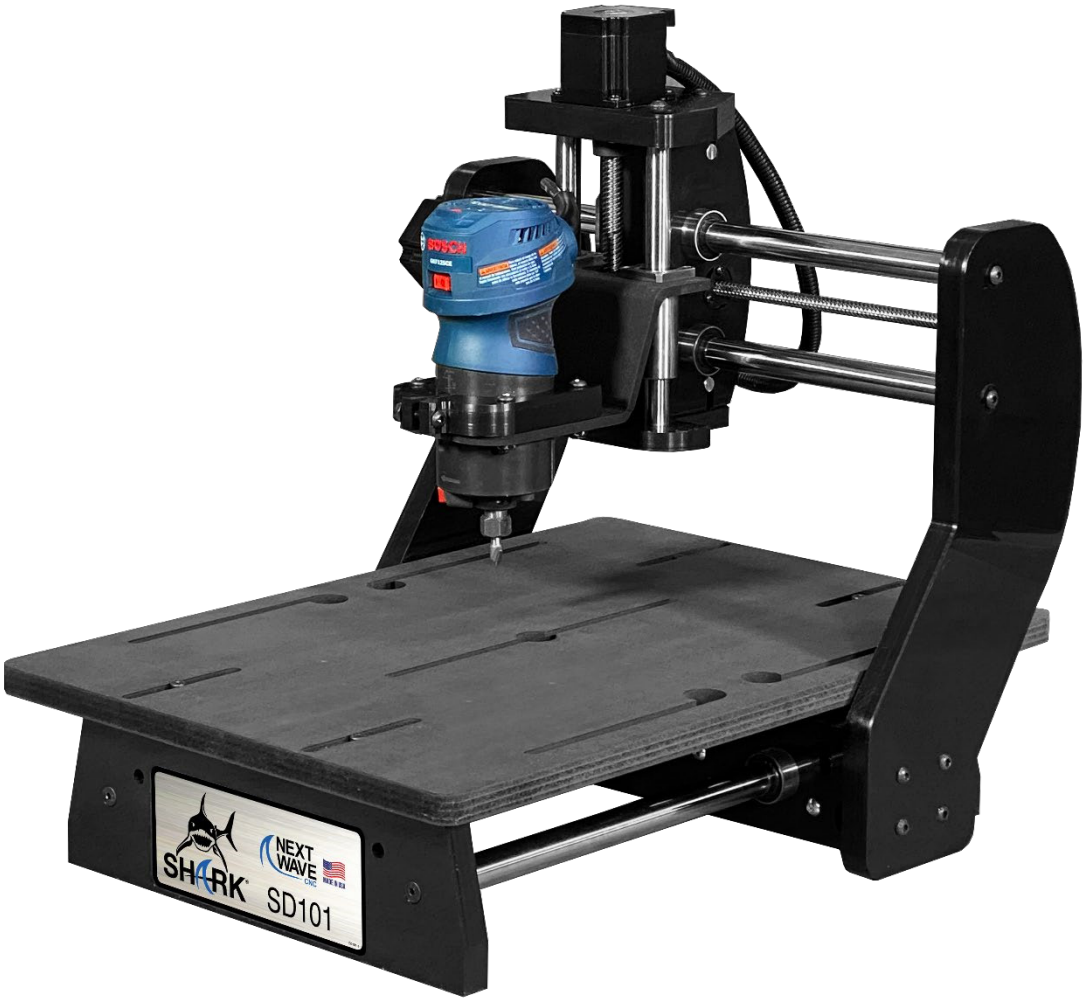
NEXT WAVE® CNC



SHARK®

SD101

Owners Manual

NextWaveCNC.com • 419-318-4822
600 West Boundary Street, Perrysburg, Ohio 43551

SHARK® CNC Quick Access Guide

Use the links below to access your software and other valuable SHARK owner resources.

SHARK WIZARD CNC Made Easy

Available only with the SHARK CNC SD101

(Licensed Sticker Here)

Download WIZARD software at:
Portal.NextWaveCNC.com
(Activate using license codes)

WIZARD Learning Tutorials are available in the software.

READY2 CONTROL

FREE

For All SHARK CNC OWNERS

Download Ready2Control at:
Portal.NextWaveCNC.com
(No activation needed)

VIRTUAL ZERO UNLIMITED

Not available for SHARK CNC SD101

(Licensed Sticker Here)

Download VZU software at:
Portal.NextWaveCNC.com
(Activate using license codes)

Download Ready2Control and Virtual Zero Unlimited Owner Manuals at: www.NextWaveCNC.com/download-links

Product Registration
User Account Access
Portal.NextWaveCNC.com

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Technical Support & Videos
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Project Files
NextWaveCNC.com/CNCProjectPlans

Accessories
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CONTENTS

Please Read This Manual Carefully

This manual provides important setup and operational information for your SHARK SD101 machine. Using your SHARK SD101 machine requires experience with basic computer operation and the technical knowledge to safely operate power tools.

The most recent version of this manual can be found at:

www.NextWaveCNC.com/downloads-links

To Our Customers

Thank you for purchasing a **SHARK SD101** from **Next Wave CNC**! Your CNC opens up a world of creative possibilities for your ideas and designs. Following the step-by-step instructions, your **SHARK SD101** machine will be up and running in no time.

Whether you're new to CNC technology or a seasoned expert, your **SHARK SD101** machine provides a lot of flexibility for programming and operation. Our specially designed **Ready2Control-Basic** software allows you to run toolpath files and control your **SHARK SD101** from the PC. See the **Ready2Control** User's Manual for more information. Your **SHARK SD101** can also be controlled with the optional **SHARK LCD Color Touchscreen Pendant**. For more information about buying or using a Touchscreen Pendant with your **SHARK SD101**, please contact Customer Support at: Support@NextWaveCNC.com.

Warranty

Next Wave CNC warrants your new SHARK SD101 to be free from defects in material and workmanship for ONE YEAR from the date of purchase. The warranty applies only to the original retail purchaser of the SHARK SD101 when purchased from an authorized Next Wave CNC distributor. This warranty covers the parts and labor to correct the defect. It does not cover the cost of shipping the machine and/or parts to Next Wave CNC for evaluation or repair. This warranty does not apply to problems arising from normal wear and tear, misuse, abuse, negligence, accidents, unauthorized repairs, alterations, or lack of maintenance. This warranty is void if the SHARK SD101 or any portion of it is modified without the prior written permission from Next Wave CNC, or if the machine is located or has been used outside of the country where the machine was purchased.

Please contact Next Wave CNC to take advantage of this warranty. If Next Wave CNC determines that your **SHARK SD101** is defective in material or workmanship, Next Wave CNC will at its expense and upon proof of purchase send replacement parts to the original retail purchaser necessary to cure the defect. Next Wave CNC will repair your **SHARK SD101** provided the machine or affected components are returned to Next Wave CNC, shipping prepaid, with proof of purchase and within the warranty period.

Next Wave CNC disclaims all other express or implied warranties, including fitness for a particular purpose. Next Wave CNC shall not be liable for death, injuries to persons or property, or incidental, consequential, contingent or special damages arising from the use of the **SHARK SD101**.

Next Wave CNC warrants the Ready2Control software to perform as intended and will provide customer support to the original purchaser when purchased from an authorized retail distributor. Warranty only applies to the current version or the support needed to update a past version. The cost of the software upgrade (if any) is not covered by the warranty.

Lifetime Technical Support is provided to the original purchaser.

Contact Us

If you need technical assistance with your **SHARK SD101** or software, please visit our Support webpage at: NextWaveCNC.com/support or email Customer Support at: Support@NextWaveCNC.com.Please include your product model number, date of purchase, and other pertinent information associated with the issue such as .tap files, screen captures, or photos of your setup or the problem.

Support Email: support@NextWaveCNC.com
Available: 9 am – 5 pm (ET) Monday-Friday

Your Product Information

Serial Number License Information

You can find the **SHARK SD101** serial number on the bottom side of the controller box on the back of the tool. For easy reference and record keeping, enter your below.

Controller Box Serial Number

_____

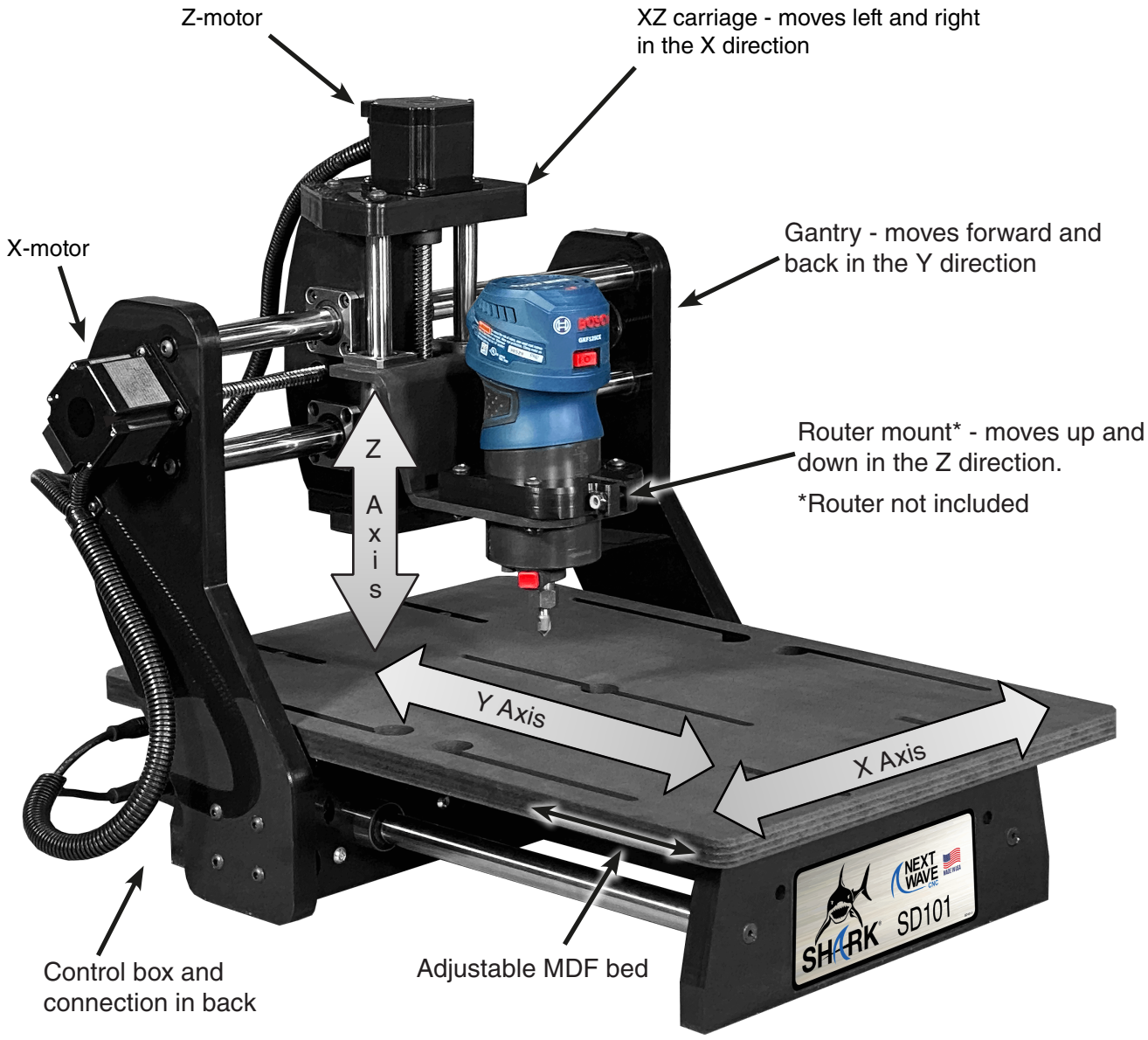
SHARK SD101
User's Manual
Version: 03/13/2024

