NORTH WARWICKSHIRE & HINCKLEY WOODTURNING CLUB

NEWSLETTER December 2022

www.hinckleywoodturners.org.uk

Notes from the Editor

Merry Christmas and a Happy New Year to all club members.

Our first meeting of 2023 will be Tuesday 3rd January. This will be a Hands-On session.

Inside this issue you will find some pictures from the Pyrography and Laser demonstration. Apologies to Steve, I forgot to get any pictures of his work so I have pieced together some information instead.

There are also some pictures from my visit to the Harrogate show.

I have also included some pictures from this year's demonstrations to remind you what a fantastic time we have had. And finally, there are the usual bad Christmas jokes.

Our Hinckley market stall on 18th November raised a fantastic £500 for the local air ambulance. Well done everyone who helped on the stand or provided items for sale.

Regards
Rob Sheehan

Laser Etching Demonstration

By Rob Sheehan

Warning - lasers are dangerous. Wear eye protection and follow all safety guidelines.

With a background in computing, I bought myself the EleksMaker laser etching machine. Mine came as a kit of parts from America. It's no longer available but similar machines cost from £150.

Steps to produce a laser etching

Concept => CAD => CAM => Post Processor => Machine

Concept

The first step is to design what you want to etch. You can draw your design and scan it into your computer, design it directly on the computer or copy a design from the Internet.

CAD - Computer Aided Design

This step converts your design into a 2D or 3D machine readable format. It defines your design as a series of lines, arcs, text etc. and includes material type, dimensions and tolerances.

CAM - Computer Aided Manufacture

This step adds machining information to the CAD output. The tool to use (e.g. router bit or laser), speed, power, number of passes etc.

Post Processor

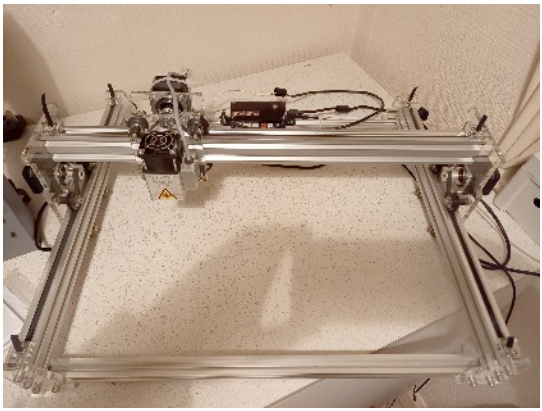
The CAM output is a generic set of machine control instructions. The Post Processor modifies those instructions for a particular machine. In my case, that would be either my ShapeOko CNC router or my EleksMaker CNC laser etcher. The output is GCode so called because most instructions start with "G" e.g. G01 10 10 10 move to coordinates 10, 10, 10. Other commands control a laser e.g. M3 turn laser on, M5 turn laser off.

Machine

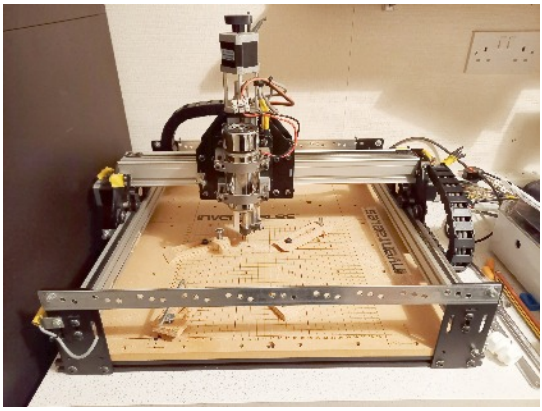
The machine needs to convert the GCode to motor control signals e.g G01 10 10 10 (move in a straight line to coordinates x=10, y=10, z=10) would be converted to drive the x, y and z (vertical) stepper motors to rotate a number of steps.

