Next Wave Automation

CNC SHARK

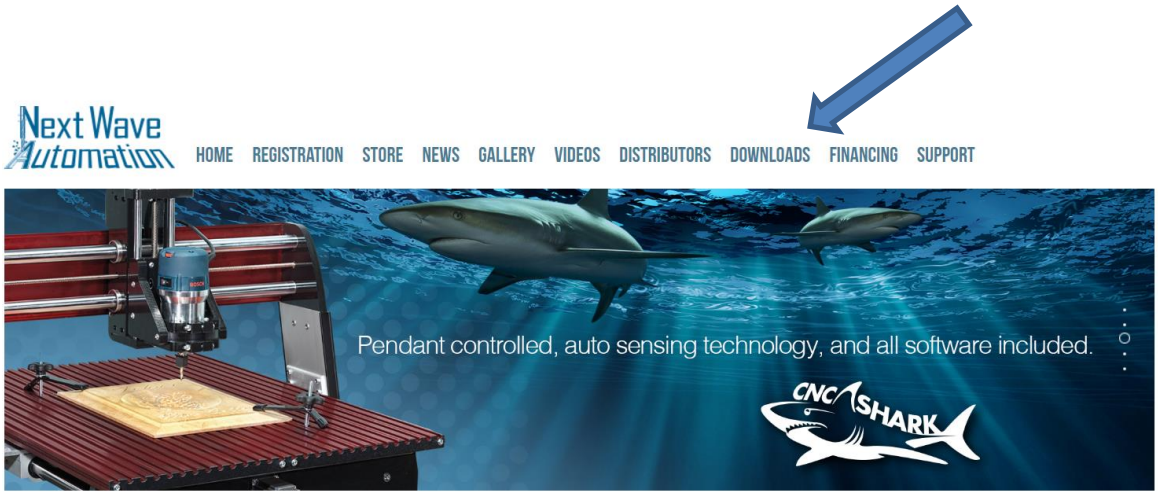
CNC SHARK II
Owner's Manual ®

206008

Nov 2017

Updates of this manual are
Available at www.NextWaveAutomation.com

FOR THE MOST RECENT MANUALS, DRIVERS, AND OTHER SOFTWARE, PLEASE VISIT
http://nextwaveautomation.com



Information in this manual is subject to change without notice

CNC Shark II is a registered trademark of Next Wave Automation.

To Our Customers

Thank you for purchasing a CNC Shark II! Your Shark II brings the speed and precision of computer-controlled machinery to your shop with the top value CNC system.

This manual tells you more about your CNC Shark II system and how to operate and maintain it. Please read the manual carefully. The manual also includes our warranty and important safety information.

This manual has been written with the assumption that the owner is familiar with the basic operation of a computer as well as the basic techniques for the safe operation of woodworking power tools. Information in this manual is subject to change without notice.

This manual is also written under the assumption the owner has spent time learning design tutorials and projects on www.Vectric.com (the makers of the designing software that is supplied with your machine) Please understand our support is designed around making sure your machine is running correctly and the designing piece is really a personal preference and complicated design questions should be first directed via email to support@vertic.com

Again, thank you for purchasing a CNC Shark II. We are confident you will be pleased with its performance and ability to carve and machine a wide variety of signs, doors, and other projects. If you ever have any questions or comments, feel free to contact us at the address below.

Next Wave Automation, LLC

600 W. Boundary St.

Perrysburg, Ohio 43551 USA

www.NextWaveAutomation.com

For faster support service please email us at

Support Email – support@nextwaveautomation.com

Include your machine model, date of purchase, and any pertinent information

you might think would be helpful. Files, pictures etc.

Main Phone – (419) 318-4822

Sales Email – info@nextwaveautomation.com

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Serial Number and Software License Information

Record your CNC Shark II Controller Interface and Vectric software user name and license codes here for safe keeping. Your software may vary depending on the CNC Shark II model purchased.

Controller Serial Number: _____

LCD Pendant Serial Number: _____

VCarve User Name: _____

VCarve License Code: _____

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Warranty

Next Wave Automation warrants to the original retail purchaser of a CNC Shark II machine and purchased from an authorized CNC Shark II machine distributor that the CNC Shark II and any Shark II accessories purchased with the CNC Shark II machine will be free from defects in material and workmanship for ONE YEAR from the date of purchase. This warranty is for parts and labor to correct the defect, and does not cover the cost of shipping the defective item(s) to Next Wave Automation for repair.

This warranty does not apply to defects arising from normal wear and tear, misuse, abuse, negligence, accidents, unauthorized repair or alteration, or lack of maintenance. This warranty is void if the CNC Shark II machine or any portion of the CNC Shark II machine is modified without the prior written permission of Next Wave Automation, LLC, or if the CNC Shark II machine is located or has been used outside the country of residence of the authorized CNC Shark II machine distributor from whom the CNC Shark II machine was purchased.

Please contact Next Wave Automation to take advantage of this warranty. If Next Wave Automation determines the CNC Shark II machine or CNC Shark II accessory is defective in material or workmanship, and not due to normal wear and tear, misuse, abuse, negligence, accidents, unauthorized repair or alteration, or lack of maintenance, then Next Wave Automation will, at its expense and upon proof of purchase, send replacement parts to the original retail purchaser necessary to remedy the issue. Next Wave Automation will repair the CNC Shark II machine or CNC Shark II accessory provided the necessary CNC Shark II machine component is returned to Next Wave Automation, shipping prepaid, with proof of purchase and within the warranty period.

Next Wave Automation disclaims any and all other express or implied warranties, including fitness for a particular purpose. Next Wave Automation shall not be liable for death, injuries to persons or property, or incidental, consequential, contingent or special damages arising from the use of the CNC Shark II machine.

Safety

The CNC Shark II, along with a router or other power tool, is a computer-numerically controlled (CNC) routing system. As such, it is a powerful system that can reduce your woodworking risks by providing a method of cutting wood and other materials without having to interact with the cutting tool(s) or material during the fabrication process. As with all power tools, your care and attention are required to ensure that you use your CNC Shark II safely. Next Wave Automation assumes you will use your CNC Shark II safely and follow accepted safety precautions and practices for woodworking and machining.

Emergency Stop

There are 3 ways you can immediately stop your CNC Shark II. CNC Shark II users should use a surge suppress power strip with an on/off switch.

The first is the STOP button on the CNC Shark II Pendant when the unit is running.

Pause and Stop on the Shark II

The second is either the on/off switch or the red Emergency Stop button on the CNC Shark II.

Hitting either will immediately stop the CNC Shark II movement. This will also stop the router if it is plugged into the Controller Interface.

Third is turning off the power strip. The power strip's on/off switch serves the same purpose as the E-Stop button on the Shark II Controller Interface. For this reason, it is recommended that you use power strips with an on/off switch.