Next Wave CNC, LLC
600 W. Boundary St.
Perrysburg, Ohio 43551 USA
Main Office Phone (419) 318-4822
Email: Info@NextWaveCNC.com

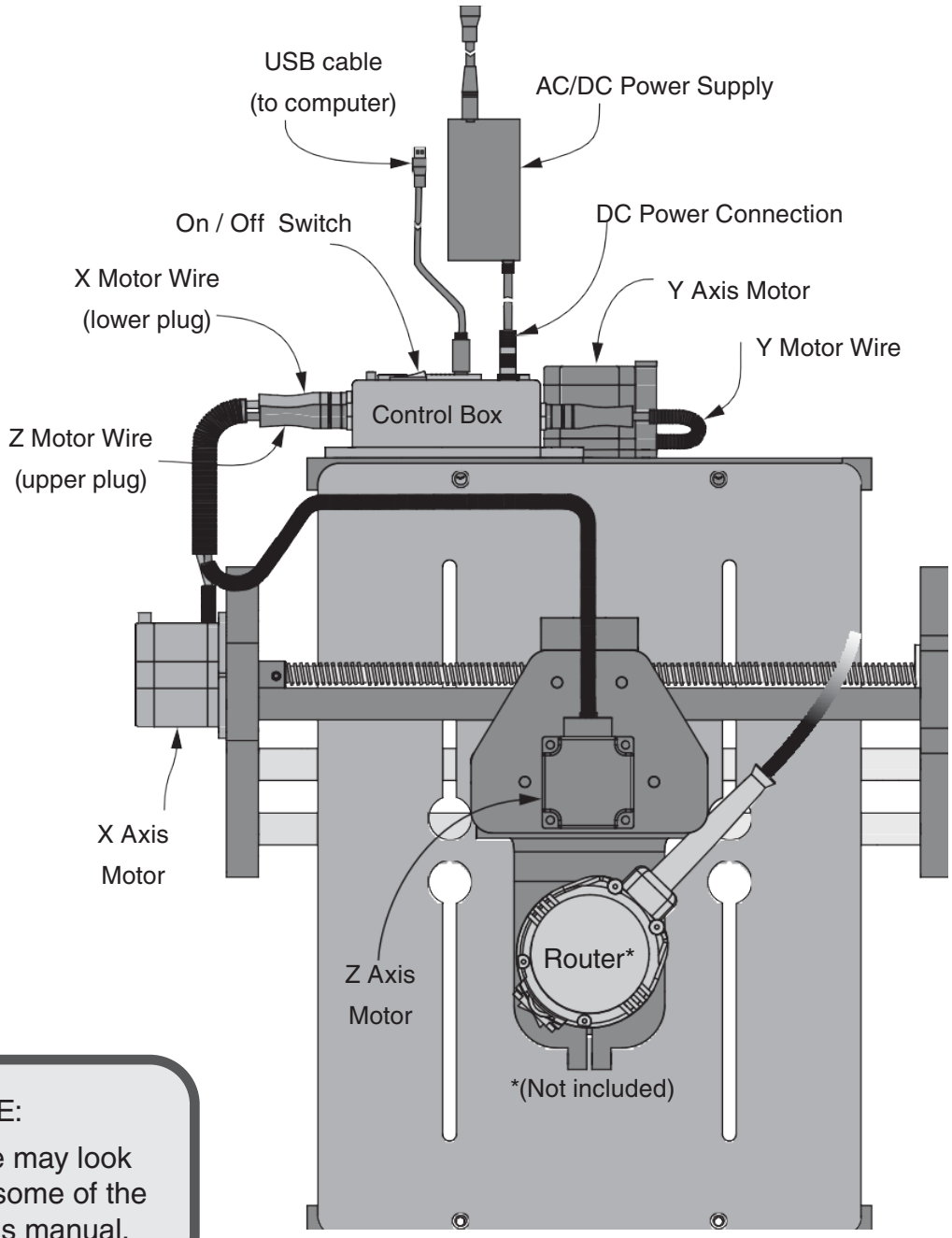
In the Box

- SHARK SD101 machine
- SD101 Owners Manual
- Ready2Control-Basic License Card
- WIZARD software (online access)
- Power Supply
- AB-USB Cable
- 2 Hold Down Clamps
- 3 Router Clamp Options*
  - (B125) Bosch 1.25 HP Colt -preinstalled
  - (B1) Bosch 1 HP Colt
  - (D) DeWALT Trim router

  *(Router NOT INCLUDED)



Wiring Schematic



NOTE:

Your machine may look different from some of the pictures in this manual.

System Requirements

All **SHARK SD101** machines plug into a standard 110v receptacle for power. A 15 amp or higher circuit is required. The Wizard and Ready2Control software requires at minimum, a computer with Microsoft Windows 10 or higher, a 2 Ghz Quad-Core processor, a minimum of 8Gb RAM, 300 Mb Disk space (for the software programs), a 1280 x 720 Display monitor, and a USB port.

Getting Set Up

There are four main steps involved in getting your new SHARK SD101 set up and running:

1. Machine setup
2. Machine Registration
3. Software installation
4. Computer Hookup

These steps are covered in more detail in the following pages. See the illustrations on the previous two pages to familiar with the main the parts of your **SHARK SD101**.

Note: Your machine may look slightly different from some of the photos in this manual.

Step 1 - Machine Setup

Unpack the **SHARK SD101** machine and verify that you have all the parts. When removing the **SHARK SD101** machine from its box, do not lift or carry it by any of the threaded rods, as this can cause misalignment.

Install Router Mount

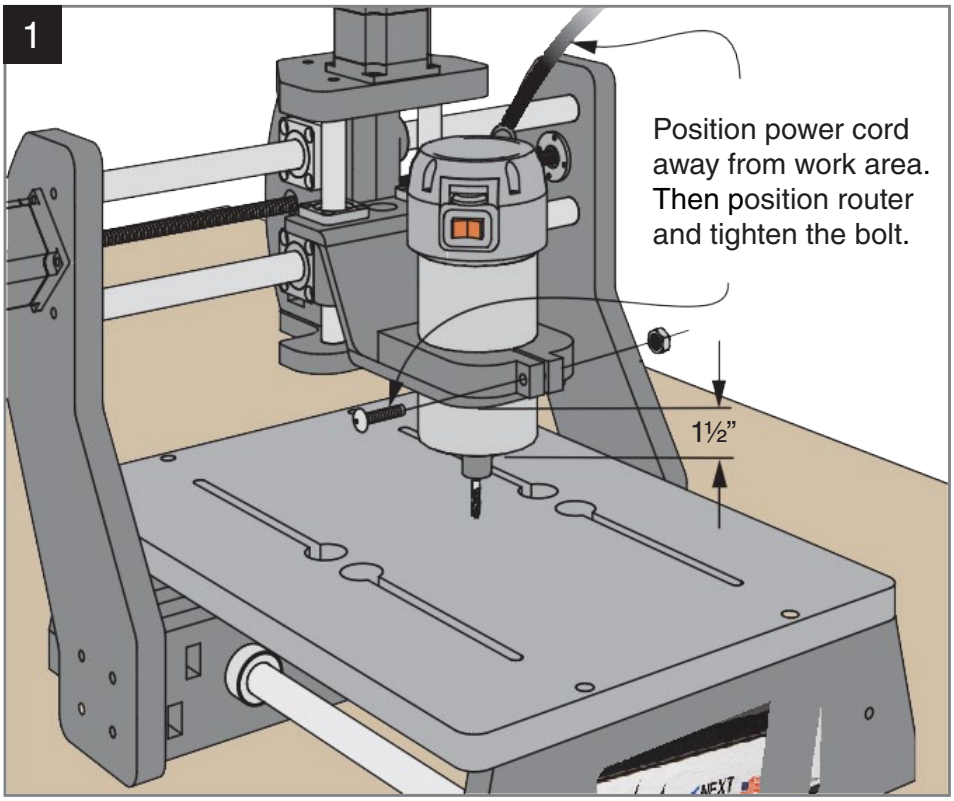
Your **SHARK SD101** comes with the "B125" router mount installed (Figure 1). This mount accommodates a Bosch 1.25 HP Colt trim router. Two other router mounts are included with your **SHARK SD101**. The one marked "B1" is for the Bosch 1 HP Colt trim router. The one marked "D" is for the DeWALT trim router. If you are using one of these other routers, switch out the router mount at this time.

Once you have your preferred router mount installed, loosen the clamp nut and bolt, insert the router until the motor protrudes about 1.5" below the clamp ring (Figure 1). This setting works well with the Bosch 1.25 HP Colt trim router and most bits. You may have vary the setting with you're particular router.

The goal is to position the router so the tip of your shortest router bit is slightly above the table when the Z axis is at it's lowest position. You will learn how to lower the Z axis in the coming pages, so you can return to this step later to fine tune height of the router.

Adjusting the Bed

The SD101 has an adjustable MDF bed, allowing the user to move the bed in the Y-direction to meet various machining need. The SHARK SD 101 ships with the bed in the "Flush" position (Figure 3), however for most work setting the bed to the "Extended" position (Figure 4) is preferred as this provide more project and clamping room at the front of the machine.



