



BASINGSTOKE MODEL BOAT CLUB

Newsletter

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December 2022

Christmas card

The idea of a card came about after I struck up a conversation with the artist, Jillian, at the lake one Wednesday in September. She and other members of the Basingstoke Art Club were having a field trip to do some painting in the park. I asked if she would kindly send me a copy of her pictures, which she did and also subsequently agreed that we could use the images for a club Christmas card.

The pictures will be uploaded onto the web site and as a thank you I have also sent Jillian a card on behalf of the club.

Car Parking charges at Eastrop Park

These were finally introduced on 31st October. Parking for up to 2 hours is free, however a ticket must be obtained from the machine. For more than 2 and up to 4 hours a payment of £2.00 must be made. The machine accepts coins, contactless credit cards and you can also pay by using the Ringo Parking App via a smartphone.

Membership News

Since the last newsletter we have be joined by **John Bristow**. We look forward to meeting and seeing him at the lake when able to attend. At the time of writing the paid up club membership stands at 106 including 3 junior members.

Archive of Newsletters

Back in October I visited Jack Sharp to borrow his collection of club newsletters and other correspondence dating back to when he joined in 1999. Jack was Chairman for a number of years until his retirement from the position in 2015. We spent an enjoyable hour or so discussing the club's early days and how technology has changed not only for model boating but how the club is run and organised. Remember, the end of the last century was before the widespread use of the Internet, home computing, let alone the use of digital 2.4GHz for radio control.

All of the newsletters have been scanned into PDF documents by month and year and they will be uploaded to the club's web site shortly. Whilst reading them a fairly consistent theme was the call for contributions from members. This is still a very important part of the newsletters and I want to thank members who have in the past made contributions and to those who will contribute in the future. I welcome any contribution either handwritten or electronic (Microsoft Word or similar).

Historical Incident

Whilst going through Jack's old correspondence I came across an incident of "reckless boating". This related to an ex member who's vessel over a period of time consistently damaged a number of members boats culminating in the sinking of one. The result of which was a stern written warning being issued to the individual concerned which included the warning that any further incident would see the invoking of Club Rule #5 (The club reserves the right to expel any member who behaves in an irresponsible manner or brings the club in to disrepute). Fortunately the individual took the hint and moderated his behaviour.

We all know that genuine accidents do happen on the lake and they can be distressing for those involved especially when a model so carefully crafted over time becomes damaged. I therefore urge members to always be aware of where their vessel is and surrounding "lake traffic". To assist in this it would be helpful if members did not stand at the edge of the lake or in front of others.

Many thanks for your cooperation and hopefully the Chairman and I never have to invoke Club Rule 5!!

Hair Products Founder Helps To Restore Frigate

An American billionaire has pledged £20,000 to restore a ship that has been in Dundee for 150 years. John Paul DeJoria, co-founder of the Paul Mitchell range of hair products has pledged 2 per cent of then total needed to repair and conserve HMS Unicorn. The cost of the work is in the region of £1million.

This article caught my eye in the 4th November edition of the Daily Telegraph. So I thought I would do some investigation via a well-known search engine. I understand that other search engines are available!

HMS Unicorn

HMS Unicorn has the distinction of being the most original old ship in the world and was designed as a 46-gun frigate for the Royal Navy. Although ordered in 1817, the ship's progress book shows that construction did not begin until February 1822. Unicorn's keel was laid down on Slipway No. 4 at Chatham Dockyard, Kent, and the ship was launched into the River Medway on 30th March 1824. Requiring around 1,000 oak trees to build and costing over £26,500, Unicorn was designed to be an agile and powerful vessel, with a complement of 300 men required to crew her.

Dating from the early 19th century, HMS Unicorn was constructed at the height of the Industrial Revolution and her unique design features elements of both wooden and iron shipbuilding. Surveyor of the Navy from 1813 to 1832, Sir Robert Seppings was a great innovator in ship design and the key architect behind HMS Unicorn. Due to the work of Seppings and the advancements of the Industrial Revolution, Unicorn carries several innovative features on board. The ship contains early examples of ironwork including diagonal bracing straps through the hull and iron knees which support the decks. This ironwork strengthened the ship and produced a more rigid structure. Unicorn's unique elliptical stern – an innovation of Seppings – is the only example left in the world and provided a greater arc of fire to the rear of the ship.