Power Strip On/Off Switch

CNC Shark II Operations Safety Instructions

1. Read and follow all safety and operating instructions before using the CNC Shark II. This includes reading the manual for the router that will be mounted on your CNC Shark II. Take the time to orient yourself to the Shark II and the workflow steps.

2. Take small steps early in use – this will enable you to use the Shark II safely and effectively. Practice each step a few times early on without running the router for example. Again, this orientation process will help you to use the Shark II safely and effectively.

3. Let the machine and spindle come to a complete stop before touching parts, CNC Shark II, or router. Ensure that you have a positive system in place to make sure that power is not applied to the router or the CNC Shark II while positioning a work piece, adjusting the position of the tool, changing a bit, or setting up clamps, hold downs, or jigs.

4. Ensure that the material or work piece is firmly secured to the table. This includes accounting for the attachment and hold down of any pieces that will become cutouts or cutoffs during the machining process. Also, be sure that all clamps, hold downs, and jigs are not in the path of the cutter – and do not interfere with the movement of the gantry.

5. Always wear eye and ear protection while operating your CNC Shark II.

6. Keep miscellaneous equipment off the CNC Shark II table and gantry. This includes areas alongside the table where the gantry travels.

7. Never leave the CNC Shark II unattended while it is running. A work piece slippage, unexpected cutting error or other unexpected event might occur. This could result in injury as well as damage to the CNC Shark II.

8. Never attempt to remove chips, dust or debris from the machine while it is running with your hands or fingers, or by placing a vacuum device into the field of operation – near the cutter.

9. Position the computer keyboard and or the Pendant Enhanced Controller Interface (with E-Stop button) in a place that is easy for you to quickly reach, and out of the path and travel direction of the tool. Chips and debris can travel a good distance, and cutters can break during use.

10. Never attempt to manually adjust the work piece while the CNC Shark II and router are running. Do not attempt to manually feed a work piece 'into' a running cutter – this is not a router table.

11. Keep the CNC Shark II lubricated and clean. Clean the CNC Shark II and area after each use. The best lubrication for the CNC Shark II is a dry Teflon, silicone spray applied to the bearings and lead screws of each axis.

CNC Shark II Hardware and Project Safety Instructions

The Shark II has 3 stepper motors, a Controller Interface Box, and a LCD Color Pendant. These are all precision electronic devices and are susceptible to damage from power surges, static discharges, inappropriate power supply, and other unexpected electrical events. It is recommended that the Controller Interface be plugged into a surge protector to minimize the opportunity for damage to occur as a result of a power surge. You may also want to use a dedicated electrical circuit for the CNC Shark II. Turning on a shop vac or other power tool on the same leg may cause a momentary change in the power supplied to the CNC Shark II. If you know that the power you receive fluctuates significantly, you may also want to use a power conditioner and battery backup device. This will ensure the longest life of your CNC Shark II electronic components. A minimal battery backup will enable you to gracefully stop the job in progress at the time of the power loss, thus minimizing the possibility of damage to the CNC Shark II, electronics and router.

CNC Shark II users are strongly encouraged to use a power strip with an on/off switch to provide power to the Controller Interface and power supply. This provides a second means of an emergency stop if needed.

The CNC Shark II machine is not designed to work with fluids. The router is a 'dry' router. Do not cut with any misting, cutter lubrication, or wet material as it may cause a fire.

Keep the LCD Color Pendant and the controller vents clear of dust, dirt, shavings and other material.

Keep your CNC Shark II away from any moisture and in a temperature range of 50^{o} to 80^{o} F.

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With the power off, lightly vacuum the LCD Color Pendant and controller interface occasionally to remove any particulate from the electronics. This will help to prevent additional heating inside the box that could result in damage.

Do not expose the system to high humidity – this may cause condensation on the electronics and result in abnormal behavior or even a short in the electronics.

You should not operate your CNC Shark II machine during a thunderstorm unless you have an appropriate surge protector in place to prevent circuits from being damaged by excessive line voltage.

Keep static charges from discharging into the motors. If you think this may become an issue, a grounding wire can be added to one bolt head of each of the motors.

It is also strongly recommended that you keep backup copies of all important computer data, files and programs. These should be separate copies – stored on a different device than the computer you are using to create the projects and run them on the CNC Shark II.

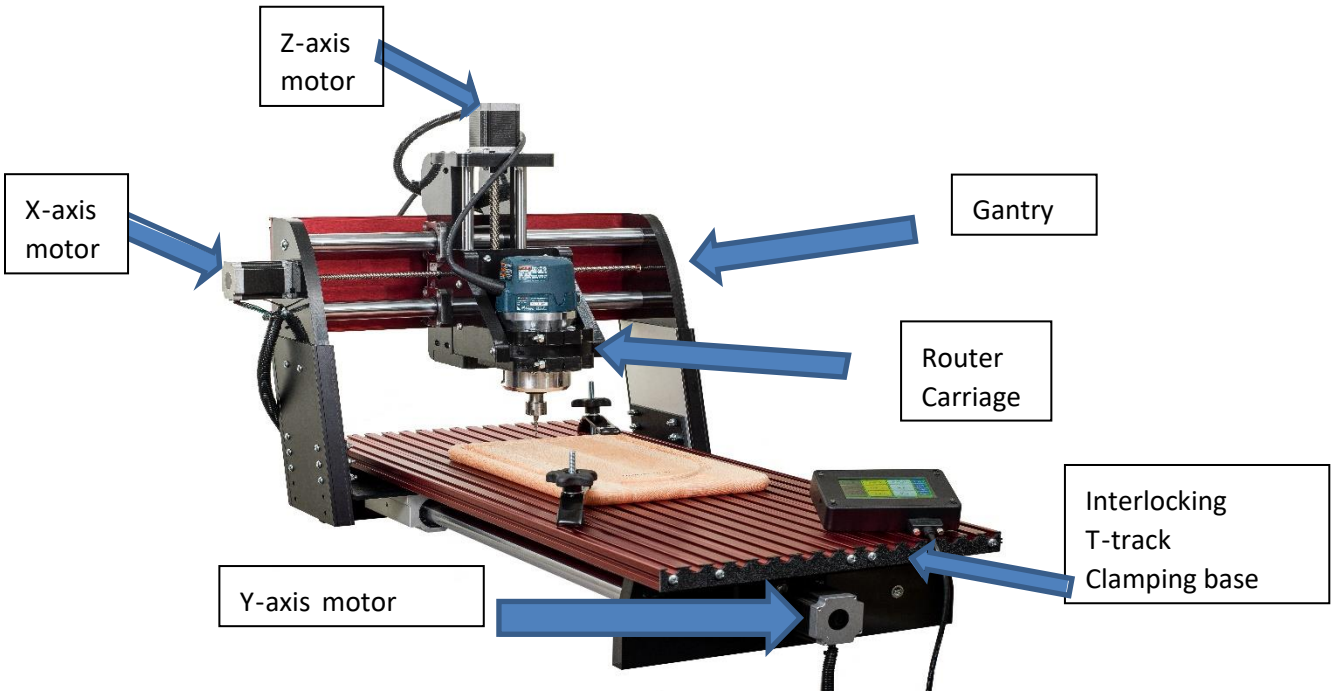
Overview

General – The CNC Shark II

Bringing the speed and precision of computer-numerically-controlled machinery to your shop, the CNC Shark II is designed for routing all types of wood, engraving plastics, etching metal, and even etching or cutting tile. The CNC Shark II has impressive power, speed, accuracy and ease of use. The CNC Shark II has a quality design and its parts have been manufactured using CNC machines to ensure the highest accuracy. The CNC Shark II is constructed of steel, aluminum, and high-density polyethylene for a robust, long lasting and close tolerance machine.

