Starting Wood Turning

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Thanks to Eddie Marchio and Peter Middleton for feedback on this article at the time it was written.

Given that this article was written over 10 years ago, a lot of the details and prices have changed, but the basic advice remains sound. For interest sake, I have left it in the original form. Scott Myles has long since passed on. John Speedy offers courses at Hardware Centre. See the list of trainers on www.wwa.org.za for more.

At Hobby-X, during the short time that I manned the stand and demonstrated, it was apparent from the questions asked about starting wood-turning that many people would like to try turning. However, the purchase of a first wood lathe is a significant obstacle for many. It is a major outlay and people are uncertain whether they will make long-term use of it.

I discussed this with several people in the club, and the first piece of advice given was: "If you are not sure that you will take to wood turning, take some lessons and then make a decision." The reasons being that if you decide not to take it further, you will have only spent the money for the lessons. After the lessons, if you do decide to buy a lathe and tools, you will have a much better idea of what is required, and less likely to waste money on unsuitable gear.

Several people offer lessons:

- Scott Myles at the Woodcraftsman in Edenvale is a journeyman woodturner, who offers 2 day and 3-day courses, all-inclusive, except lunch! (Phone (011) 452-5138/9)
- Roger Courtney of the Pretoria Wood turners.
- Several woodturners in the turner's section of the WWA – this may become more formalized with the addition of the Nova lathe, so that the club now has three lathes available.

To guide beginners, I surveyed the local market with assistance from the local woodturners and suppliers to see what is available at the starter level, with value for money being the main guideline. (See Crosscut next month for a list of lathes that I found offered in South Africa.)

As with the purchase of all tools, buy the best you can afford. Research your purchase thoroughly so that you are less likely to regret it later. Obviously, because prices are heavily dependent on the exchange rate as nearly everything is imported, you should confirm them with the suppliers. Some makes are stocked by more than one supplier, so it may be worth shopping around.

Worldwide, there is a wide range of excellent lathes. However, although there are some excellent lathes available in the local market, the selection is not very wide. If you avoid machines with no significant spares backup, then the choice is narrowed further.

As I see it, there are two classes of lathes:

- Those from the Western world, with a long history of supply, recognized brand names, good backup, a wide selections of accessories and good resale value.
- Those from the east, with rather variable quality. Brand names such as Grizzly and Jet are well known in the American market and provide excellent, quality controlled machines with good spares backup. Other machines may be of variable quality, non-existent spares and support, and poor resale value due to no brand name and no assured continuity of supply. Non-standard interfaces may mean that no additional accessories will fit, or you will have to adapt them to fit. Check this with the supplier before you buy.

Questions to ask when checking out a lathe:

- Can all the regular adjustments to the lathe be made without tools? Looking for a spanner in the shavings under the bed every time, just to adjust the tool rest will rapidly lead to a sense-of-humor failure. (Adjustable locking handles are readily available in metric threads to solve this.)
- Is the motor switch accessible and robust?
- Is it possible to easily remove drive centers, faceplates, etc with a minimum of tools?
- Are speed changes easy? What is the minimum speed? Many cheap lathes do not have a low enough minimum speed, which makes roughing out large blanks unsafe. A large out-of-balance blank at 200 rpm can be scary enough, 600 rpm with the same blank on a lightweight lathe can see your lathe walking across the room!
- Run-out of the head and tailstock bearings. If this is significant, then when you remount or rechuck a piece, it will not be accurately centered, leading to all sorts of problems when trying to finish a piece. Tailstock and headstock should be concentric, to avoid problems when remounting or using a chuck with support from the tailstock. You can easily check this by fitting centers in the head- and tail-stocks. When you bring the tailstock up to the headstock, the points of the centers should line up exactly.
- Check the weight – usually, the heavier, the better. With out of balance blanks, vibration is reduced with heavier lathes, making fine finishing easier. With cheaper lathes, often rigidity of the bed is poor, leading to vibration and misalignment problems.
- A swivel head will provide you with more flexibility in dealing with large diameter projects or when hollowing out vessels.
- The use of a common headstock spindle thread will make it easier to find accessories such as chucks to fit. Many of the USA lathes use a 1” x 8 tpi thread, whereas a lot of European lathes now have a 33 x 3.5 mm thread.

I suggest you use the comparison table below as a starting point for your investigation.

When you have selected a machine, ask around in the club for opinions on your selection. (I used the word opinions, as there will be some differences!) Also, check out the second-hand market. Many a person decides to take up wood-turning and splashes out on a good lathe, tools, chucks, stand, etc and then decides to sell the lot, often barely used. Many a fair bargain can be had if you are patient. Look in Junk Mail and contact Scott Myles, who deals in second hand lathes, to see what he has available. When considering what is offered, the same advice given here applies: If you are uncertain, ask experienced club members to check out the machine and tools for you. Wood lathes are quite robust and brand-name lathes can be expected to last a lifetime, so you need have no worries about buying an older machine. Be sure to check out the situation with regard to accessories to see if they are available from the manufacturer or other sources. (A good place to check is the Axminster catalogue – they cater for a wide range – if it isn’t listed there for your lathe, then you will need to be more careful.)