A Ship in Ordinary

Although built for war, Unicorn spent her early life in reserve or 'ordinary'. Following the ship's launch in March 1824, the Admiralty Progress Books record that HMS Unicorn was "housed fore and aft". It was at this point that the Royal Navy added the ship's distinctive roof, to preserve the vessel for a potential future commission. As a result of this continuous protection, Unicorn is now the most original historic vessel left in the world.



Anchored on the River Medway until the 1850s, the ship formed part of Britain's formidable naval force which helped to maintain the 'Pax Britannica' or 'British Peace' of the 19th century.

Unicorn the Powder Hulk

While not sent out as a fighting frigate during her years “in ordinary”, Unicorn was given alternative roles. Between 1857 and 1862, the ship was loaned to the War Department as a powder hulk. Anchored at Woolwich on the River Thames, Unicorn stored huge quantities of gunpowder for the Royal Arsenal and was cared for by ship keeper James Middleton – who lived on board the powder hulk with his wife and children.

Coming to Dundee

In April 1862, HMS Unicorn was moved to Sheerness Dockyard and laid up “in ordinary” once again. With the rise of ironclad ships and steam propulsion, Unicorn’s potential as a fighting frigate had drawn to an end. However, only a decade later, Unicorn was given a new life 400 miles north in the growing industrial city of Dundee which required a new training ship for the city’s Royal Naval Reserves (RNR) – Britain’s voluntary naval reserve force established in 1859. As a result, HMS Unicorn left her home on the River Medway and was brought north, Unicorn arrived in Dundee in 1873 as a training ship for the Royal Naval Reserves – a role she carried out until the 1960s.



HMS Unicorn is still moored on the city’s waterfront and is now the oldest ship left in Scotland, as well as one of the six oldest ships in the world.

Remembrance Sunday 13th November

Thanks to the Covid pandemic over the past couple of years the club has been holding the 2 minutes silence on the Sunday nearest the 11th of November in recognition of the sacrifice made by our veterans and service personnel around the world. This year attendance was over 20 members plus partners, the pond was quite congested with all sorts of boats some sporting poppies. Joe Harwood provided the whistle commands for the start and end of the 2 minute silence, during which members stood with heads bowed in tribute. We even witnessed a Chinook helicopter flypast courtesy of the RAF!

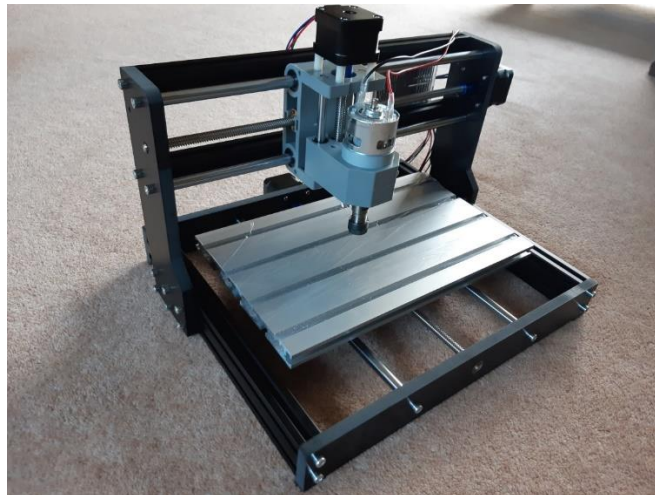
Hopefully on the 12th November 2023 more members/partners will be able to attend.

CNC for beginners by Keith Ebsworth

Some of you will have heard me at the pond discussing how I created a lot of the detailed parts for my Mississippi stern wheeler. I had neither the skill level nor the patience to create multiple identical copies of shutters and railings so I opted to go the CNC route. Occasionally the next question that arose during the conversation was what is a cnc?

So with apologies to those who already know about such things, just skip the next few pages, I will try to explain. I should say at the outset that I am no expert and this was my first venture into automatic machining but as I have an engineering background I knew it was worth a try.