The CNC Shark II comes with Vectric's VCarve Desktop, (VCarve Pro on Extended Models) which will allow you to bring in designs from a multitude of art or drawing programs. You can find tutorials and design help at their website www.vectric.com

The core components of the CNC Shark II are shown in the figure below.



CNC Shark II Core Components

CNC Shark Controller and LCD Pendant

The CNC Shark LCD Pendant controls the movement of the X, Y, and Z axis as well as runs the project's tap file saved from the Vectric design software when input via a flash drive. The LCD Pendant is designed to be a standalone unit so that it is no longer necessary to expose your computer to a dusty shop environment. However, in the event you want to run it from your computer the Controller Interface may also be connected using a USB cable plugged into a USB 2.0 capable plug. This function will require you to download and use the CNC Shark Control Panel software (check online for the latest version) used to communicate to the controller. Then, just like the LCD Pendant you can use this interface to jog (position) the gantry and router, load a project (tap) file, and run the project.

The CNC Shark II has a Controller Interface with the power supply integrated into a single unit.

LCD Touch Screen Pendant

CNC Shark II Assembly Instructions

Unpack the CNC Shar II machine and verify that all items are present.

- CNC Shark II
- CNC Controller
- 15 pin Pendant Cable
- LCD Touch Screen Pendant
- Power Supply
- Power Cord
- 2 Hold Down Clamps
- Router Cradle Mount

NOTE: Make sure when removing the CNC Shark II base from its box that you lift it from the supporting rods underneath or the HDPE bottom. Do not lift from aluminum table top as this can cause misalignment.

Attaching the Gantry to the Base

1. For standard operation, use the bottom three sets of holes to mount the Gantry Assembly to the Base Assembly. The upper sets of holes can be used if extra vertical clearance is needed.

2. The Gantry Assembly attaches to the Base Assembly with the 12 mounting bolts and nylon- insert lock nuts (six on each side). The fit of the mounting bolts is intentionally snug, so you'll need to use the T27 Torx bit or screwdriver to start and advance the bolts. Once the bolts are through the gantry and base assemblies, thread on the nylon-insert lock nuts and tighten with a 7/16" wrench. Do not overtighten.

CNC Shark II Router Mounting

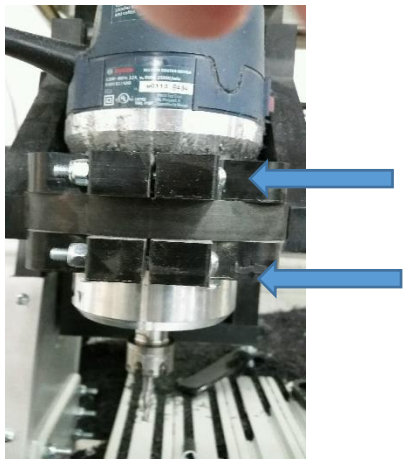
With your CNC Machine, you will need to attach your router cradle mount to your gantry as the cradle mount is packaged individually due to shipping constraints.

To install the cradle mount, you will need to remove the 4 bolts in the outer corners of the aluminum cradle plate that is attached to your gantry, using a T27 Torx bit or screwdriver. Do NOT remove the 4 recessed bolts located in the center of the aluminum cradle plate.

With the 4 bolts removed, place the cradle mount onto your gantry and replace the 4 bolts using a T27 Torx bit or screwdriver.

Install Router into Router Base by loosening the two horizontal bolts in front and sliding router in until the motor protrudes at least 1 ½" below the clamp.

Tighten all clamping bolts securely.



Setting up your CNC Machine

Place the Controller Interface in a comfortable easy to access location and connect it to the CNC Shark II using the serial cable provided. The LCD Pendant gets its power from the Controller Interface so no other power cords are needed. See image below.

Applying power to the Controller Interface.

- Re-verify that all three axis drive cables are connected to their respective Controller Interface leads.
- You should arrange the drive motor cables, power cables, and USB cable in a manner that minimizes overlap, even amongst cables of the same purpose. This will reduce any opportunity for signal interference because of cables 'laying on top of each other'.

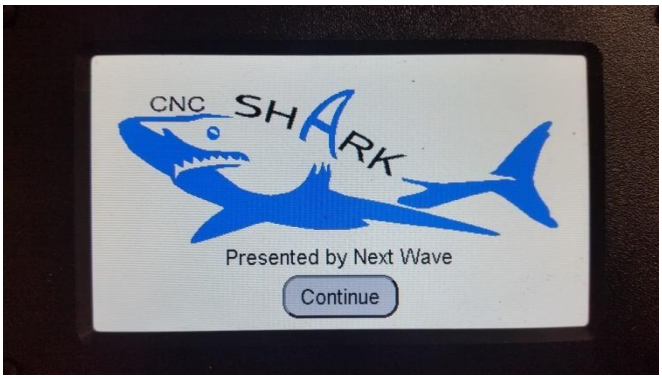
- Plug the Shark II Controller into a 120V AC wall outlet, power strip, or surge protector. Once again, it is recommended that a power strip with an on/off switch is used.
- You will also hear a slight bumping or clicking noise coming from each of the motors when power is initially supplied. This noise is momentary, and will occur every time power is applied to the Controller Interface.

WARNING: **The axis cable connectors should never be disconnected or re-connected while there is power to the Controller Interface. Doing so can damage the stepper driver board inside the Controller Interface.**

The CNC Shark II machine's hardware is now completely setup and is ready for basic operation testing. You must setup the CNC Shark II software before you can completely test your CNC Shark II machine.

Registering your Shark II

Once you power up your CNC Shark II, you will see a screen like below. Hit continue.



CNC Shark II Welcome Screen

Next you will see your CNC Shark II's serial number, and firmware information. Record this serial number into your manual on Page 2 then press OK.

CNC Shark II Serial Number

Go to www.NextWaveAutomation.com to register your SHARK II. Once at the home page, choose "Registration," listed at the top of the page. Fill in the items that are marked in Red and then choose Save at the bottom. This will email an access code to the email address provided in the registration form. (**be sure to check your spam box if you fail to see the code**)

ATTN SCHOOLS: You will typically need to have an administrator rights to registration because of security restraints.