(In case you are interested, when I started turning, I first made myself a pole lathe, and after making various small articles, I decided I needed a powered lathe. I ended up buying a second-hand Hegner HDB175 with stand, and various accessories, such as a chuck, which I am still satisfied with. Julian tells me that Hardware Center sold about 5 Hegner lathes, but I think they were rather expensive, so they didn’t sell well, and they haven’t imported any more.)

Lathe tools

Cheap starter carbon-steel sets are available from various sources. They are not all satisfactory, and even with the better ones, you will probably wish to move on to High Speed Steel (HSS) brand name tools when you are more experienced. Scott Myles ventured the opinion that it is better to practice sharpening on a cheap starter set than on expensive tools. Also, I have found the old carbon steel tools are easier to regrind into special shapes and profiles for once-off jobs, so I don’t think they will be wasted. A disadvantage of carbon steel tools is that they can easily be overheated when grinding, and they then lose hardness at the edge. This is not a problem with high-speed steels that retain hardness right up to red heat. (Don’t quench red-hot high speed steel, it might develop micro-cracks.)

(High Speed Steels are steel alloys with Carbon, Chromium, Vanadium, Cobalt, and particularly Tungsten and sometimes Molybdenum that have much improved wear resistance compared with ordinary carbon steels. They are significantly more expensive than plain Carbon Steels. They are capable of holding edges for up to 5 times longer, and have excellent high temperature properties, that are valuable for metal machining, hence the name.)

In Carbon Steel tools, SA Machinery (SAM) is offering a basic 8 piece set for R135-; Hardware Center offer an 8 piece set with fairly substantial handles for R342-; and The Woodcraftsman offer a Record Tools 6 piece set for R329-.

The above all include a wider spindle gouge, but none of the above includes a roughing gouge, which I personally consider essential, particularly for beginners. The Record ¾" CH100 lists at R413- from the Woodcraftsman and the Henry Taylor HS3 ¾" lists at R560- from Hardware Center. These are HSS and are as good as you will ever need.

If you wish to go straight to HSS tools, Scott Myles recommends a selection of 5 HSS Record tools that includes a roughing gouge for about R1200-, depending on exactly what you choose. These are tools that will serve most purposes.

There may be some lathes that I have missed: If know of any that may be of interest, please let me have the info to include in a future issue. Corrections and additional information are also welcome.

My comments: If you have limited space and budget, the Jet Mini (JML1014) is well worth a look. It has received positive comments from several club members. For larger lathes, there is more choice, so it is difficult to make a recommendation, as this depends on your personal circumstances. The Record lathes are tried and tested, and although they have a few quirks, their resale values are good, should you one day wish to upgrade. They also have an excellent selection of accessories in stock locally. For those who need a lathe with more capacity, the Nova lathe offers excellent value for its capabilities.