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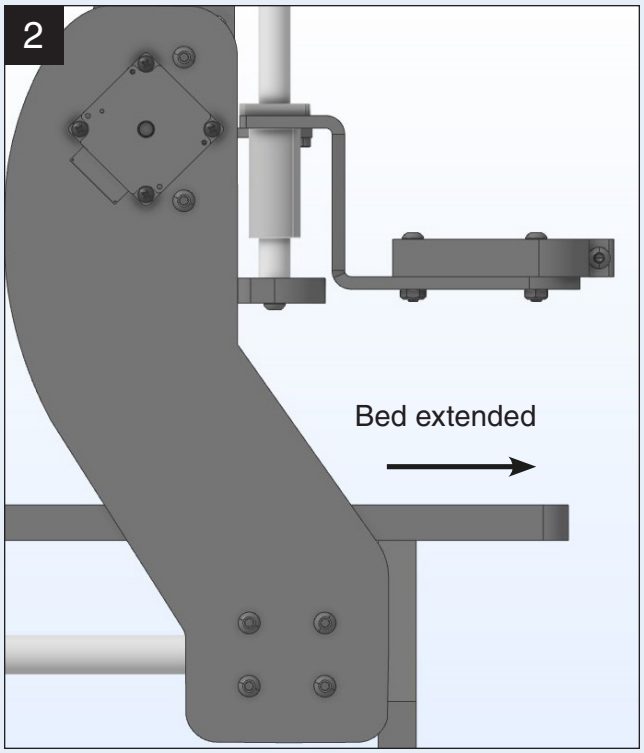
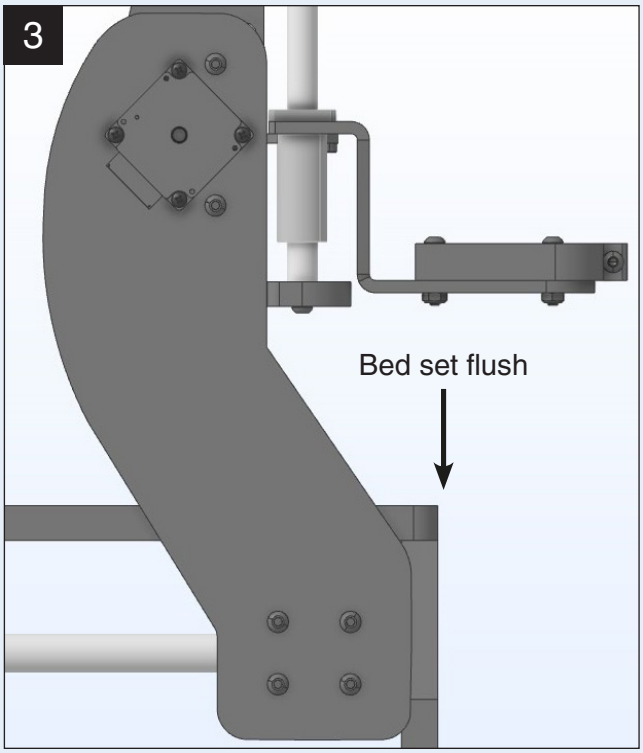


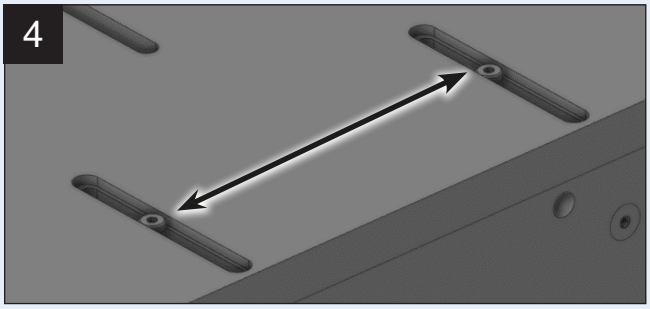
Extending the bed provides maximum table area for clamping and machining your project. This is the recommended position for most cutting.

3



Adjusting the bed flush allows you to clamp material vertically to the front of the machine. This is useful for end-grain machining.

4



To adjust the bed, loosen the 4 bolts holding the bed to the base legs with the provided 5/32 Allen wrench, and re-tighten when the bed is in the desired position.

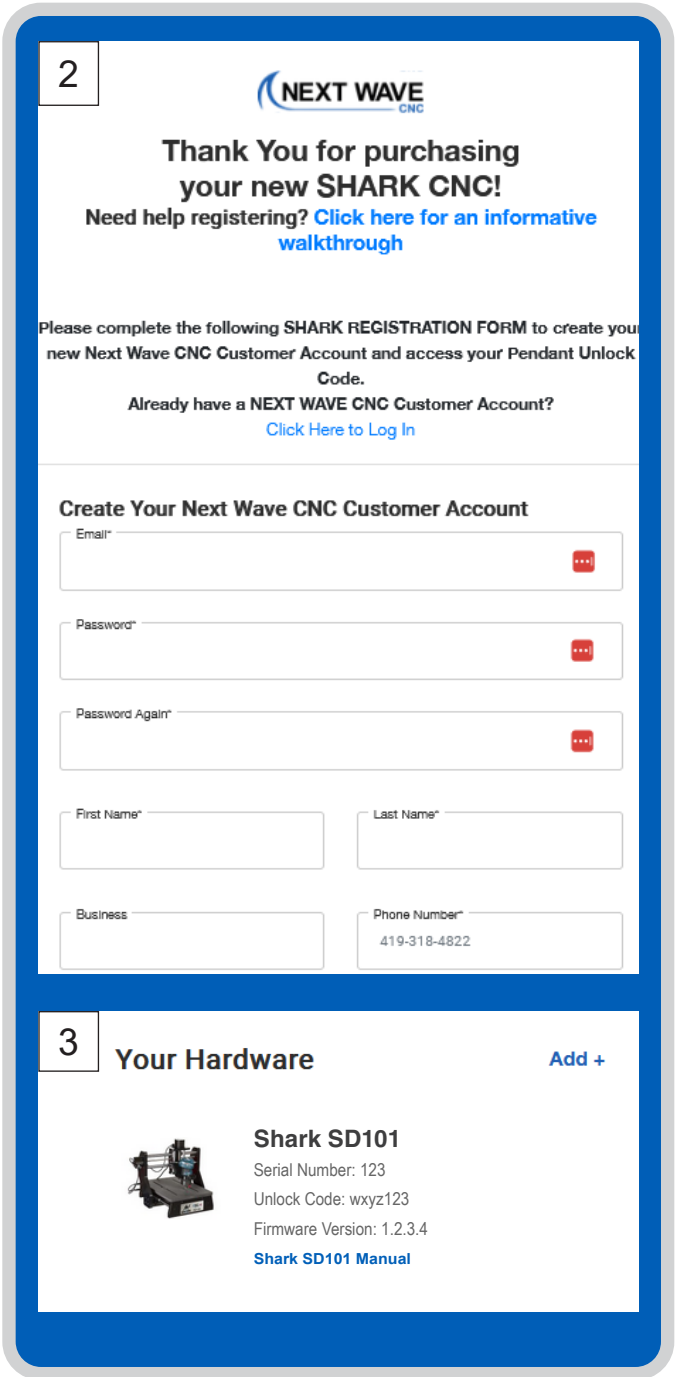
CAUTION: Over-tightening can cause the bolt head to sink into the MDF bed.

5

Electrical Hookup

Your **SHARK CNC SD101** machine and router can be plugged into any standard 120V-15amp wall receptacle. However, we recommend using a switched power strip as it provides additional voltage protection.

When the power is switched on, you may hear a slight clicking noise coming from each of the motors. This noise is normal and may occur each time you turn on your machine. The machine's hardware is now set up. Proceed to the Software set up section on the next page.



Step 2 - Machine Registration

If you do not have a Next Wave CNC Customer Account, go to **www.NextWaveCNC.com** and click on the Registration menu item at the top of the web page (Figure 1). Follow the prompts to create a Next Wave Customer Account (Figure 2).

Once you have entered the required information and pressed the Register button, a verification e-mail will be sent to you. In the email press “Verify Your Email”. You will then be directed back to the your user account page.

Verify that your **SHARK SD101** machine appears under the “Your Hardware” section (Figure 3). If not, add your **SHARK SD101** by clicking on the “Add+” link that appears in the upper right corner of the “Your Hardware” section.

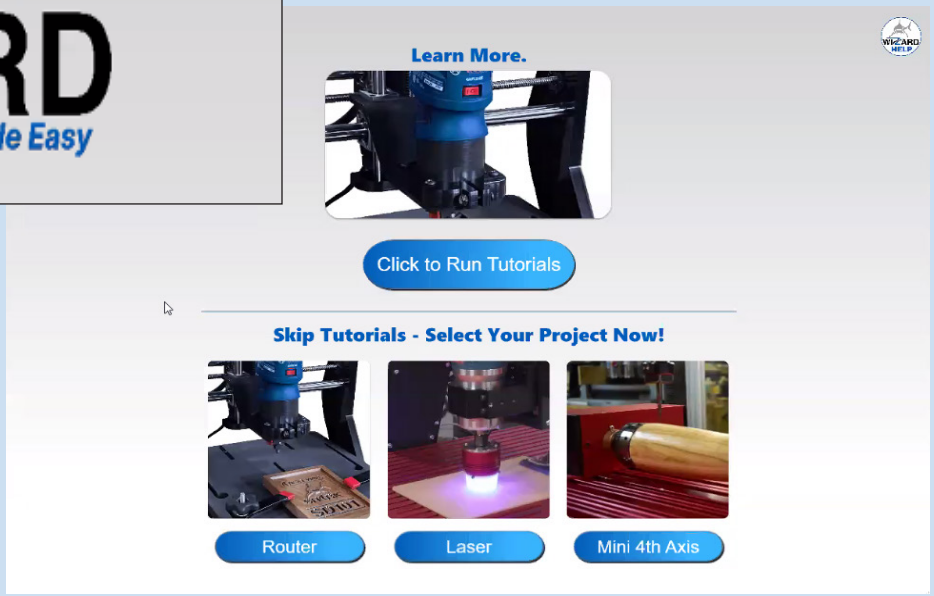
Step 3 - Software Installation

To get started with your SHARK SD101 you need to download and install two pieces of software. They each have a different function but work together to assist in creating projects with your new CNC. They are both available through your User Portal Account. And the process of downloading and installing them is covered in this section. We will install the Wizard software first see pages 12-14 and the Ready2Control Software second (see pages 16). After installing the Ready2Control software you will connect your computer to the SD101 and use the Ready2Control software to run your design files and control the movement of your CNC.