If you received a registration error message there are a couple things to try: assuming you have an internet connection.
1.) Use a different browser and register again
2.) Use a different computer to register.
3.) Send tech support ALL the information from the form or a screen capture of the form and we can generate a working access code for you.

If you received the success message and did not get a key code back in your email please try the following:

1.) Check your trash and spam email folders.
2.) Register again but send to another email address

Always Visit http://help.nextwaveautomation.com/ for help with the latest issues.

Workflow Overview

It is important to recognize that unlike other wood working and machining tools, you just don't walk up to the CNC Shark II with your material, hit the power button, and start carving or engraving your project. It is easiest to think of the workflow in two distinct components:

1. Create the design and toolpath (also called TAP file) - using VCarve.

2. Machining the part - using the CNC Shark II LCD Control Panel, you will set your "Home Location" then load the toolpath file and run the project (create your carving).

Create the Design and Toolpath(s)

VCarve is used to create the design of the part you want. It is a powerful user friendly program, if you haven't yet gone to www.vectric.com and watched their instructional tutorials on designing **you must do this first**.

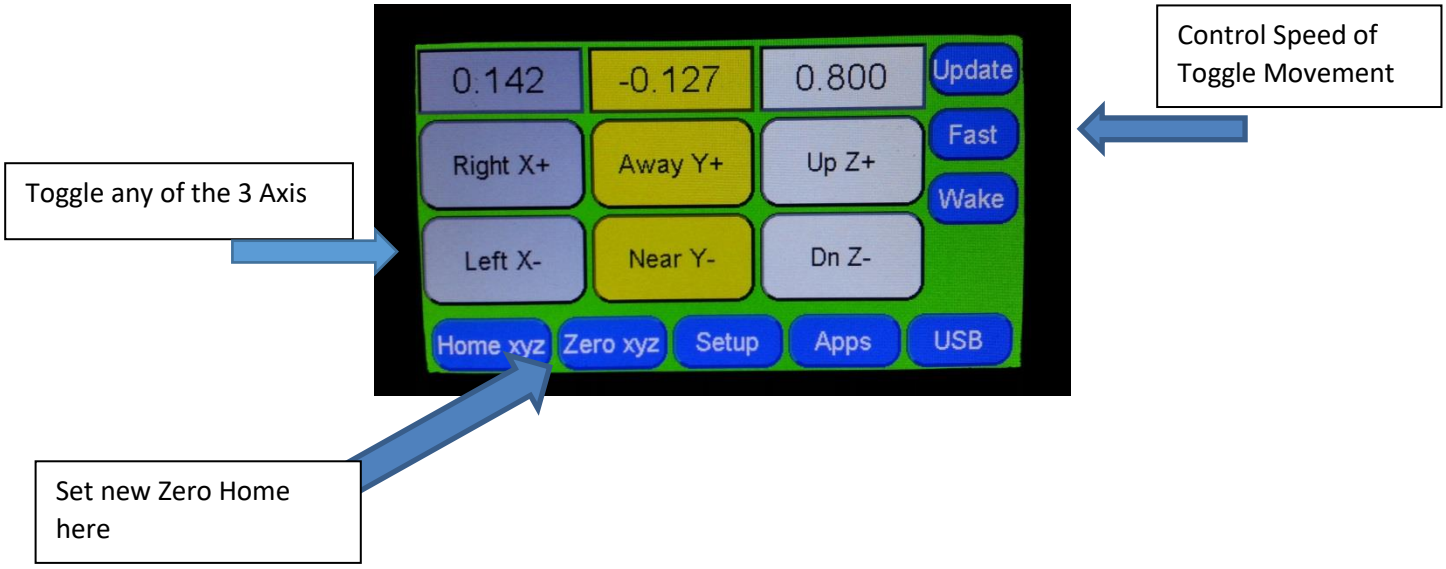
The VCarve projects are saved with the file extension '.crv'. This is not however the file you will load onto the CNC Shark II LCD Control Panel to carve your design as VCarve does not directly control or operate the CNC Shark II. This is commonly referred to as your 'project file' and can be opened and edited at any time by using the VCarve software.

Once your design is ready, you will use VCarve to generate one or multiple toolpaths depending on what you are trying to do to your project, profiles, drilling, carving etc. They all require separate toolpaths. (Complete directions on this are available at www.vectric.com) You select the design component, the cutting tool you want to use and then generate the toolpath. A great feature is that you can preview the outcome of that toolpath in VCarve and make changes before ever cutting or wasting your material. Then using VCarve to save that toolpath, and selecting the correct post processor (CNC Shark post processor in post processor area of VCarve) it automatically creates the g-code needed by converting into a .TAP file. Next save it onto a USB thumb drive and directly load this into the CNC Shark II via the USB slot on the right side of the pendant. The tap file contains the G-code instructions that will tell the CNC Shark II where to move in X, Y, Z to make the appropriate cuts using the cutter tool selected. (G-code is the common name for the computer numerical control (CNC) language used by the CNC Shark II.

It is important to also note that you can do all tasks associated with VCarve on a separate computer – i.e. you may choose to use a computer in your office or home to create your designs and generate the toolpath files and then download them to a thumb drive and plug this into the Shark II.

Machining the Part

The material to be machined is placed on the Shark II work table and properly secured – typically by using clamps. The proper cutter tool is placed in the router. Using the Shark II Touch Screen, the tool is moved (jogged) to X0, Y0, Z0 – this is typically on the very top of the material, and the lower left corner. Once you have it in position you press the Zero xyz button, answer yes to reset zero and this becomes the starting and stopping place for this project. (You can place your material anywhere on the table and reset home in this manner)



The tap file is loaded onto the Thumb Drive in the Controller Interface using the Touch Screen interface. Select the 'Load G-Code' button, and select the appropriate tap file. At this point, all the steps necessary to run the toolpath have been taken. The 'Run' button is selected, and the Shark II starts to machine the part.

You can also type a measurement directly into the current location screen. Pressing the location area will display the screen below.

Enter the desired location using the numeric keypad

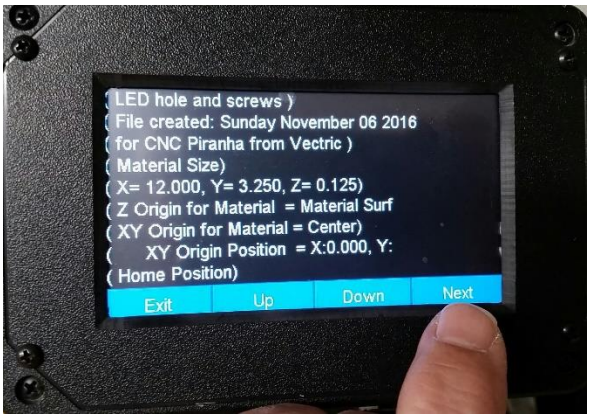
Then press the Move Button

Next, plug the thumb drive containing the .tap file into the LCD Pendant using the USB port on the right hand side of the Pendant.

