

South Downs Woodturners

February 2024

Dear Member

This is to be my last newsletter for the club. I took on the job more or less by accident during the pandemic lockdown to try to keep the club together when we couldn't meet in person, so I've been doing it for a while now. Matt Hall has volunteered to take on the job and will be Editor from the next issue. Like me, I'm sure that he will be looking for input from members, so please send him anything which may be relevant. Articles, photos of things you've made, or of your workshop, items for sale, forthcoming events - it's all useful stuff to keep members in contact with the club. Matt's e-mail address is mjh.01@icloud.com. Articles don't have to be in perfect language or style, we can edit text and crop pictures to fit the space.

More news is that Peter Pullen has sadly given up driving and has decided that he can no longer be membership secretary. Peter has done the job for a very long time and he will be greatly missed - I'm sure you'll all join me in saying a very big 'thank you' to him for all his efforts. He is also a superb turner and I think won enough 'chairman's challenge' pens to stock a stationery supplier. The 'advanced' table will be the poorer for his absence. The good news is that Sarah Macdonald has agreed to take on the role of membership secretary and will join the committee in place of Peter. I'm sure she will do a great job.

Best wishes to all

Norman

NEXT CLUB MEETING

We have our next meeting soon, so put the date in your diary now:

Wednesday February 28th 2024 at 7:00 pm in Bramber Hall

This evening will be our first professional demonstration of the year: a return visit to our club for the ever popular Kevin Hutson. He will be showing us projects using various spalted timbers.

We also plan to have a sharpening station in operation from about 6:30, along with the shop, the library and the toolbank. Plus the usual raffle and 'Tools and Turnings', so bring along anything you'd like others to see.

DATA PROTECTION AND CLUB MAILINGS

One of the problems in keeping our newsletter mailings and other e-mail to members current has been that, until now, the membership database has been maintained by the membership secretary, but Peter's e-mail system would not allow bulk mailing to a long list (we currently have around 70 paid-up members). To get around this, we keep a separate mailing list which I use to send out meeting reminders and newsletters. This means that your details are held on two lists; Peter's which is held on his computer and includes address details, and mine which is held on my computer and includes only your name and e-mail address. Keeping these two lists synchronised and including potential new members takes a bit of effort.

As part of the transition to a new Editor, Matt has created an account on Brevo, a (free) cloud based service which allows mailouts of exactly our kind of things. This does mean that member's details are being transferred to a cloud-based service. Although we are assured that this is a secure service it's right that we offer you the choice to opt out of having your name and e-mail address stored in this way. If you do opt out, you won't get future meeting reminders or other e-mails, but you will be able to access the newsletters via the web site, where Stewart posts them.

If you want to opt out of the Brevo storage, please let Matt (mjh.01@icloud.com) know as soon as possible.

SHOP STOCK

Anthony Trigg would like to know if there are any items which members would like the club to stock which we currently don't. Also if there are any items which we might consider buying in bulk? For example, if enough members were interested in 7 mm pen kits, we could consider a bulk order (from China) - 100 kits minimum. If you have any thoughts, please contact Anthony (trigganthony@gmail.com).

JANUARY MEETING

January 31st was our first meeting of 2024 and was a freestyle competition evening. There was a good entry of some very nicely turned pieces. Unfortunately we didn't get any pictures of the tables or of the winning entries - we'll make sure we do for the next competition.

The final results were:

Beginners

1st Dennis Manley

2nd John Dove

Intermediate

1st Matthew Hall

2nd Barry Chidlow

Advanced

1st David Watson

2nd Jubal Prevatte

Congratulations to all for their excellent work.



*Norman turning a desk-top pen.
The lathe is about a foot too low
for his height and would lead to
back problems if used that way!*



*Key ring and pens which Norman made, or started,
at the meeting*

During the evening, we had a fill-in demo from Norman Billingham, who showed various aspects of pen turning on a small lathe, mainly using the common 7 mm pen tube. During the evening Norman made a simple desk-top pen, using a Bic refill, a key ring and a slimline pen and started a closed-end desk pen using a 7 mm kit. Anthony Trigg made notes, which are on page 3.

FREE WOOD?



We have been contacted by a lady who has recently moved into a house in Worthing. She says that in the garden there is a wooden 'feature'. She has no idea what it is - possibly the remains of a tree that grew on the site, or perhaps an installed feature. It looks like driftwood which leads her to think it is a sculptural feature. She will be removing it to renovate the garden and wondered would it be of any use to our members? She's happy to donate it but would need advice about removal.

If you are interested, or wish to discuss or visit to see it, please feel free to call Mia McDonagh on 07949 836625.