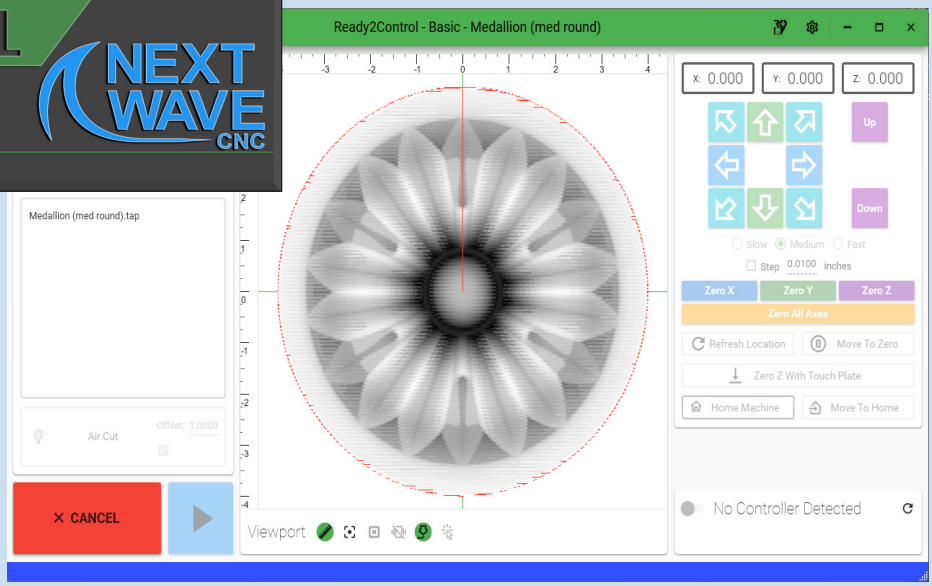
Two Softwares

One for Designing
One for Cutting

The Wizard software enables you to quickly and easily design and customize a variety 2D and 3D projects for your CNC Router, Laser or Rotary 4th Axis, It also outputs directly to Ready2Control for cutting.



The Ready2Control software is used to cut your router project on your SHARK SD101. It also provides an variety of tools and functions for easily calibrating and controlling your CNC router and accessories.



(Step 3 cont.)

Wizard Software Installation

In your Portal User Account window, look for the **Your Software** area (Figure 1) and click on the **Add+** link. This will open the **Enter software license pair** window. At the bottom of this window (Figure 2) enter the license codes from the **SHARK CNC Quick Access Guide** (Figure 3). You can find your codes on page 2 of this manaul. These codes will be used to activate your copy of the Wizard software. Enter them in the bottom of the activation window (Figure 2) and click Submit.

The Wizard software will now appear in the Your Software Window (Figure 4). Click on the Download link under the software. This will download the software to your computer.

Locate the software file on your computer. It's most likely in your Downloads folder (Figure 5). The file your looking for is named Wizard.msi. Click on it to launch the installation process.

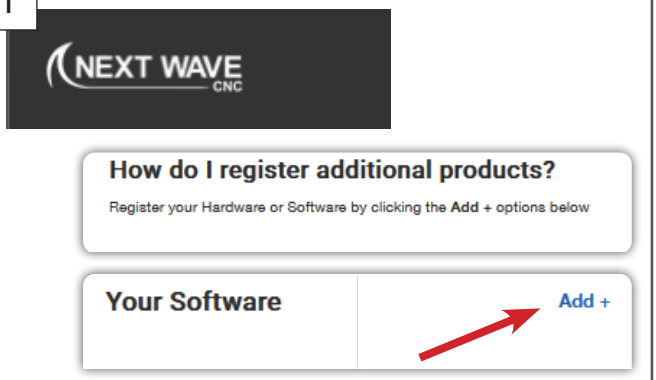
Next, click the "I agree" box and the Install button (Figure 6). The installation process varies between computers, and you may see additional approval screens. The installation process may take a several minutes (Figure 7). When the installation is complete (Figure 8), you can "Launch" if you'd like to explore the program at this time. Otherwise click "Close" and continue with the Ready2Control installation on page 16.

Wizard Tutorials

The **WIZARD** software includes built-in Tutorial projects (see page 14) with step-by-step instructions and videos. You can explore the tutorials at this time or come back later after you compete all of the **SHARK SD101** set up steps.

If you experience problems with the installation process, please contact Technical Support at: ***Support@NextWaveCNC.com.***

1



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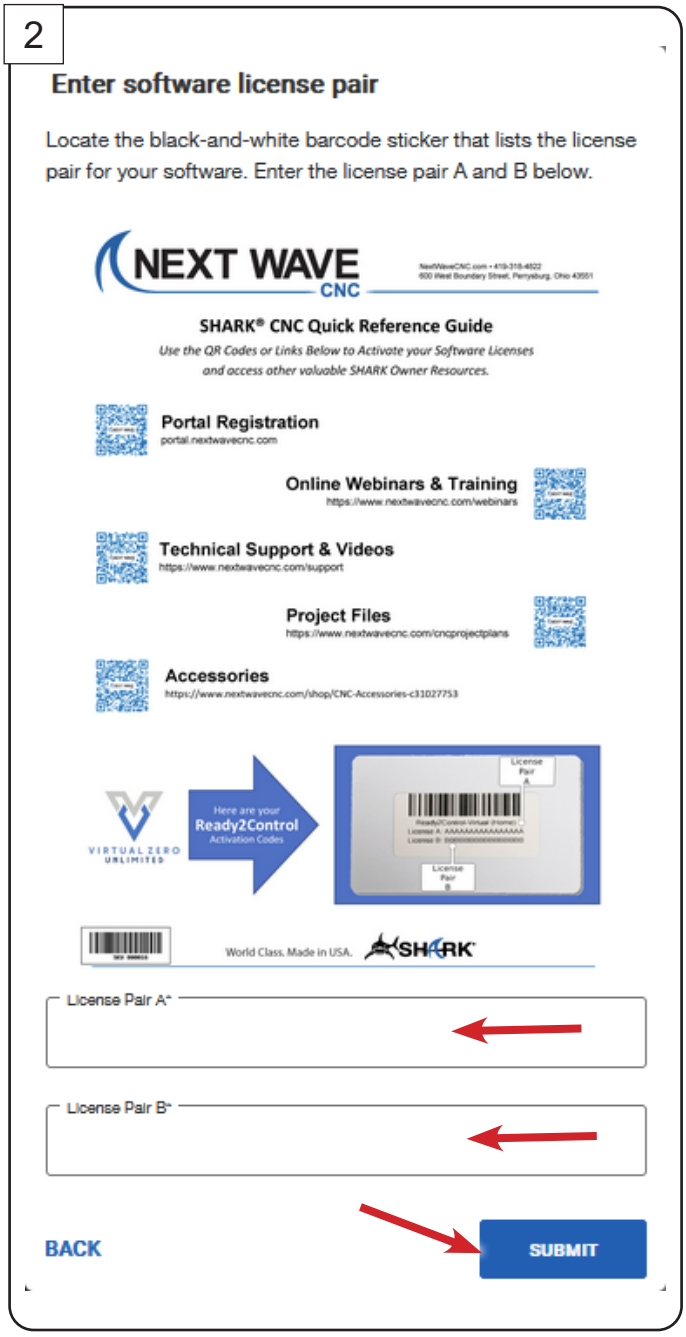

3

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SHARK® CNC Quick Access Guide

Use the links below to access your software and other valuable SHARK owner resources.

SHARK WIZARD CNC Made Easy

See page 2 of this manaul.

Download WIZARD software at: Portal.NextWaveCNC.com (Activate using license codes)

WIZARD Learning Tutorials are available in the software.

READY2CONTROL

FREE
For All SHARK CNC OWNERS

Download Ready2Control at: Portal.NextWaveCNC.com (No activation needed)

VIRTUAL ZERO UNLIMITED

Not available for SHARK CNC SD101

(Licensed Sticker Here)

Download VZU software at: Portal.NextWaveCNC.com (Activate using license codes)

Download Ready2Control and Virtual Zero Unlimited Owner Manuals at: www.NextWaveCNC.com/download-links

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4

NEXT WAVE CNC

How do I register additional products?

Register your Hardware or Software by clicking the **Add +** options below

Your Software Add +

Wizards
License Type: Home
Download Seats Used: 0 of 2

5

Downloads

Wizard.exe
Open file

6

...k you for using the Wizard. Next Wave CNC encourages safe and responsible operation of our CNCs. When using this software, please do not leave the machine unmonitored while it is running.