The USB button will now become accessible, press it now.

Next select the appropriate tap file. (Tap files only allow 8 characters so be sure you have unique identifying names)

Verify you have the correct file you are preparing to run, you can see file name, material size, etc. If everything is correct press Next



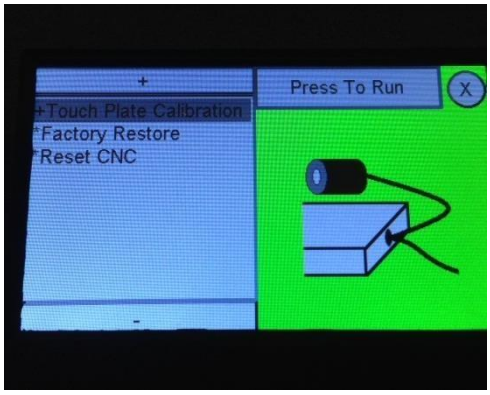
At this point, all the steps necessary to run the toolpath have been taken. Next select the 'Start' button and the CNC Shark II will start to machine the part. You'll notice you have complete control to pause and resume should you need to check something (remember to turn router off if your adjusting the work piece) The slide bar for speed override allows you to compensate for things like denser material than what you had originally designed the program for. And of course, the E-Stop in case you need to stop everything in a panic. (we don't recommend using the small x to stop the cutting as it can confuse the machine, it is only used to back out to the previous page)

Using the Touch Plate Accessory

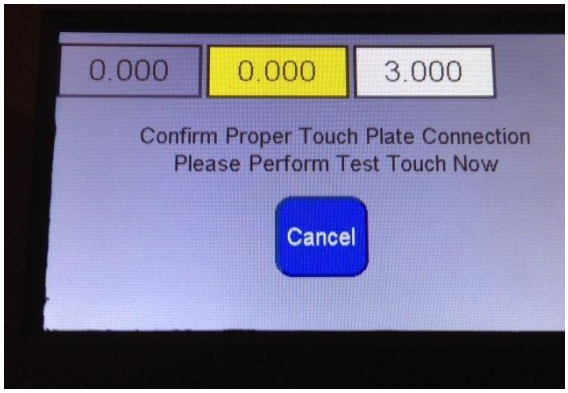
The Touch Plate is an optional accessory that can be used to obtain faster, more accurate setups. Just plug it into the CNC Shark II. This same Touch Plate is used with the CNC Shark offered by Next Wave Automation through a network of authorized distributors and web store.

Next Wave Touch Plate Accessory

Press the App button and go to the Touch Plate Setup App.



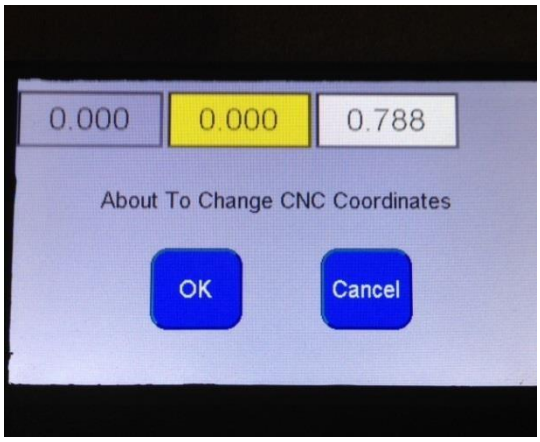
Attach the magnet to the router bit collar and place the plate on top of the material you're working with. Then Tap Press to Run and the CNC Shark II will ask to perform a test as below.



Raise the touch plate to enough to make momentary contact with the bit, the screen will turn red and you may proceed. If the screen does not turn red, try repositioning the magnet and repeat procedure. Once you make the proper connect press ok to begin movement.

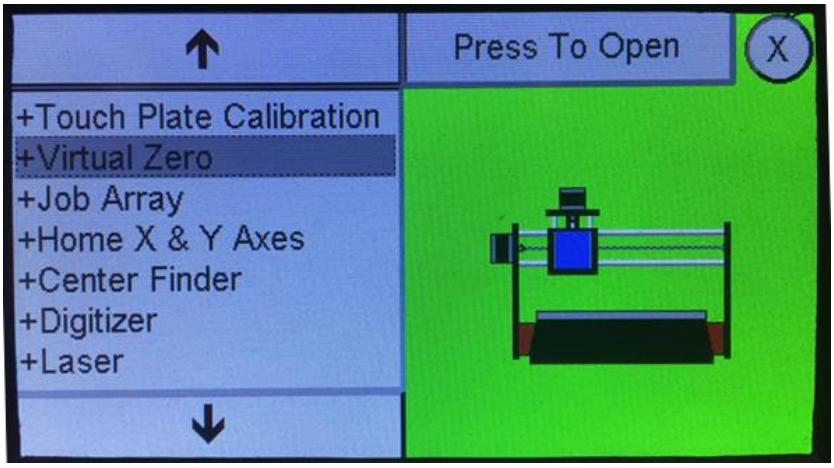
The CNC Shark II will establish the zero/home position the instant the bit makes contact with the touch plate. You can ABORT the process at any time by pressing the Abort Key.

Press OK to accept the results.



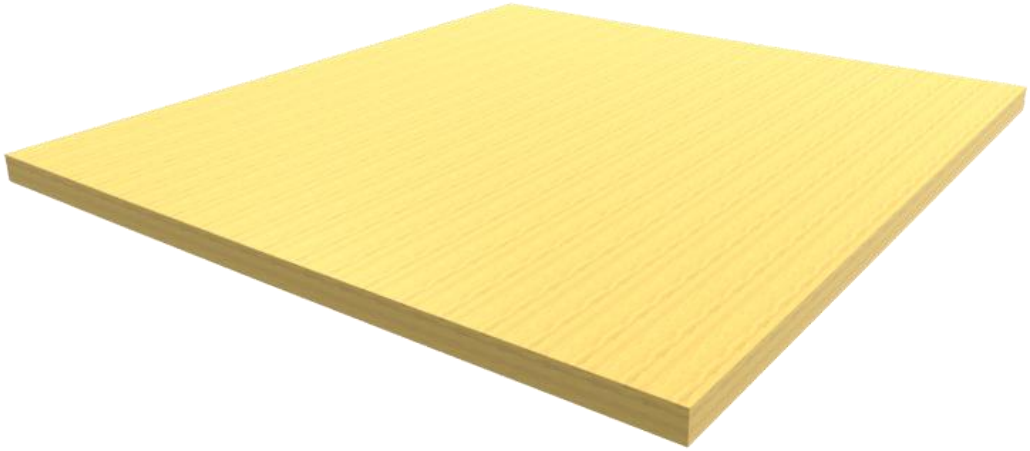
Virtual Zero

Even material that seems flat can sometimes have a slight bend to it. Virtual Zero is a function that uses the Touch Plate to account for this different bend in each piece of material. Virtual Zero is for G-Code files only, not raster graphics laser files. To clarify, Virtual Zero does not work in accompaniment with laser-burning images. When using Virtual Zero with a file, ensure that the file uses the CENTER as the reference, as opposed to a corner of the material. When running a file, a green "V" indicates that Virtual Zero is armed.