NEW WEBSITE

Many members will know Southdowns member Stewart Furini, who has given us several excellent demonstrations of colouring turned work. Stewart also does a great job of keeping the Club's website up-to-date. Having recently retired from school teaching, Stewart is now becoming more active professionally as a woodturner and he has a new website. You can find him at: <https://www.stewartfuriniwoodturning.co.uk/> where there are links to his YouTube channel and to more than 200 videos on turning and colouring wood. If you sign up, you can get a regular newsletter from Stewart. We wish him all success with his new venture.

LAST MONTH'S MYSTERY OBJECT

In the heat of the moment at the last meeting I forgot to ask Dave to explain what his mystery object in the last newsletter is.

It's actually a 'golden ratio' gauge. The golden ratio, also known as the divine proportion, is a ratio between two numbers equal to approximately 1.618. Although its first known mention is by Euclid, around 300 BCE, it was in the medieval period that the golden ratio became a representation of divine order. It is claimed that, because it often occurs in nature, the number is naturally pleasing to the eye, and is a mathematical distillation of beauty. Golden ratio rectangles are found throughout art history. In this device, whatever the inner pair of points is set to, the outer dimension will be 1.618 times larger.



WE ARE IN THE NEWS!



Thanks to the efforts of Anthony Trigg and other members, we are starting to get publicity in local publications. The one here is from Durrington but I've also seen the article appear in the Lancing local newsletter.

This kind of publicity can only be good for us and will help bring in new members. We now have a supply of leaflets about the club which are available to any member who can see an opportunity to publicise the club and our activities.

NOTES ON PEN TURNING - Norman Billingham, Jan 2024 Demo

The simplest pen to make uses a Bic ballpoint pen refill with a new wooden case around it. Requires a hole down the blank long enough to accept the refill (at least 130 mm) and diameter 4 mm. The drill is used to make the long hole, then to act as the drive for turning.

Some thoughts on drill bits.

A standard twist drill is 'jobber' length and not long enough for this job. There is not much metal down the centre section of a drill so drill bits are actually quite flexible. Long, thin drills are liable to follow the grain and can drill off centre; this may lead to vibration, the drill bit binding or breaking. Stub and spotting drills are shorter and thus stiffer and will ensure a more accurate (less wander and flex) start to a hole than will a jobber drill. Slocombe drills (or centre drills) are stiffer still, the tip ground at 120° with the back part cut at 60° which is same angle as tailstock centre. Long series and extra-long series drill bits are available to enable drilling of the deep hole required. Look for an extra-long series 4 mm drill. These can be expensive from an engineering supplier but lots of cheap offerings on eBay from China (currently £6.39 for four, 160 mm long, including delivery). 160 mm is just right for this job. If you are uncomfortable turning very close to the drill chuck, you can put a short sacrificial length of wood on the drill.

You will be drilling at the headstock end of the lathe, with a morse taper drive which works by friction so requires a rod to tap out for releasing it. As the drill chuck will be turning you cannot hold it as you would when tailstock drilling, so a drawbar is required to hold the chuck into the headstock. Do not rely on friction alone. A morse taper tang with a threaded hole to receive the threaded draw bar will hold the drill chuck into the headstock. The retaining washer and nut only needs to be done up finger tight; it's just there to stop the chuck coming loose in the headstock.

As a guide, the toolrest is lined up with the centres and along the axis of the lathe bed. Choose a straight-grained piece of wood around 12 – 15 mm square and a bit longer than you want the final pen to be. Mark the centres, line up with the tailstock centre and the drill bit and start drilling with a short 4 mm drill bit. Once the hole is established, swap to the long drill and drill the hole deeper, clearing the

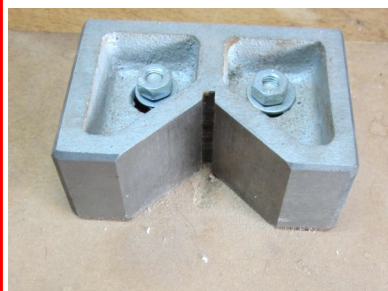


shavings at regular intervals to prevent the drill binding and using the toolrest as a guide. If your lathe bed is short, you may need to remove the tailstock to do this. When drilled to depth, stop the lathe, but, for safety, do not let go of the piece of wood until the lathe has stopped. Replace the tailstock, rotate the work slowly and bring up the centre until it engages with the end of the work (unlikely to be exactly on centre as the long drill will probably have wandered a bit).