Software

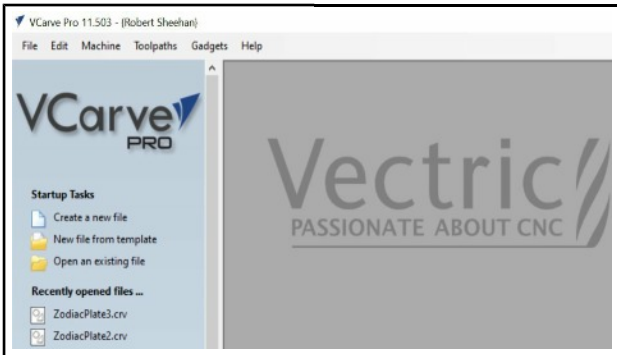
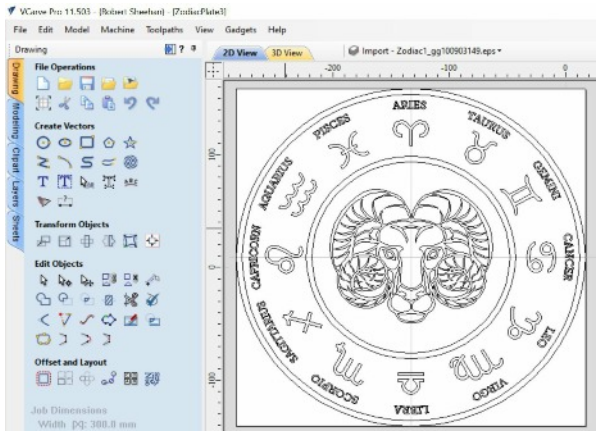
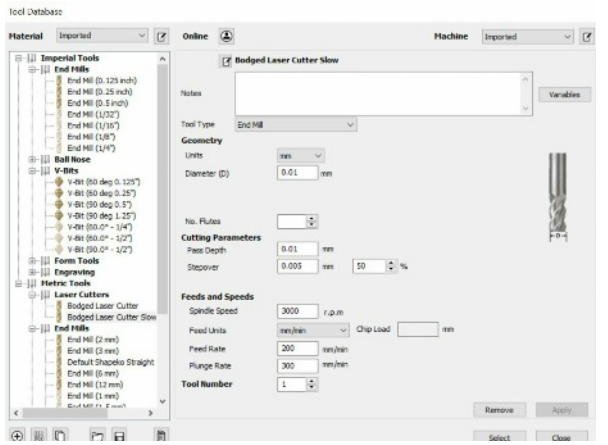
Many programs are available for CAD, CAM and machine control. I use VCarve Pro v11.5 which costs approx £550. This performs both the CAD and CAM functions. The Post Processor was available free online and the machine has an in-built Arduino processor running Gbrl to convert the GCode to stepper motor and laser control.



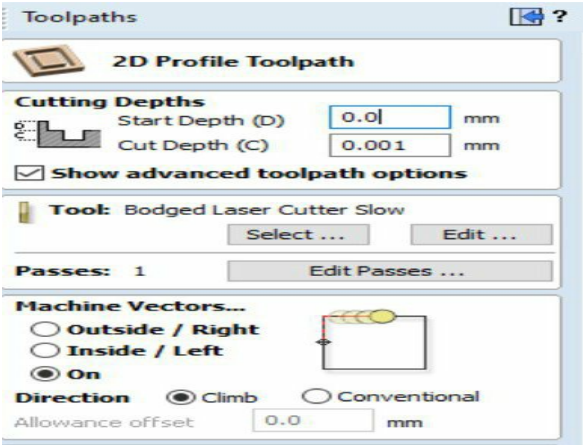
My EleksMaker laser etching machine. 5W laser (upgraded from original 0.5W) can be seen on the gantry. The black box at the rear of the machine is the Arduino processor. One stepper motor moves the laser left and right. Two motors drive the gantry.



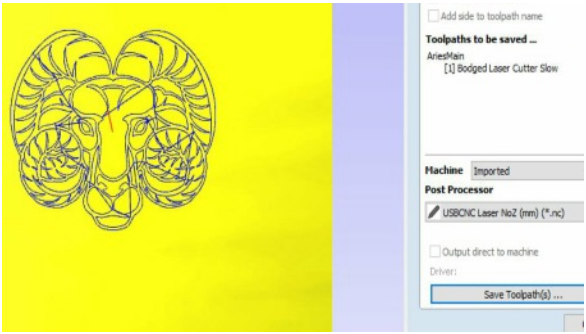
My ShapeOko CNC router. Router bits (1mm to 1/4 inch) are held in an ER11 collet. The spindle motor has been upgraded from a Dremel. Compared to the laser, it has an extra motor to raise and lower the cutter.