I agree to the license ter... and conditions

Options | Install | Close

7

Wizard

Setup Progress

Processing: Wizard.exe

Cancel

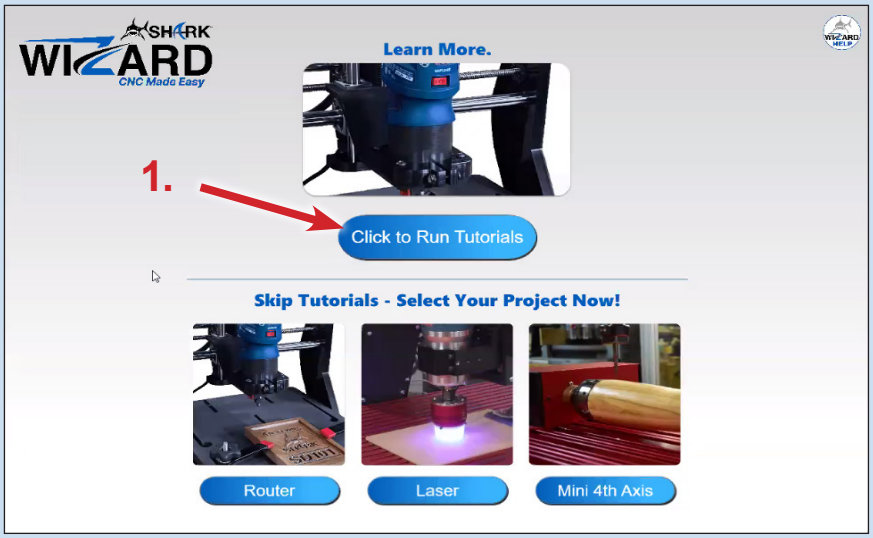
8

Wizard

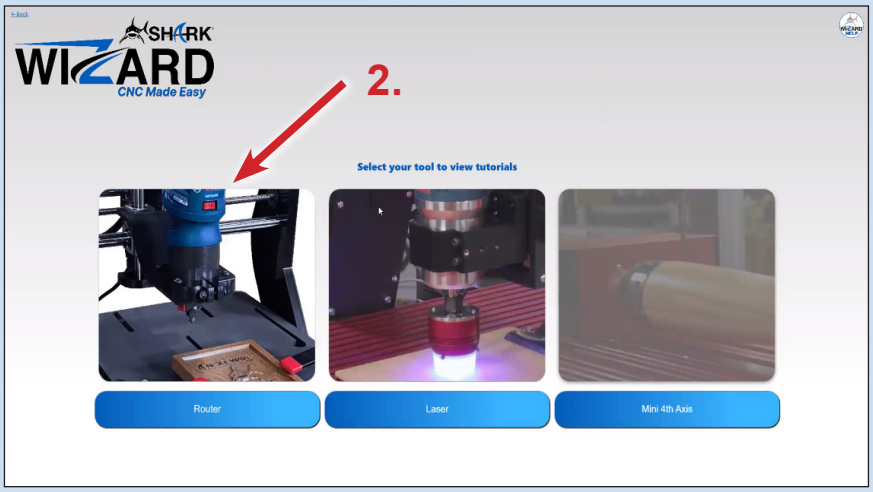
Installation Successfully Completed

Launch | Close

WIZARD Tutorials: Easy-Learning Built-in



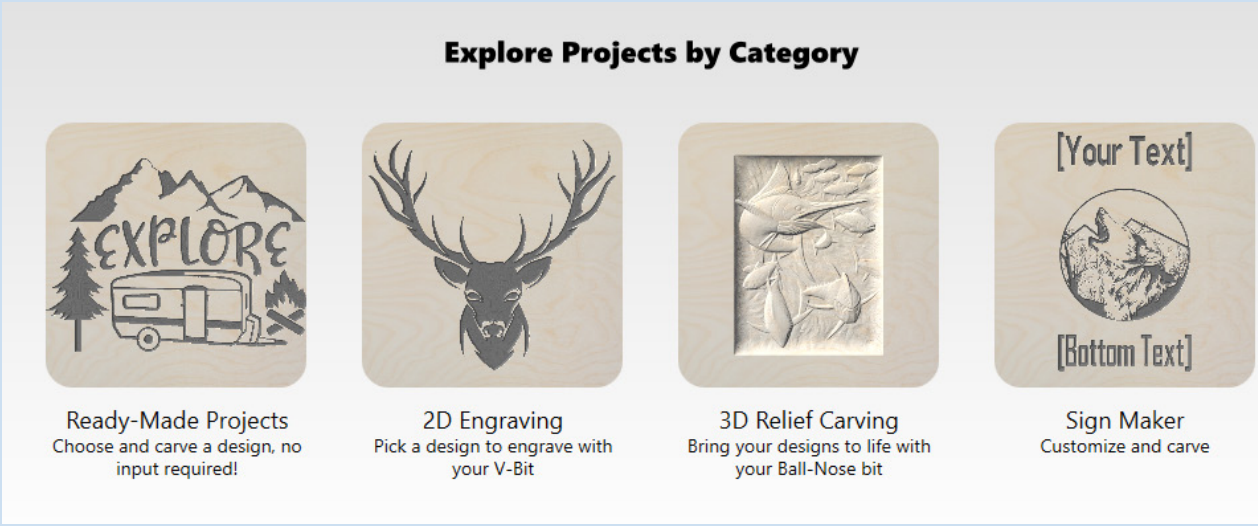
The opening page of the WIZARD software includes four main options. The Tutorials at the top is a great place to start.

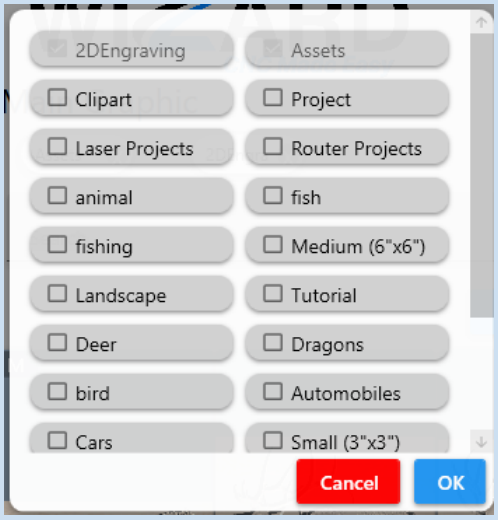


On the next Tutorial page you choose the type of CNC project you'd like to learn about. We recommend starting with the Router Tutorials.

On this page pick the type of "router" project you'd like to learn about. We recommend starting with the first one and work your way down since each one becomes slightly more difficult. After clicking the one of the three project buttons, the software will walk you through the necessary steps of sizing your design and preparing it for cutting on your SHARK SD101.

The WIZARD has 100's of projects Ready-to-Carve





Open the file to initiate the installation process (Figure 2). Click the “I agree” box and the Install button (Figure 3).

The installation varies between computers, and you may see additional approval screens, but the installation process usually goes quickly (Figure 4). The installation is now complete, and you can launch **Ready2Control-Basic** (Figure 5).

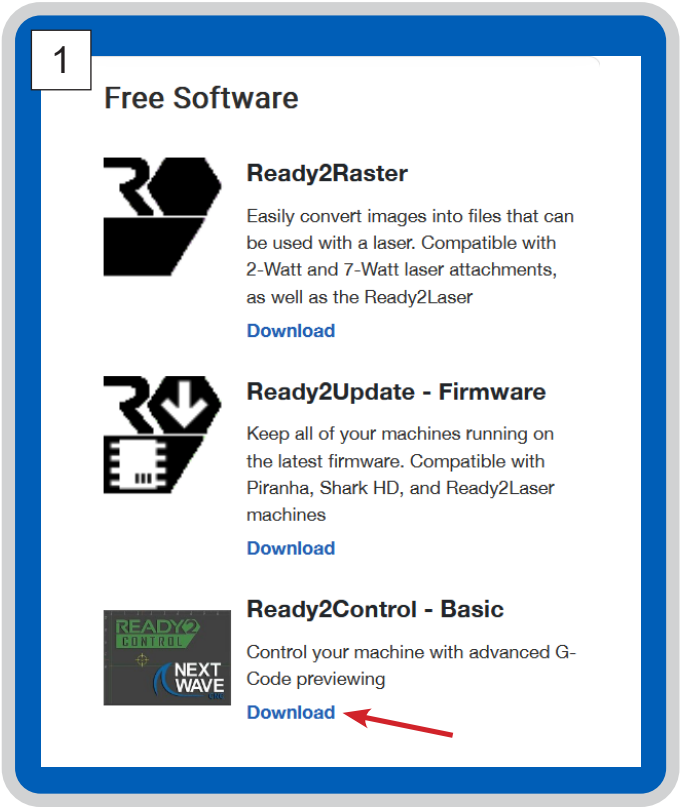
(Step 3 cont.)

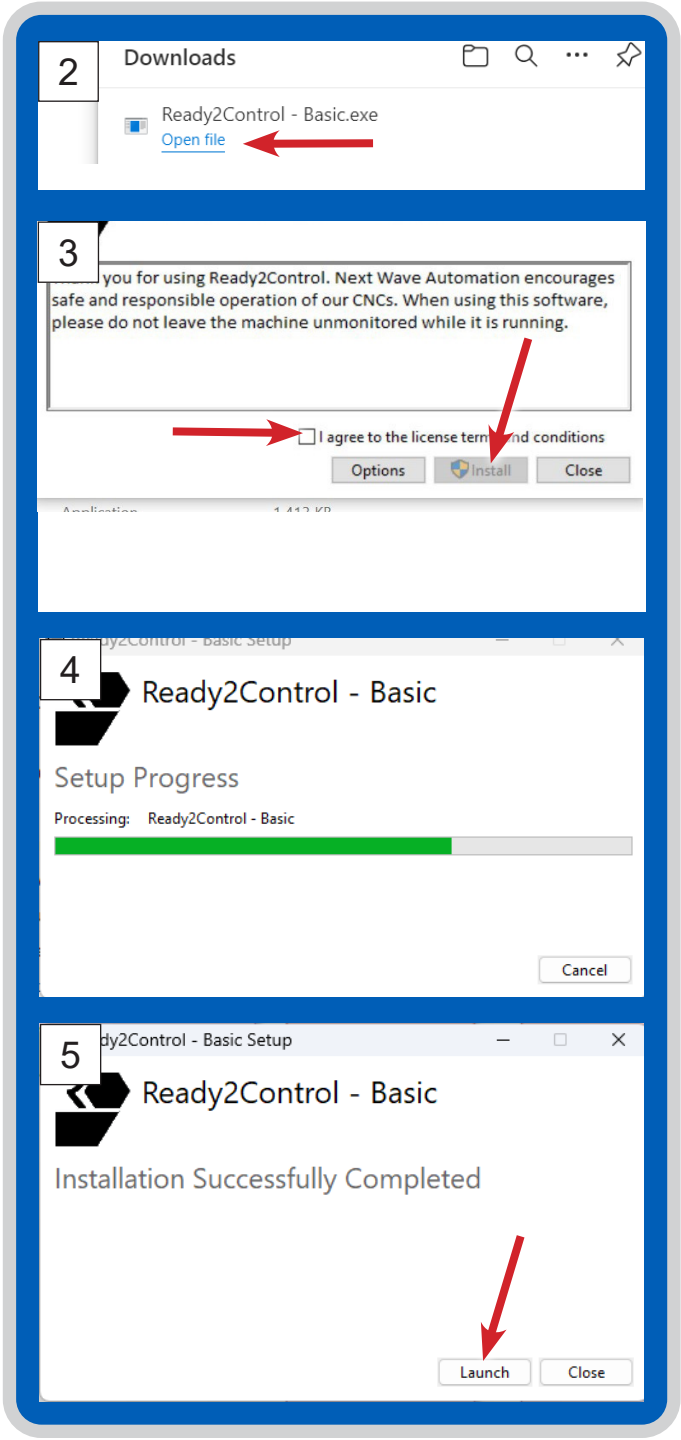
Ready2Control Installation

The **Ready2Control** software serves as the primary interface used to operate and control your **SHARK SD101**. You will use a computer to control your **SHARK CNC** machine, **but do not connect them at this time**.

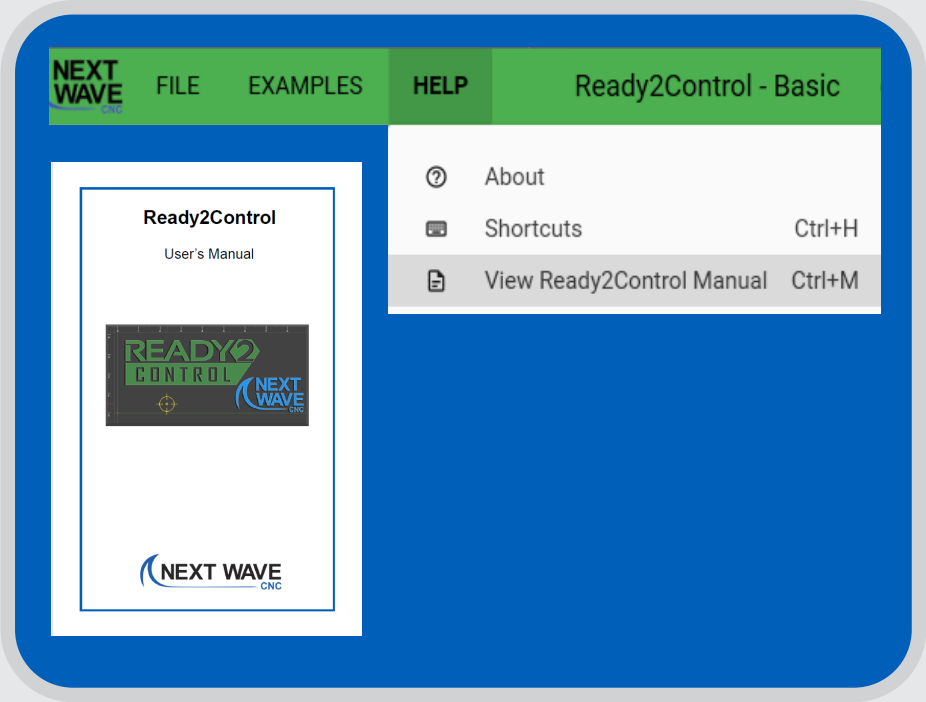
To get started, download the software from the Free Software section on your Portal Account (Figure 1).