CNC stands for Computer Numerical Control. Which means the machine is controlled by numerical data from a computer. (More on that later) The machine consists of a frame, movable bed, a motor driving a spindle which holds a cutter and a control board that sends the instructions.



On my machine and many other small machines the table can move backwards and forwards driven by a stepper motor. On large machines the table is fixed and the overhead gantry moves. Left and right movement is controlled by a second stepper motor and the cutter is moved up and down by a third stepper motor. Accurate cutting is achieved due to the fact that stepper motors can move in very small increments. The spindle has a collet holder so a variety of different shaped bits can be fitted to give the desired finished shape.

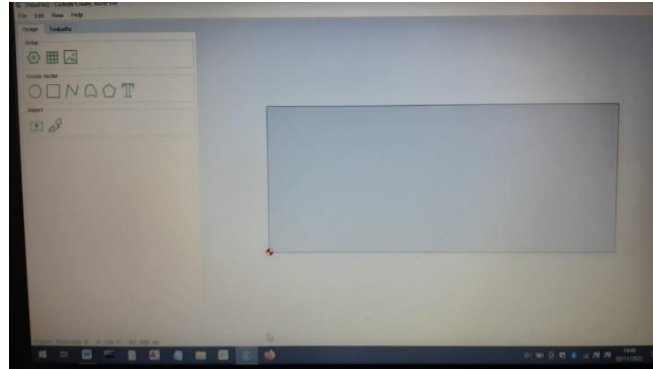
I fit a waste board onto the aluminium bed so I don't have to worry about cutting into it or breaking the cutter. When the waste board gets too cut up it is easily replaceable.

So how do we use this thing?

The first step is to draw your design in 2D. Fortunately there are loads of free, easy to use software packages available. I use a package called Carbide Create as it is one of the easiest to get started with and does most of the things I need to make.

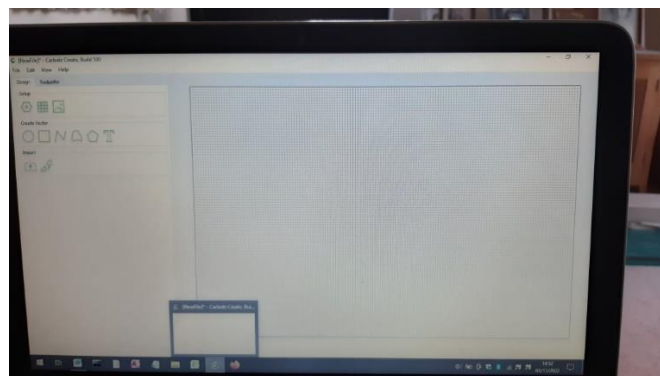
Let's say we want to make a roof for a boat cabin with a hole for a ventilation pipe to go through and a support ring around the base of the pipe which is recessed into the roof.

Here is our starting screen.

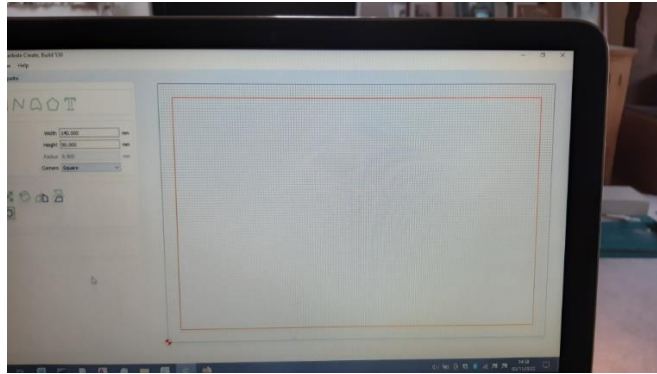


We type in the size of our piece of wood, 150mm wide, 100mm high and 3 mm thick. For those of you that can remember being in school these are the X, Y and Z coordinates but you only need to know this if you are interested in the cnc code.