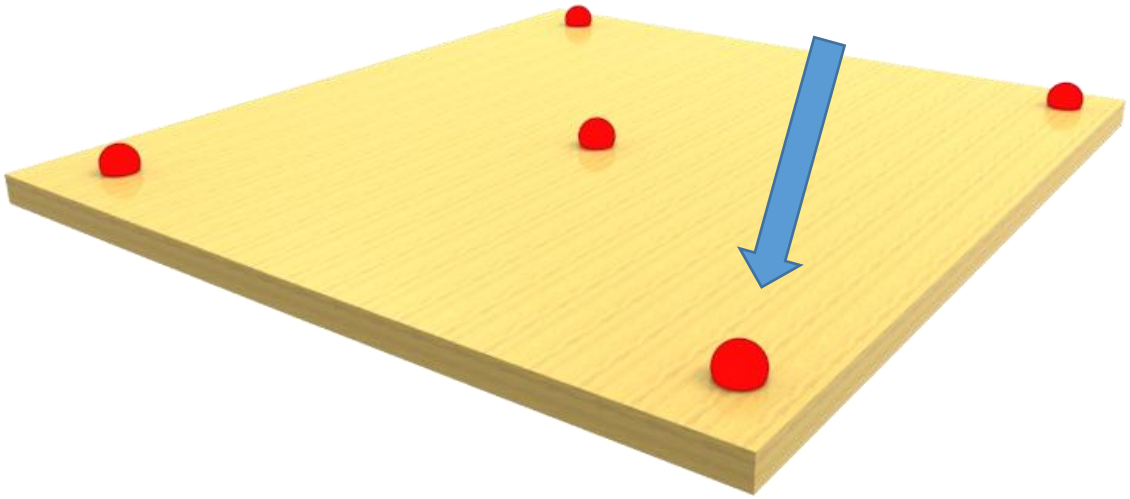
SELECTING VIRTUAL ZERO FROM THE APPS MENU

Even seemingly flat material can be slightly warped. Virtual Zero touches down at five points on the material to compensate for any warps or bends.