Next locate the **Ready2Control** software file on your computer. It’s most likely in your Downloads folder. The file your looking for is named **Ready2Control - Basic.exe**.

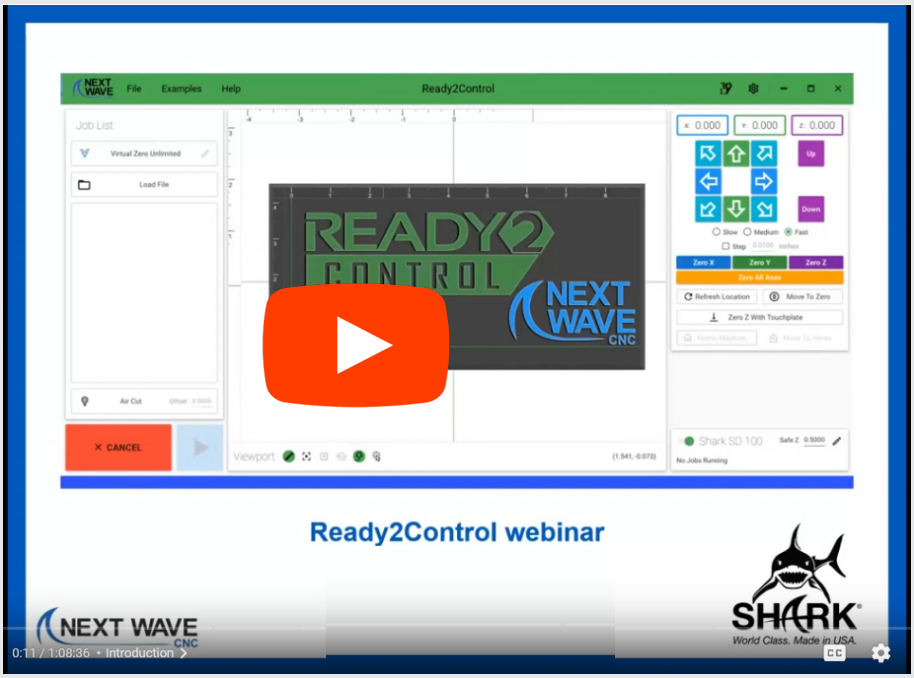




Learning Ready2Control

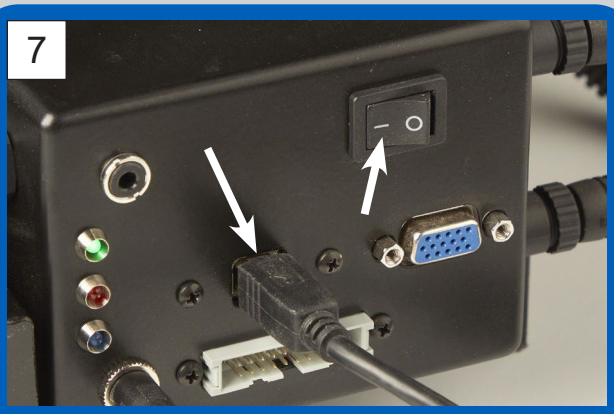


For detailed information on using **Ready2Control**, download a PDF copy of the Owners Manual from the Help menu at the top of your **Ready2Control** program.



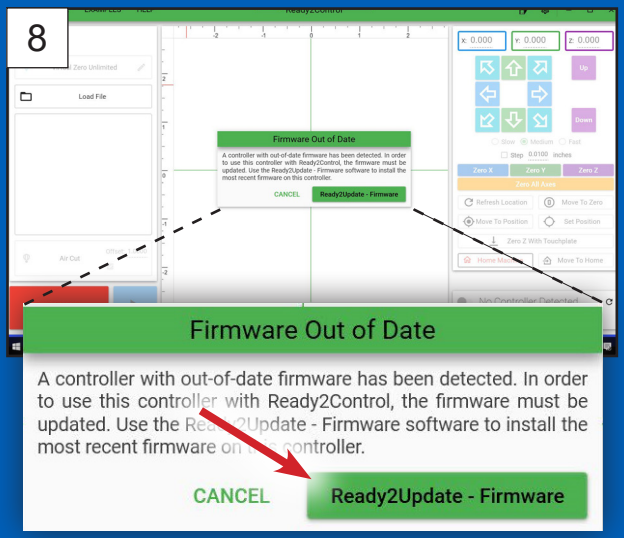
You will also find a detailed two-hour video on the “Setup and operation of Ready2Control” at: **NextWaveCNC.com/webinars.**

7



Attached the control box to your computer with the AB-USB cable. Toggle the power switch to ON.

8



This window appears when your SHARK SD101 Controller needs a firmware update.

Step 4 - Computer Connection

You can now connect the AB-USB cable between your computer to the control box on the back of the SD 101 (Figure 1). Once connected turn ON the power switch.

Firmware Updates

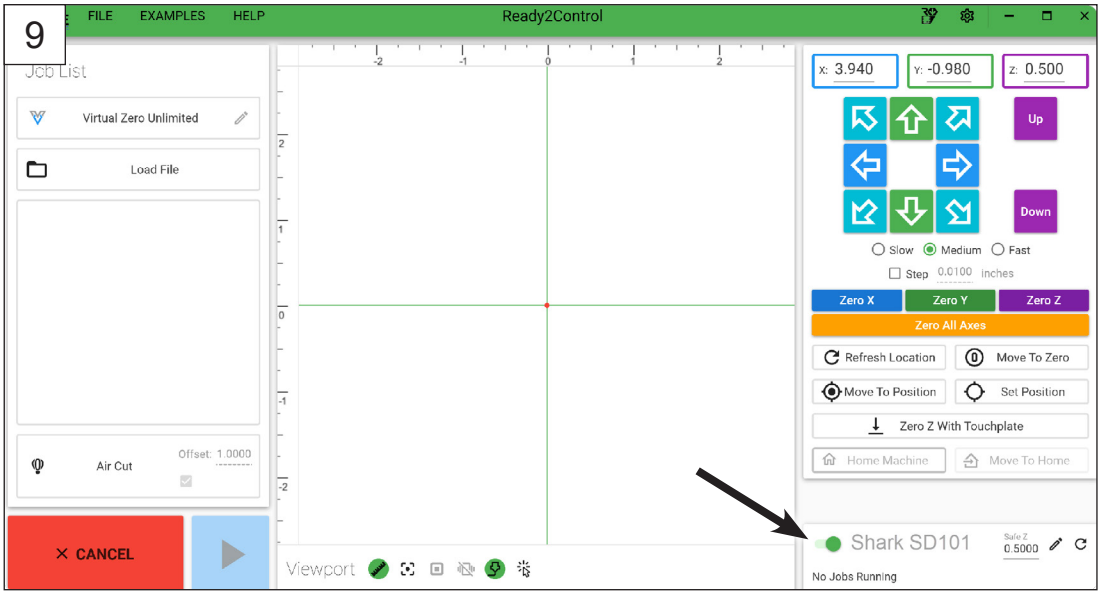
The first time you connect Ready2Control to your Next Wave CNC machine, a “Firmware Out of Date” window may pop-up (Figure 1 below). Click the **Ready2Update-Firmware** button to start the update process. The process will also ask you to download the **Ready2Update-Firmware** software. Downloading and installing The **Ready2Update-Firmware** software is similar to how you installed the **Wizard** and the **Ready2Control** software

Ready2Control should close automatically; if it doesn’t, you will have to close it manually, since the update cannot take place with it open. With a few button clicks, **Ready2Update-Firmware** will take care of updating the firmware for your machine’s controller. If you have any questions or problems running the **Ready2Update-Firmware** contact Tech Support at Suppport@NextWaveCNC.com

Machine Connected

When the firmware update is done, close out of the **Ready2Update-Firmware** program and reopen **Ready2Control**. Your SHARK SD101 should now be connected to **Ready2Control** and the name of your tool should appear in the lower right of the screen (Figure 9).

9



Practice some Basic Movements

Ready2Control has many great functions to operate the **SHARK CNC SD101** machine. But you only need to learn a few basic operations to get started. Let's start with learning how to jog (manually move) the router around the work area.

Jog and Speed Settings

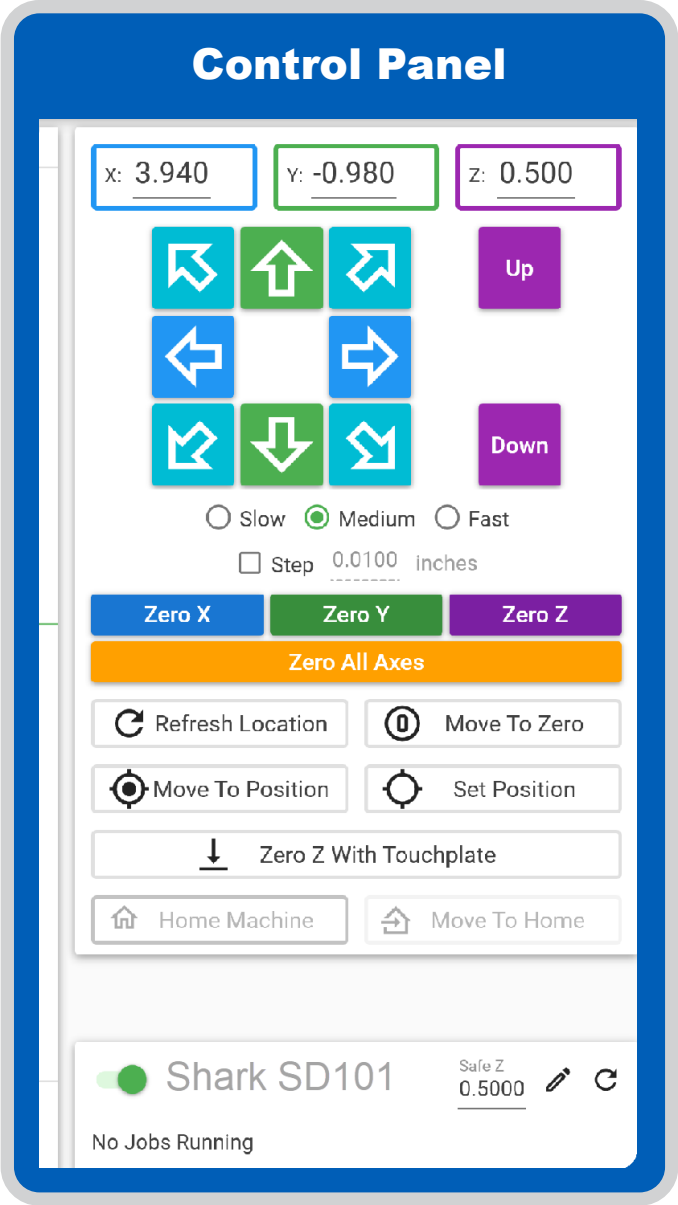
Look at the Machine Control Panel on the main window of **Ready2Control** (image at right) and identify the jog (arrow) buttons. You can jog the router right or left along the X-axis, toward you or away from you (Y-axis), diagonally towards the machine's corners, or up and down along the Z-axis.