Lathe Comparison table

Make and model	Retail price inc VAT (Supplier)	Motor Power	Spindle speeds (rpm)	Distance between centers (mm)	Center to bed distance (swing/2) (mm)	Bed construc-tion	Toolrest width (post diam.) (mm)	Weight (kg)	Headstock thread and description	Tail-stock details	Accessories included	Accessor-ies available	General comments
Jet Mini (JML 1014)	R2388- from SA Machinery (SAM)	½ HP	435 to 3015 in 6 speeds, Poly Vee belt	350	125	Cast Iron	150 (16)	33	1" x 8 tpi #2 Morse Taper	#2 Morse Taper, 10mm through hole	80mm faceplate, live tail center, 4 prong drive center	Nova Chuck and #2 MT accessories	Compact starter lathe. Spares support. See www.jettools.com
WLK 1440	R1346- from SAM	1/3 HP	810/1180/ 2785	1000	178	Two light square tubes	225		Thread only	Live center, not remova-ble	Faceplate		No accessories.
SwivelHead	R4888- from SAM	½ HP	5 speed	1000	200	Two solid round steel tubes			Thread only	Live center	Faceplate	Copy attachment R3157-	
Jet 1236 Swivel head	R4932- from SAM	¾ HP	6speeds: 500 to 3000 Lever speed change	875	152	Cast Iron	300	83	1" x 8 tpi #2 MT	#2 MT, 10mm though hole	150mm Faceplace, live tail center, stand.	Nova Chuck and #2 MT accessories	Capable of outboard turnings of 400mm diam. Spares support See www.jettools.com
Toolmate Swivelhead	R3819- from Hardware Center	¾ HP	10 speeds 500 to 2600 Lever speed change	900	155	Cast Iron	300		1" x 8 tpi	#2 MT, 10 mm though hole	Faceplate, live tail center, stand.	Nova Chuck and #2 MT accessories	Very similar to Jet1236 above, but not branded. Spares support.
Nova 3000	R10800- from Hardware Center	1 HP	8 speeds: 178/300/ 570/850/ 1200/1800/ 2400/3000 Poly Vee belt	910 with single bed extension included in price	200	Cast Iron		66 kg without motor and bed ext.	M30 x 3.5 Right hand, #2 MT, 24 position index	#2 MT	Spur drive, live tail center	Nova Chucks, (Super Nova R1760-) faceplates, etc	Swivel Headstock, 740 mm outboard swing with outrigger. Local support. See www.teknatool.com (The club has just bought one with a speed control.)
Record Starter Lathe DML24X	R4867- list	1/3 HP	450/950/2000 Poly Vee	610	115	Two solid steel bars	250 (19)	40	#1 MT, ¾" x 16 tpi thread	#1 MT, 8mm through hole	Spur drive, live tail center	Full range of Record accessories	5-year guarantee. Full local support, See www.recordpower.co.uk
Record Swivel Head DML 36 SH	R5864- list	1/3 HP	450/950/2000 Poly Vee	914	115	Two solid steel bars	250 (19)	55	#1 MT, ¾" x 16 tpi thread	#1 MT, 8mm through hole	Spur drive, live tail center	Full range of Record accessories	305mm bowl on swivel, 5-year guarantee. Full local support, See www.recordpower.co.uk

Make and model	Retail price inc VAT (Supplier)	Motor Power	Spindle speeds (rpm)	Distance between centers (mm)	Center to bed distance (swing/2) (mm)	Bed construc-tion	Toolrest width (post diam.) (mm)	Weight (kg)	Headstock thread and description	Tail-stock details	Accessories included	Accessor-ies available	General comments
Record CL1 36X15	R9288- list	1/3 HP	450/950/2000 Poly Vee	915	150	Two solid steel bars	250 (19)	86	#1 MT, ¾" x 16 tpi thread	#1 MT, 8mm through hole	Spur drive, live tail center	Full range of Record accessories	380mm bowl on swivel, 5-year guarantee. Full local support, See www.recordpower.co.uk
Record CL3 36X30	R13397- list	¾ HP	425/625/925/ 1360/2000 Poly Vee	915	150	Two solid steel bars	250 (19)	86	#1 MT, ¾" x 16 tpi thread	#1 MT, 8mm through hole	Spur drive, live tail center	Full range of Record accessories	762mm bowl on swivel, 5-year guarantee. Full local support, See www.recordpower.co.uk
Record CL3 48X30	R14546- list	¾ HP	425/625/925/ 1360/2000 Poly Vee	1220	150	Two solid steel bars	250 (19)	95	#1 MT, ¾" x 16 tpi thread	#1 MT, 8mm through hole	Spur drive, live tail center	Full range of Record accessories	762mm bowl on swivel, 5-year guarantee. Full local support, See www.recordpower.co.uk
Variable Speed Record CL4 36X30	R19806- list	1 HP	Electronic from 180 to 2910	915	150	Two solid steel bars	250 (19)	98	#1 MT, ¾" x 16 tpi thread	#1 MT, 8mm through hole	Spur drive, live tail center	Full range of Record accessories	762mm bowl on swivel, 5-year guarantee. Full local support, See www.recordpower.co.uk
Elektra Bekum HDM 1000	Metabo R6950- list	¾ HP	700/ 110/ 1600/ 2200	1000	160	Two solid steel bars		48	30 mm thread		150mm Faceplate, Live tail center	Copying attachment with templates R1750-, stand, 3 and 4 jaw chucks	Mostly for between centers, spindle copy work?
Eurasia WL000GV	R3317- from Makro	½ HP	600 to 2200 Level speed change	1000	173	Two folded steel U sections	300		Thread	Remov-able live center, unknown bore. No locking lever – spanner required	Faceplate, Copy attachment, Stand with shelf		Unconventional bed design seems to lack rigidity. Specialised as a copy lathe?

There is a long list of Record accessories available, including the Power Chuck at R1436- and Scroll Chuck at R2880- with a variety of jaws, spigots, screw chucks, and pin chucks. The scroll chuck is also available with M29x1.5mm and M33x3.5mm inserts for other lathes as well.
MT is Morse Taper – a narrow angle conical taper that was invented to allow interchangeable tool inserts that are self-centering - #1 is smaller, #2 is larger. Both are adequate for all but the largest work, which the above lathes probably can't cope with anyway.