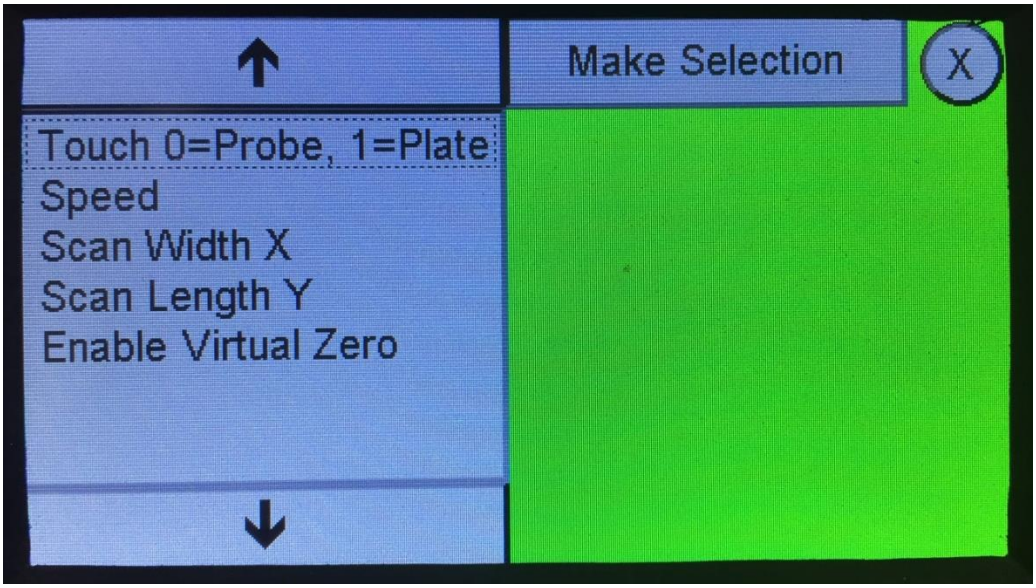
SLIGHTLY WARPED MATERIAL

Points at which the router will touch down on the Touch Plate

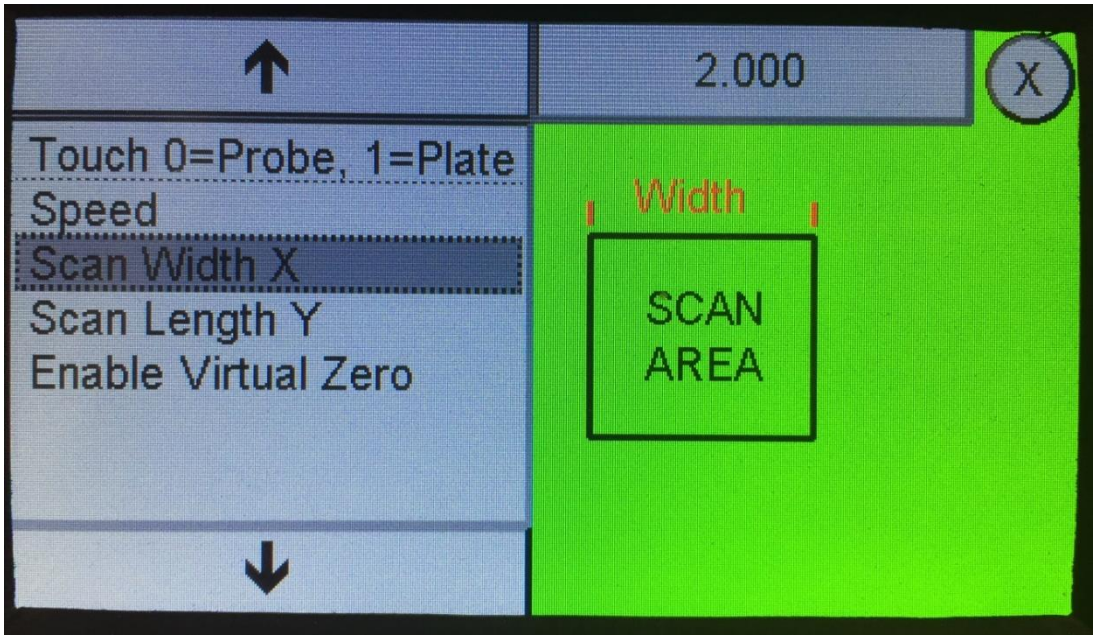


Virtual Zero reference points

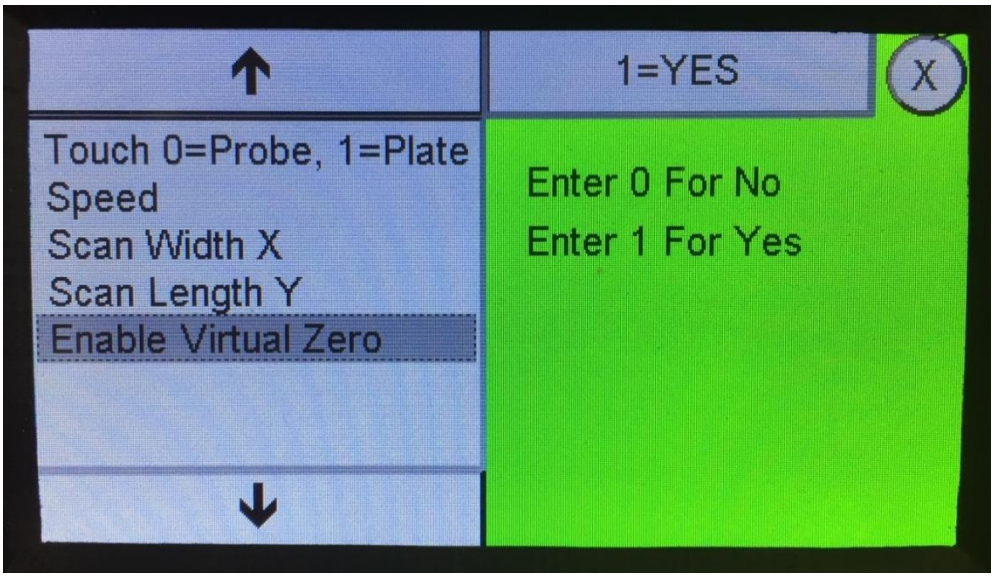
Once Virtual Zero has been selected, the program needs input to use the touch plate. Select the first option from Virtual Zero sub-menu and input the number 1 to confirm that the touch plate will be used.



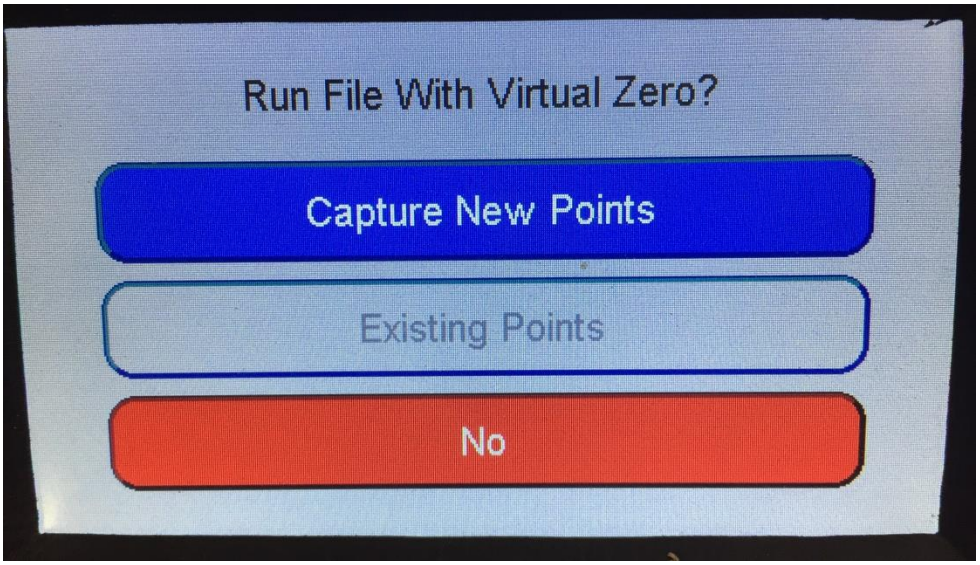
From this menu, select Scan Width X and enter the width of the area you are machining, in inches. This area should account for potential obstructions, such as clamps holding the material in place. In our example, we input 2 inches. Your value will vary depending on the size of the individual area you are machining. Then, select Scan Length Y and enter the length of the machining area.



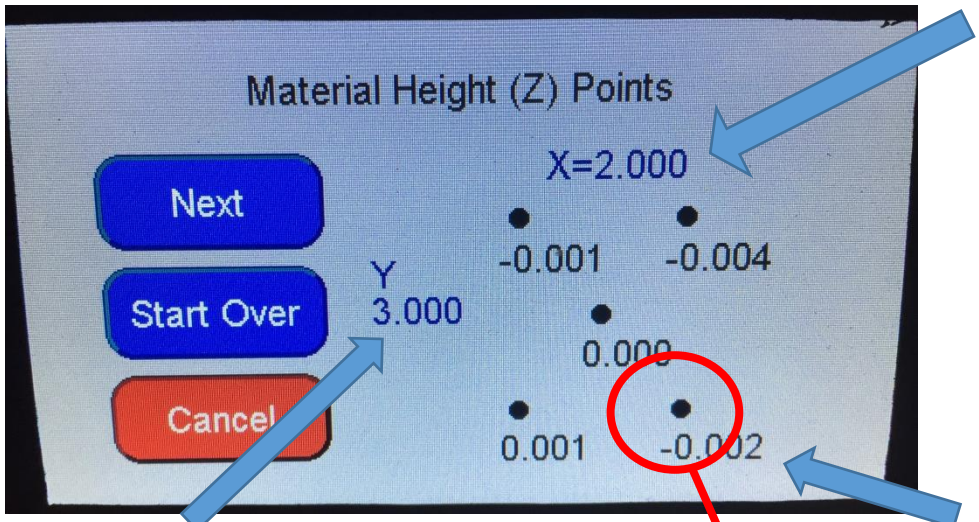
Once you have input your desired settings for Speed, Scan Width X, and Scan Length Y, select Enable Virtual Zero. Inputting the number 1 tells the machine to run Virtual Zero the next time you run a file, and the next time a file is run, the machine will display a prompt asking if the file should run with Virtual Zero. Inputting the number 0 tells the machine to ignore Virtual Zero the next time a file is run.



With Virtual Zero enabled, the next time you run a file, a prompt will appear asking if the file should be run with Virtual Zero. If you are using a new piece of material, select Capture New Points. If you are using a piece of material on which you have previously run Virtual Zero, you may choose Existing Points. You may also choose No to bypass using Virtual Zero.



After selecting Capture New Points, the machine will take information by touching the router bit down onto the Touch Plate five times—once in the center of the material, and once in each of the four corners of the material. Your numbers may not be the same as those shown in the example picture below.