Jogging the router allows you to manually move it to any location on the table. This is useful when mounting your project board to the bed, zeroing the X, Y or Z axes, (covered in the next section), or changing the router bit.

You control the speed of the jog between Slow, Medium, or Fast by selecting one of the radio buttons below the jog buttons. By checking the Step box, the jog movement is divided into "steps" of a distance that is entered into the panel.

Take some time to experiment with moving the router around. Jog the router to get a feel for the different speeds. Take special note of the position readouts at the top of the Control Panel. Also try not to bump into machine's hard stops at the edges of the travel area. If the router does bump against the limits, you may hear a "grinding" noise. Don't be concerned—the noise is the sound of the internal motor magnets electronically skipping over each other. This does not cause any damage, but it's good practice to avoid hitting the travel limits of your machine because it can cause the machine to lose the zero axes calibration that you will learn about in the next section.

For detailed information about using **Ready2Control**, download the owners manual from the Help menu at the top of **Ready2Control**. You can also view a detailed **Ready2Control** Setup and Operation video at **www.NextWaveCNC.com/webinars.**



Zero X,Y,Z Axes Buttons

These buttons play an important role in calibrating your machine and setting up your project material. The function of these buttons is covered the Project Workflow section on pages 21-25. They are also covered in the **Ready2Control** Owners manual which can be downloaded from the Help menu on the mains screen of the **Ready2Control** software. You can also find a video on using **Ready2Control** at: NextWaveCNC.com/webinars.

Hooked Up and Ready to Run

As mentioned at the beginning of this section the four primary steps to setting up your **SHARK SD101** are:

1. Machine setup
2. Machine Registration
3. Software setup
4. Computer Hookup

If you've worked through each of these steps, then your setup should look similar to what is shown below. Creating a project using the software and cutting it with your SHARK SD101 has additional steps, which we cover in the following section on Project Workflow. The steps show the Project Workflow section are common to most projects. However, you may need to modify or add to fit your particular project.

CNC Project Workflow

CNC Project Workflow refers to the steps involved in creating your project from idea to completion and includes four major steps:

1.Design your project

2. Mount your material

3. Calibrate your machine

4. Run your project

Each of these major steps can be broken down into a series of smaller steps, which are also covered in this section.

The project example used in this section is a simple carving project that uses the **WIZARD** design software, **READY2CONTROL** and your **SHARK SD101**. All CNC projects follow these basic steps, but some of the steps may need to be modified or expanded for your particular project.

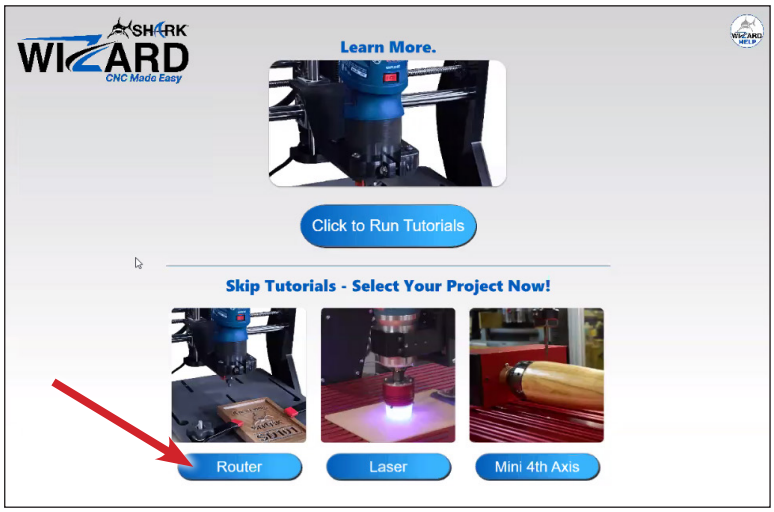
(NOTE: You do not need your computer connected to your SHARK SD101 when using the design WIZARD, but will need it connected after Step 1f on the next page.)

Step 1. Design your project

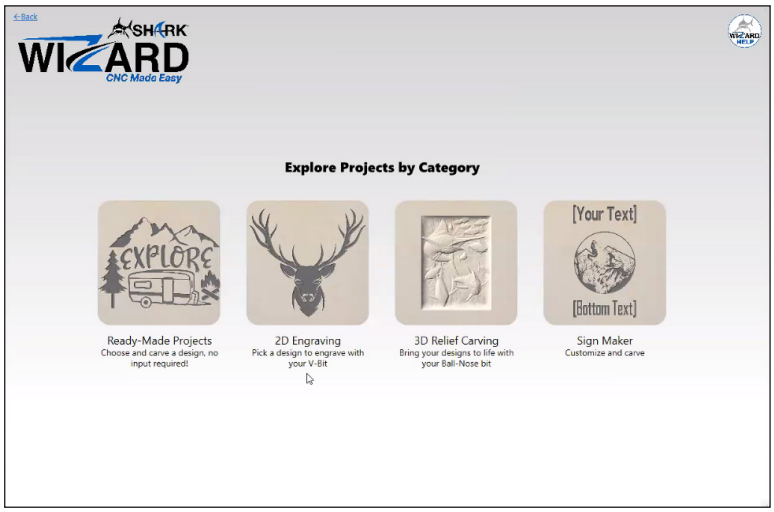
The Wizard provides a quick and easy way to design a variety of CNC projects using your **SHARK SD101** router including the Laser and the Rotary 4th Axis accessories. The first step in designing your project with the **WIZARD** is to select the tool or accessory you plan to use to make the project (Step 1a) For this project we'll use the "Router" option.

Then in the second window you select the type of CNC router project you'd like to make (Step 1b). The **WIZARD** provides four options: Ready Made Project,2D Engraving, 3D Relief Carving and the Sign maker.

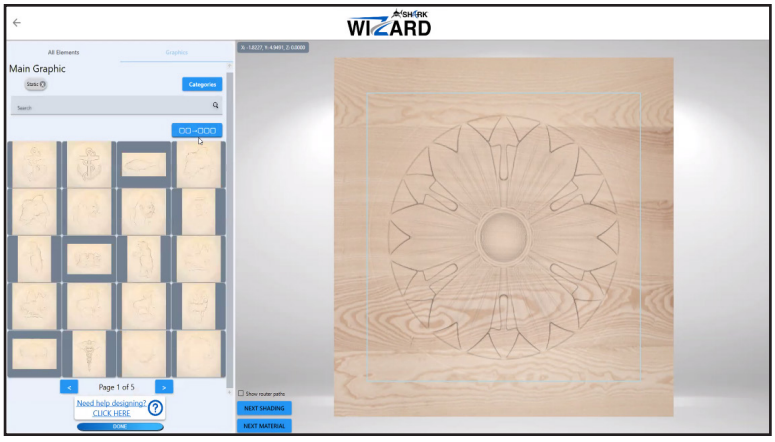
In the third window you'll select your specific design (Step 1c). Within the **WIZARD** you'll find lots of designs to select from. The projects are organized into various categories, but there is also a search function to assist you in finding a specific design.



Step 1a - Select your tool or accessory

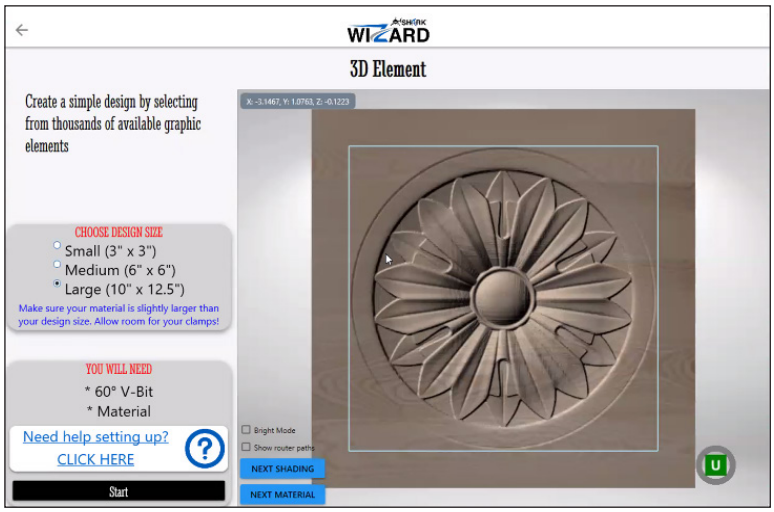


Step 1b - Select your project type

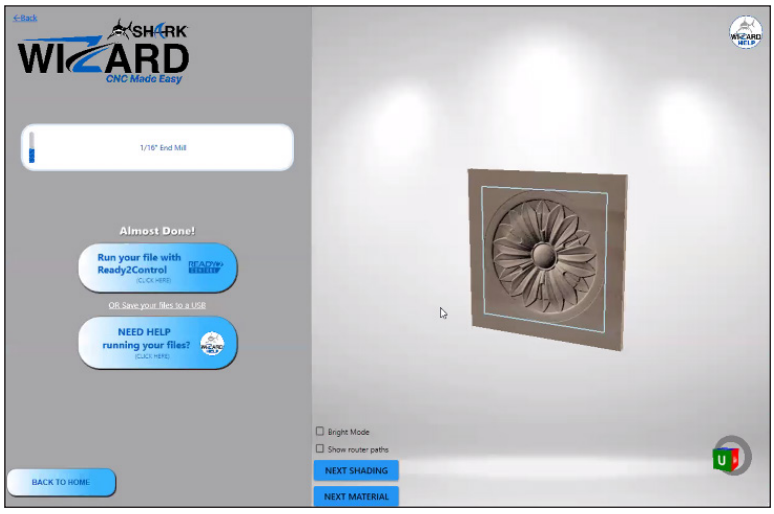


Step 1c - Select your design

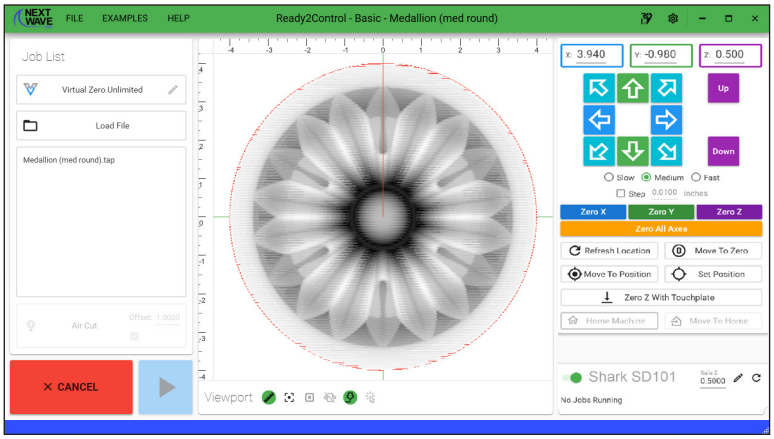
NOTE: Due to ongoing software development, the software images in this manual may vary from what you see in your version of the Wizard software.



