. You can do this by just hand sanding both on and off the lathe. On the lathe is much easier to sand, but most pieces will need some hand finishing off the lathe. The wonderful thing about turning versus flat woodworking is I can finish a piece in a couple of hours versus weeks or months. I would suggest having a small rotary sander such as a Grex or even just a portable power hand drill with some 3-inch hook and

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loop pads would work fine. This is where a Chinese knock off has served me fine for five plus years.

For finish I would probably start with a wipe on finish of some kind that can be applied on the lathe with good results. My go too finishes are wipe on poly if I want a hard shiny finish. (Shiny sells) or my favorite which is Doctors Walnut Oil Formula with all the stuff he adds. Another is Mylands High Build Friction Polish which just works really well and is easy to use, however over time loses its luster. Rattle-can lacquer is often a finish I use as well.

I'm sure there are a lot of things I'm missing here, But I also feel confident that I could accomplish my goals of turning beautiful bowls with this setup. Getting into turning is not a cheap hobby by any means. You can offset the cost a lot by buying used equipment; but don't buy cheap stuff thinking you can upgrade later. You will ultimately be frustrated and may even give up -- which would be a shame. Buying high-quality used equipment and tools is always a viable option if you're seeking the biggest bang for your buck. The AWA Google Group is a great way to query fellow woodturners if you have a specific item in mind that you want to purchase used.

Lastly, as you have all heard the old saying there are many ways to skin a cat; well, there are even more ways to turn a bowl! So let the turning begin!

-- Chip Hidinger; 7/13/2015