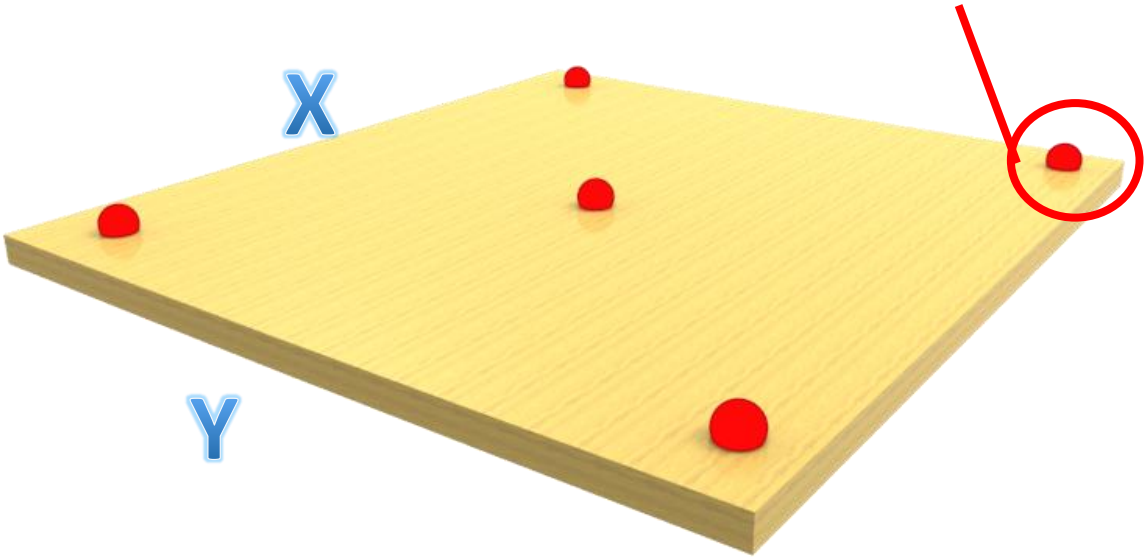


Material width

Recorded value at each Point

Material length

Each of the five dots in the above image corresponds to a point on the material, as depicted below.



When the router begins to move, place the Touch Plate on the material directly below the router, so that the bit will make contact with the Touch Plate. The router bit should descend and touch down lightly on the Touch Plate and then back up. Do this for all five points. Now, when the machine runs a program, it will compensate for any bends in your material.

Informational Resources

Next Wave Automation
www.nextwaveautomation.com

Manufacturer of the CNC Shark II. The website has software and documentation downloads as well as other general product information.

CNC Shark Talk User Forum

www.cncsharktalk.com

A user group of the CNC users geared around CNC Shark owners. The website has projects, ideas, showcase, and valuable support from users of all levels

Vectric

www.vectric.com

Producers of the **VCarve** software package. The Vectric website has product information, FAQs, on-line tutorials, and an excellent user forum. Keep in mind that Vectric supports Vectric software, not the CNC Shark.

Vector Art 3D

www.vectorart3d.com

Vendors of CNC-ready, **VCarve** compatible three-dimensional clip-art models. Use their powerful FREE software to create toolpaths of the models, which can then be imported into **VCarve**. Purchase models individually or in collections; a huge number of models is available. They also provide custom modeling services for customers requiring specific parts created from their own artwork.

VectorClip2D

http://www.vectric.com/products/cut2d.html

Vendors of CNC-ready, **VCarve** compatible two-dimensional clip-art models.

CNC Shark II Maintenance & Trouble Shooting Guide

Maintenance

It is best to vacuum away any dust, wipe down the bars and lubricate them using a dry lube spray such as what we carry. http://shop.nextwaveautomation.com/shop/category.aspx?catid=12
You can also find products like this at any good hardware shop, just make sure it is the dry type so it doesn't attract dust and buildup. Spray the bars, bearings, and lead screws occasionally and you should be good to go. -NWA

No Power – No lights

- Check Fuses below power cord see image below

Router Not Auto Powering up

Some routers have new built in safety feature, voltage sense technology, that sometimes won't detect enough start voltage to correctly initiate the router on/off mechanism. Your router fails to start, but it works fine in a regular outlet.

An easy way to test this is to plug a power strip into the controller and put in something like a small light. If the light comes on when running the program the controller switch is working.

If this works, you can try using a power strip that has a built in lighted switch or add a small night light plugged into the power strip. This is usually enough power draw for the Router switch to sense it and power the router correctly.

If it still isn't working, make sure you have the newest CNC Shark post processor which contains the power on / off command.

If you continue to have an issue email support@nextwaveautomation.com to get it resolved.

Improving Touch Plate Accuracy

When working with the touch plate detection or virtual zero app make sure you are placing the magnet in the correct location to get the best reading. The magnet for the touch plate should be on the bit to get the best reading but this is not always possible if you are using a solid carbide bit. If you're placing the magnet to the collet and you're not using a high precision collet from Next Wave made from stainless steel, you can have some inconsistencies in your readings. Most router collets have an anodizing or oxidizing coating that will interfere with quick readings. So, if you're doing very minute readings and need accurate numbers than I would recommend slowing the touch plate detection speed down to 10 ipm which can be adjusted inside the touch plate app.
To adjust the speed for the touch plate go under the apps section on the pendant (bottom button) find the touch plate app go into it then scroll down to the adjustment selection and change it there.

LCD not Connecting

- 15-Pin Cable is not corrected properly (make sure screws are tight)
- Nothing is touching the LCD Screen
- Make sure there is not a flash drive in the USB slot when powered on
- Make sure the proper power supply is being used
- Your VGA cable may be bad. Replace with NWA approved cable

Unable to read USB files

When your controller is unable to read your files from a NEW USB thumb drive the issue is probably that it is not formatted in a **FAT32 format.** The solution is to reformat the USB after copying any files you want temporarily back onto your computer.

1.) Plug the USB drive into your computer.
2.) On the bottom left, right click on the Windows Icon then select "Open Windows Explorer"
3.) Find which drive letter is your USB it is NOT normally A, B or C. It will probably be D, E or F
4.) Copy your files from it to a directory temporarily on your PC

WARNING - Formatting your main computer drive will not make you happy, be careful.

5.) Right click on the appropriate drive letter again then select Format.
6.) Make sure that the File System has "FAT32" selected
7.) Click the start button. Formatting should only be a minute or two
8.) Copy your files back onto the USB Drive
9.) Try the USB in the Controller again

Computer Requirements

The current minimum system requirements for running VCarve software:

- 2 GHz Pentium 4
- 60 Mb Disk Space
- 2 Gb RAM
- 1024x768 graphics display
- DVD ROM drive
- USB 2.0
- Operating system: Windows 7, Windows 8, Windows 10

VCarve will run faster with a better processor and more memory than listed in the minimum system requirements.

Other operating systems, for example iOS (Apple) and Linux, are not currently supported.

The computer used to connect to the Controller Interface must have a USB 2.0 port. The Controller Interface will not work with a computer connected with a USB 1.0 or 1.1 port, or a USB hub that is not powered.

There is no requirement to run VCarve on the same computer as you use in the shop to connect to the Shark II Controller Interface.

FOR THE MOST RECENT MANUALS, DRIVERS, AND OTHER SOFTWARE, PLEASE VISIT

http://nextwaveautomation.com

Other Accessories

Water Cooled Spindle

CNC Laser