	VCarvePro software providing basic drawing, CAD and CAM functions
	Zodiac plate design. Zodiac symbols were bought off the internet for $12.50. I then placed them around the plate rim with my birthday symbol in the centre.
	Tool selection chart. End mills, slot mills and drill can be selected or a laser cutter. Default tool settings can be adjusted e.g. Tool diameter, spindle speed, feed rate.

Toolpath selection. Milling a channel, hollowing out a pocket, carving text etc.



Toolpath details. Depth of cut, number of passes etc.



Post Processor selection. Yellow screen shows a simulation of the cut.

Zodiac Plate.
Design etched on to plywood.

Another plate with a border pattern and a central leaf picture.

Pyrography or Wood Burning

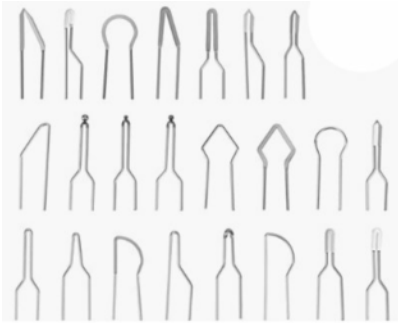
The art of drawing using heat to create lines, shapes and shading. Modern pyrography pens make the process a lot easier than the original Poker work where a red hot poker was used to create pictures.

Stamp
One step up from pokerwork. A fire or electrically heated stamp.
£10+ for simple fire heated designs.
£100+ for custom made electrically heated designs.

"Soldering Iron"
Similar to a soldering iron but designed for burning wood. Different tips can be fitted. There is no temperature control.
Cost £15

Peter Child pyrography station.
Different shaped tips can be used or the user can make their own from resistance wire. The temperature can be adjusted to produce different effects or when burning different types of wood.
Cost £120

Razertip pyrography station
The “Rolls Royce” of pyrography kits. Many different tips and pens are available. Temperature control. Cost £200+



A selection of different pyrography pen tips. For writing, shading, wide lines, narrow lines. Specialty tips for feathers etc. From a few £ for 20 basic tips to £10+ each for speciality tips.

A couple of examples, taken from the internet, of advanced pyrography.

Charity Stall Hinckley Christmas Lights

Harrogate Woodworking Show 2022

Emma Cook's Gonks

West Riding Wood Carvers

Reminder of This Year's Demos

Bill Bennett - Spheres

Bob Heathman - Long hole boring

Phil Steele - Pole lathe & threading

Steve Obrien - Pyrography

Rob Sheehan - Pepper mills and Laser

Peter Carless - Lidded bowl

Wolfgang Schulze-Zachau - Square bowl

Peter Deeming - Home-made tools and jigs

Christmas Jokes

What did the wise men say after they offered up their gifts of gold and frankincense? Wait, there's myrrh.

Who is never hungry at Christmas? The turkey—he’s always stuffed.

What did the Christmas tree do after its bank closed? It started his own branch.

Knock, knock! Who’s there? Noah. Noah who? Noah good Christmas joke?

Knock, knock! Who’s there? Mary. Mary who? Mary Christmas!

Knock, knock! Who’s there? Anna. Anna who? Anna partridge in a pear tree.

Why do mummies like Christmas so much? Because of all the wrapping!

What did Adam say on the day before Christmas? It's Christmas, Eve!

What did the beaver say when it saw the Christmas tree? "Nice gnawing you."

What falls at the North Pole and never gets hurt? Snow!

What's the most popular Christmas wine? "I don't like Brussels sprouts!"

What's every parent's favorite Christmas Carol? Silent Night.

How is Christmas exactly like your job? You do all the work and some fat guy in a suit gets all the credit.

Why is it so cold at Christmas? Because it's in Decembrrrrrr.

NORTH WARWICKSHIRE & HINCKLEY WOODTURNING CLUB EVENTS 2023

January	3rd	Hands On
	17th	TBD
February	7th	TBD
	21st	TBD
March	7th	TBD
	21st	TBD
April	4th	TBD
	18th	TBD
May	2nd	TBD
	12-13	Woodworks@Daventry
	16th	TBD

Axminster Nuneaton

Saturday 26th November Timberkits Creative Workshop

Events at Other Clubs

Please contact the club to check times/dates/locations before attending

Coombe Abbey (Walsgrave Baptist Church 10am - 4pm)
TBD