Turn down with whatever is your favourite tool, roughing gouge, spindle gouge or skew. Remember the tool on toolrest first, start on the work and work off the end of the piece. The diameter at the headstock end should be 5 mm or very slightly over; the rest can be any shape you fancy. Larger diameters are useful for people with arthritis or mobility/gripping difficulties. The shape can be refined if you wish with a spindle gouge or skew, decorate with beads, coves or curves, burnt lines or colours. Sand and finish as required; Norman used sanding sealer and two grades of wax stick. Engineer's suppliers are a good source of 25 or 50 m reels of 25 mm wide abrasive. Once happy with the finish, part off with a parting tool and shape the end of pen. Stop the lathe and pull the stock off the drill bit. Sand and finish end of pen and push in Bic insert. The insert comes out of the plastic easily on current pens; some older stock ones are much tighter and you may have to break the outer case with a pair of pliers.

7 mm pens

Norman moved on to the simple '7 mm slimline' pen kits, widely available from many suppliers at very variable price (and quality). The kits consist of two (7 mm diameter) brass tubes, and the necessary components. The pen blank does not have to be wood; can be acrylic, epoxy resin etc. *Anyone have a source for epoxy blanks containing shredded bank notes?* Less need for straight grain as the larger 7 mm drill won't wander so much over a short (55 mm) hole. The blank needs to be slightly longer than the two tubes; it can be as little as 12 mm square but best to allow a bit more. A huge range of ready-cut blanks in different woods is available from many suppliers.

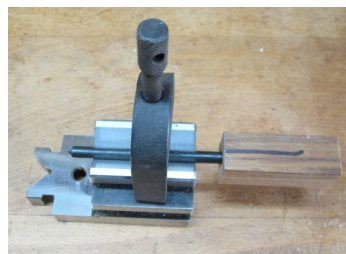
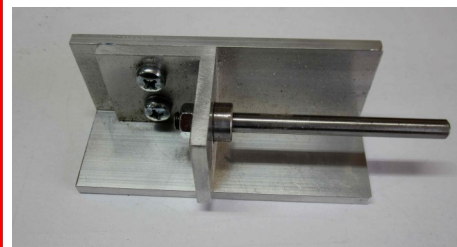


Start by drawing a line at the centre of the blank to ensure grain aligns at the centre of the pen then cut the blank in half, and trim to length of brass tubes plus about 2 mm. Drilling the hole down the centre of the blank needs to be done accurately as possible. Specialist self-centring drill press vices are available, or an economical alternative to keep the blank vertical under the drill is to use an engineering Vee-block fixed to a piece of wood which is then clamped to the drill press table. Another option is to use pen jaws on your chuck in the lathe. Start drilling at the end of the blank with the mark on (centre of the pen). Start with a centre drill and then use a 7 mm drill. Specialist pen drilling bits are available but a standard 7 mm twist drill works fine. Use 'peck drilling', i.e. pull the drill bit back regularly to clear the shavings. Drill all through; remember drill bits get hot so don't grab it. Brass tube should just fall through the hole drilled. If doing several pen kits use elastic bands to keep pieces together.

The brass tubes can then be cleaned and scratched by rubbing on fine abrasive, then glued into the two pieces of the blank. Some people use CA glue but Norman prefers epoxy. If just a couple of pens being made, 5 minute epoxy will do; if a larger batch then something with a slower setting time. Try to avoid getting adhesive in the centre of the tube; some people use blue-tac, potato or similar to block the tube. Coat half the tube length in adhesive, push it all the way. With a twisting and to-and-fro motion and wipe the end of the wood, push out the other side of the blank, more adhesive on the tube and push back in and clean the other end of the wood. Leave somewhere warm to set.

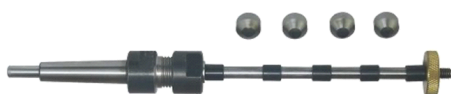


To trim the end of the blank a barrel trimmer is used, this has a shaft that fits into the tube a cutting edge to clean the blank and a cutter to clear any excess glue from inside the brass tube. These can be purchased handled, but trimming by hand is hard work – keep the handled trimmer



for a final touch-up. You can buy a trimmer with a shank on the end for use in a cordless drill. Use a slow speed to keep the heat down and also to prevent machining away the brass tube. **Please don't** hold the blank in one hand and the drill in the other; sooner or later the trimmer will catch and start the rough, square blank spinning in your hand – and it hurts! Another option is to use a disk sander; however you need to ensure

the tube is perpendicular to end of the blank. A simple jig (copied from a commercial one) made from a piece of mandrel rod and some aluminium angle, or use an engineer's v-block to support length of 6 mm rod. A useful source or straight rods is a set of transfer punches; useful for other sizes of pen tube and for dismantling pens.