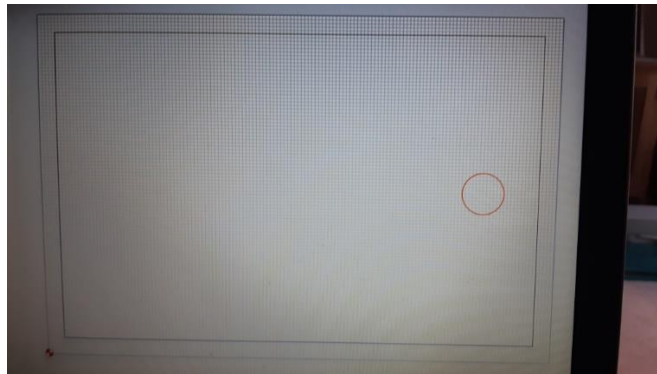
The screen changes to show the size and shape we have entered.



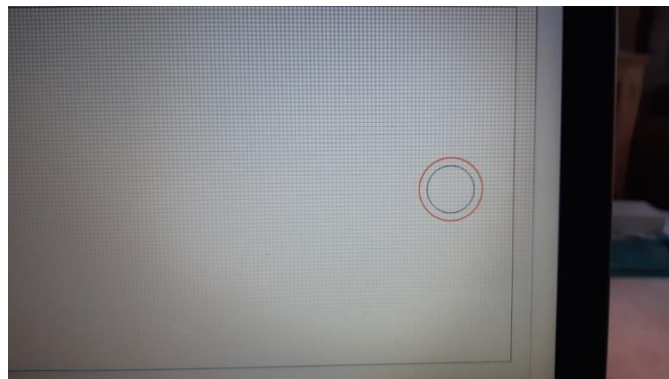
We then select a rectangular shape at the left of the screen and draw a rectangle using the mouse. The software gives us two boxes so we can enter the width and height accurately. I'm making the roof 140mm by 90 mm which will fit easily on the piece of wood chosen. The software has tools which allow you to centre your design in the middle of the wood. The roof outline is clearly shown.



We then decide what size vent pipe we want and draw it using the circle tool. I've made it 12mm diameter and positioned it at one end of the roof and centralised top to bottom.

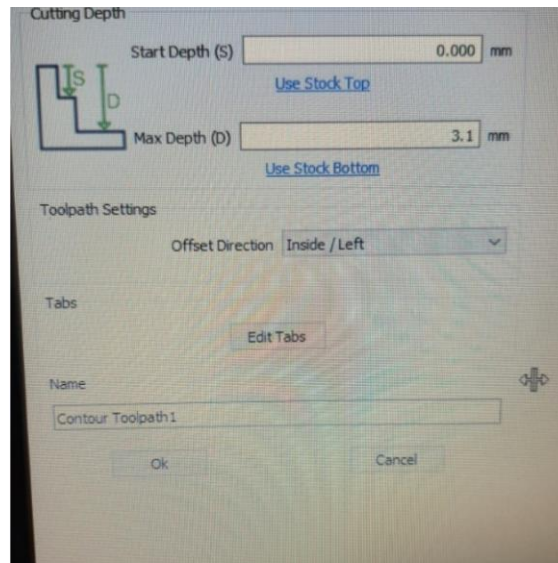


The software has an offset tool which allows me to add the support ring recess by telling it how much bigger I want it than the original circle. I've made it 4mm wider.

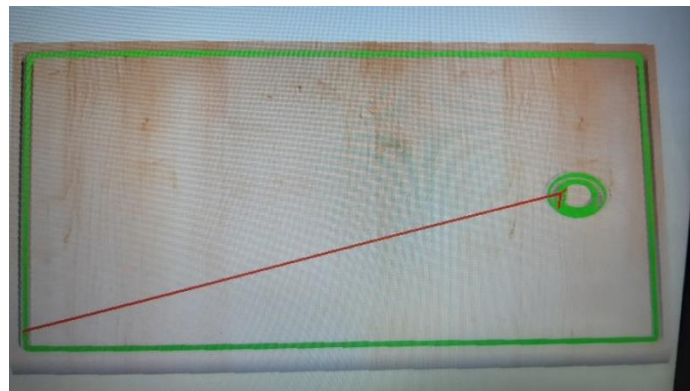


Our design is now finished but we need to tell the machine how to cut the features we have drawn. For each of the features we create a tool path that the cutter will follow. We do this by selecting each feature and saying what size cutter we want to use and how deep we want it to cut. As this is a simple design I am going to use a 3mm cutter for everything. It is small enough to fit into the hole and big enough so we can move it at fast speed without breaking it. The smaller diameter the cutter the slower you have to move to prevent it bending or breaking.