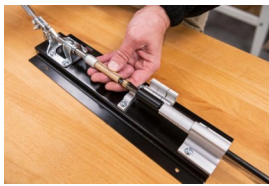
We finally arrive at some turning. Some people turn between (soft) centres, but you then rely on a micrometer and careful turning for correct diameters. It's more usual to use a pen mandrel, which will come with bushes as a guide to diameter, and in lengths suitable for one or both pieces of blank. Norman prefers the short mandrel as the longer ones can 'whip' a bit when turning. With the blank and the bushes on the mandrel, remember which end is the centre of the pen, only use enough pres-

sure on the tailstock to support the mandrel. More sophisticated mandrels use a collet chuck to hold the rod, allowing the 'active' length to be varied. Mandrel rod is an odd size, 6.2 mm diameter, but spare rods are easily available via eBay and useful for making sanding jigs (see above) and pin chucks (see later). Turn each half to your desired shape with a roughing gouge, spindle gouge or skew then sand the blank. The blank should finish just a hair above the diameter of the bush, if the blank is thinner then as your fingers slide down the pen, you'll feel a ridge onto the cone tip. Go carefully as you approach diameter. Pen tube is 7 mm diameter and the outside diameter of a straight, slimline is 8.5 mm, so you only have 0.75 mm of wood veneer on the final pen. Try to avoid sanding the bushes too much; even if they are hardened (most aren't) you can sand away the metal over time. Mark the middle of the pen with a Sharpie inside the brass tube when taking it off the mandrel.

There are lots of options for finishing but a pen needs to be wear resistant. Some turners use CA glue and polish like acrylic. Norman prefers a less plastic finish. He uses sanding sealer followed by melamine lacquer. This will dry in seconds but will take a week or so to fully harden. Followed by some polishing wax.



At this point Norman pointed out that 7 mm pen tube can be bought in 10" lengths and cut to any length you like. A slitting disc on a Dremel will cut it, or a very fine blade (6/0) in a jeweller's piercing saw. Lots of end-fittings are available for e.g. Christmas decorations, key-rings, touch styli etc. All use offcuts of timber, and give lots of options to experiment with design finish etc – good stocking fillers.



Final assembly of a pen involves pressing fittings into the tube. A pen press makes the job easy but you can use a vice, a clamp, two plates in the lathe between the tailstock and headstock or even your drill press. Press the cone into the end of one tube, away from the marked centre, then press the mechanism into the other end of this tube until the guide

ring is flush with the tube. Check the length of pen nib extension, which can be adjusted by how far the mechanism is pushed in. Push the end cap and pocket clip into the outer end of the second tube, slide the centre band over the mechanism and push the two halves of the finished pen together.

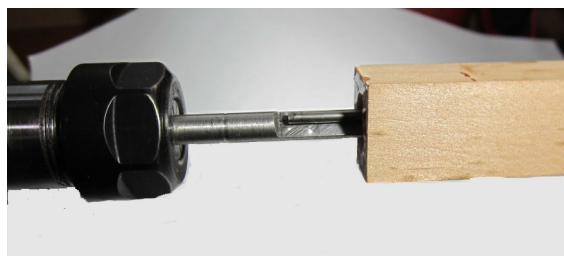
What's next?

Many more elaborate pen kits are available, including pencils and fountain pens but each new pen type is likely to need a new set of bushes and possibly a new drill and barrel trimmer and it can all get very expensive. An alternative is to stay with the cheap slimline kits and make your own modifications. Larger centre bands (from streamline kits) are available in different materials. Make your own centre bands. Rather than relying on an end grain to end grain joint, turn blank down to brass tube and then you can add layers of drilled veneer, different species of wood, coloured bands or different materials.



Closed end pens

Closed end pens, like the desk design, are a new challenge as the top section cannot be mounted on a mandrel, so turning is not so straightforward. Expanding chucks are available but expensive. Norman showed



two ways round this. The first uses the fact that the thread on the end of a mandrel is usually M6. The longer part is mounted in the pen jaws and drilled with a 5.5 mm drill to the

depth of the pen tube plus about 20 mm. The hole is then enlarged by a 7 mm drill to the depth of the pen tube. A long-series (from Amazon for about £8) M6 tap is then used to thread the 5.5 mm hole. Once the brass tube is glued into place and the end trimmed, the piece can be screwed onto the end of the mandrel and turned in the usual way. Another approach is to make a pin chuck. A piece of mandrel rod has a flat area machined (or filed) on it to take a small diameter pin. Twisting the tube on the mandrel causes the workpiece to lock for turning.

Special thanks to Anthony Trigg for producing comprehensive notes - any editing errors are entirely mine.

Norman Billingham

My last newsletter but I hope you have found something of interest. I know that Matt can still use input from you - pictures of your work, or any description you might want to write about whatever you are doing. I have a couple of articles to pass on to Matt but new pieces are always welcome. It's your newsletter and only as good as your input.

For now, on behalf of all of the committee, I wish you successful and enjoyable turning and we'll look forward to seeing you at the next meeting.

Norman Billingham