Having selected the central hole I set the cutting depth at 3.1mm. This will go all the way through our 3mm wood and slightly into the waste board to ensure that we have cut all the way through.



Next I select the recess ring and choose 1mm depth. Finally I select the roof outline and select 3.1mm depth to cut it out. The software calculates how long the job will take and can even show a simulation of the cutting paths.



The final stage is to save the code for the machine to use. You can connect your computer to the machine and run the code directly but in my case that means leaving it in the garage while the job runs. This can be a long time if there is a lot of detail to cut and I would rather be getting on with the next design while the machine is doing its thing plus cutting creates a lot of wood dust, not ideal for your keyboard.

I save the code to a SD card as my machine has an off-line controller which reads the card and sends the code to the controller board on the machine.

I stick my wood to the waste board with double sided tape, set the cutter starting point on the corner of the wood as that is where it was on our design, select the file and tell it to run. The double sided tape stops the part moving and avoids the hazard of the cutter hitting clamps or screws.

At this point I usually go and get lunch or head to the pond as watching a cnc run is only interesting for the first job. Also you do not want to be breathing in the dust especially from MDF.

As you can see all the work is in doing the drawing as the code tells the machine what to do. You don't need to know the code but just for interest here are a couple of lines.

```
G1 Z-0.200 F200.0  
X125.585 Y46.918  
F300.0
```

G1 is a move command, Z is a move in the Z axis (up/down), -0.200 means move down 0.2mm and F200 means move speed is 200mm per minute

X125.585 means move 125.585 mm right, Y46.918 means move 46.918 backwards and F300 means move at 300mm per minute.

The roof was a simple example and more sophisticated designs can be done. Also you can make detailed piece parts and then glue them together which is how I built my stern wheeler stairs. With 3D design software it is even possible to machine 3D parts. Here are some examples of more detailed parts.



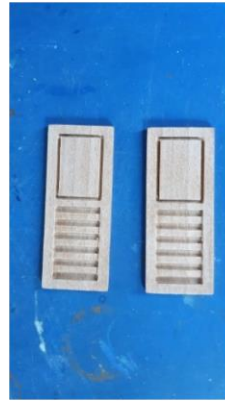
Main Stair Case



Cabin walls



Shutter



Doors

My machine is now 2 years old, has done a lot of work and is still going strong. I think it was a good deal as it was only £180 and came complete with everything needed, except the design software. I have seen them as low as £130 so worth checking out all the options. It took about an hour to assemble but I could have done it in half the time if I hadn't checked everything twice before attaching it. Assembly was easy and tools needed were included, 1 screwdriver and 2 Allen keys.

If you are thinking of getting into cnc-ing, it's well worth it and you can always give me a shout for a live demo of the software and cutting.

Forthcoming Event

The Midhurst Modellers Show will be taking place on the 12th February 2023 10:00 to 16:00. As usual the club will have a stand for displaying a range of vessels used by members. I have requested passes for 8 members to help man the stand. Please contact me or Phil if you would like to attend.

Close

Well that's it for this issue according to word count there are 2957 words in this edition plus a number of pictures and I hope you found at least some of them worthwhile. My thanks to Keith for his contribution to this newsletter, without member's contributions newsletters would be quite short! So please feel free to send me any contributions for the next edition. Maybe some of you will be working on a boat build project throughout the winter months which could be of interest to other members. I plan to start my Aeronaut Bella yacht kit which I purchased back in the summer.

Chris our chairman and I now take this opportunity to wish you and your families a Merry Christmas and a Happy New Year. Enjoy your boating but with winter here wrap up and keep warm.

Cheers
Andy

To save costs the Newsletter is printed in black and white so you miss some of the detail of the photos in colour, etc. – if you would like to see it in full colour I will as usual have a copy added to our BMBC website.