Step 1d - Select project size



Step 1e - Send your design to Ready2Control



Step 1f - Your design is almost ready for carving

In the next window you select the size of the design and the minimum material size for your project (Step 1d).

Projects in the **WIZARD** are categorized as small, medium and large. This window shows you the size options available for your chosen design. Click a radio button to select the size for your design, and then the Next button at the bottom to continue to the next screen.

The final screen in the **WIZARD** (Step 1e) gives you a summary of your design, including the required bit, materials size and a preview. Take special note of the bit that is required for this project. The cutting file that the WIZARD creates is designed using this specific bit - other style bits will not work.

Pressing the “Run your file with Ready2Control” button automatically creates the cutting file (TAP/g-code file) needed to carve the design on your **SHARK SD101**. The cutting (TAP/g-code) file is also automatically exported to **READY2CONTROL**.

After pressing the “Run...” button, your computer should automatically open the **Read2Control** software (Step 1f).

If your computer isn’t connected to your **SHARK SD101**, you should do so now. When they are connected, the name of your CNC (SHARK SD101) should appear in the lower right corner of the READY2CONTROL window. If the name of your tool doesn’t appear, try toggling your CNC on and off, or disconnection and reconnecting the USB cable to establish a good connection.

The **Ready2Control** window lists your project file at the left, with a gray-scale preview of your design in center Viewport area. Before you can run your file you must mount your material and calibrate the CNC, which we’ll cover next.

NOTE: Due to ongoing software development, the software images in this manual may vary from what you see in your version of the Wizard software.

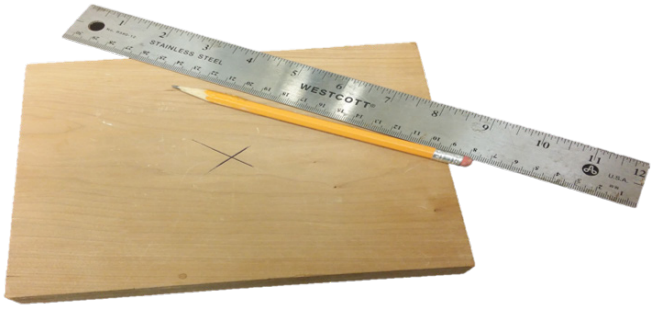
Step 2. Material setup

Your project board needs to be at least as big as the “minimum size” specified in the WIZARD.

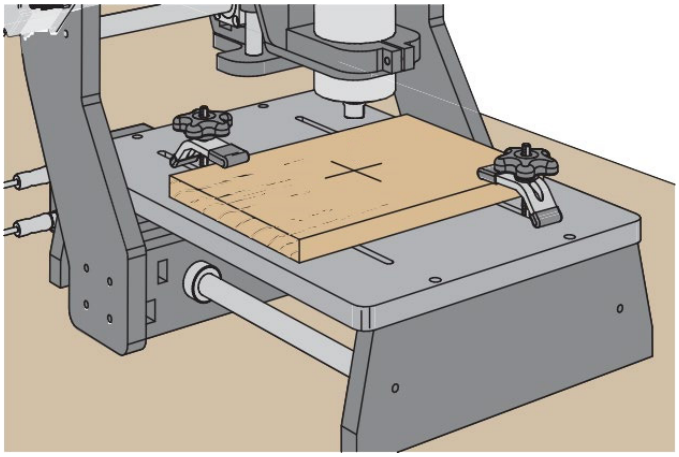
The first step is to mark the center of your material (Step 2a). This is referred to as the XY Datum or XY zero location for your project.

Next, clamp your project board to the table (Step 2b). For a small project, two clamps are often sufficient, but 3 or 4 are even better.

The orientation of your board on the CNC should generally match what is shown in the WIZARD. However, if your board that’s larger than the recommended minimum, you may be able to switch the orientation between horizontal and vertical.



Step 2a - Mark the center of your board.



Step 2b - Securely clamp your board to the bed.

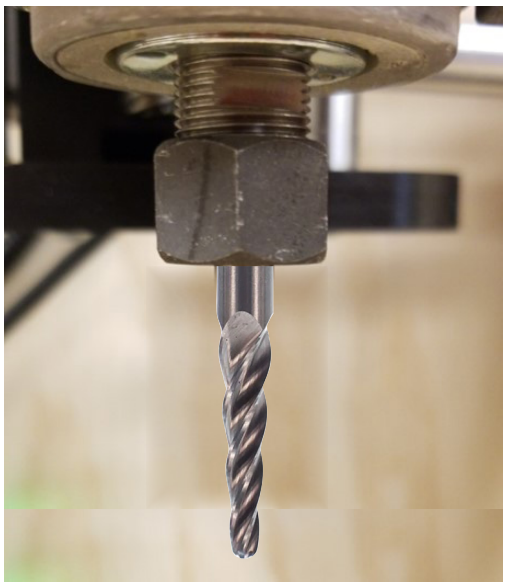
Step 3. Machine Calibration

Next install the required router bit in your router (Step 3a). Generally you want to slide the bit up in the collet so only a small amount (1/16”-1/4”) of the shank is exposed. Letting the bit stick out further increases the changes of bit chatter and breakage. But also, don’t slide any of the cutting edge into the collet as this can cause clamping problems and damage to the collet and the bit.

With the material clamped in place and the bit installed, used the control panel arrow buttons to center the router bit over center mark on your project board (Step 3b - next page). Using the Slow mode makes this step easier.

When you have the bit centered over the mark, press the Zero X and Zero Y buttons to zero (calibrate) the X and Y axis locations. This location is also referred to as your the XY datum location.

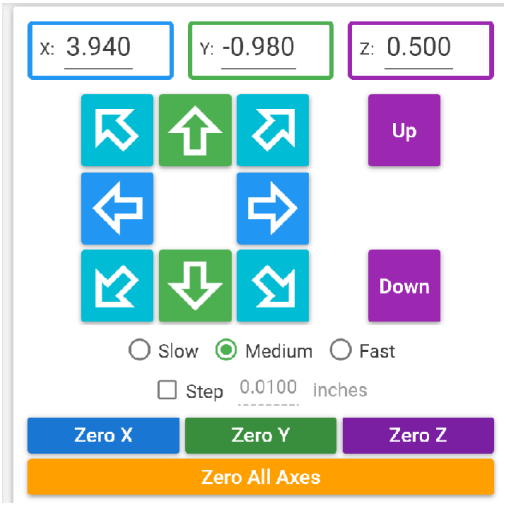
Once you have the X and Y calibrated, place a small piece of paper over on your material under the bit (Step 3c - next page) . Then use the Down Z button to lower the tip of bit until it just touches the paper.



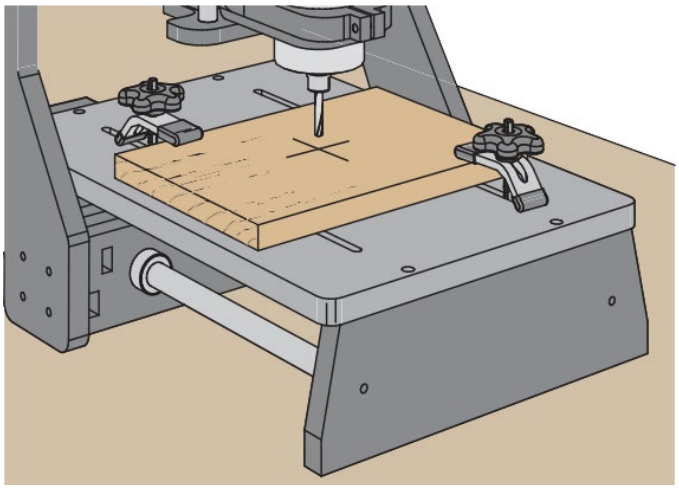
Step 3a - Install your bit in the router.

Using the Slow mode and the Step function make this step easier and more precise. Also, sliding the paper back and forth provides some feedback. When the paper starts to drag under the bit, you've reach the right height. Next press the Zero Z button to zero (calibrate) the Z axis.

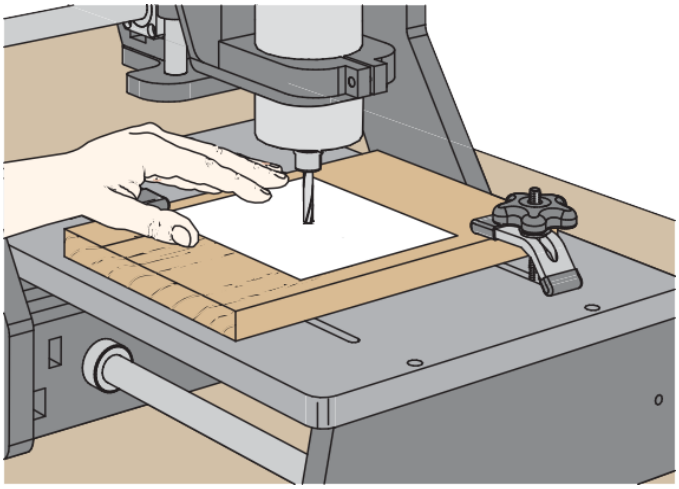
You should re-zero all three axis every time you restart your CNC, reconnect your computer, or mount a new project board. If you jog the machine too far and accidentally hit the travel limits at the sides, front or back, then you need to re-zero that axis. If you jog the Z up or down too far make sure to re-zero it as well. When it doubt its best to re-zero, because if the machine is not currently zeroed, it will not cut your project correctly and you will have to start over with a new piece of material.



Use the control panel to move the router and Zero (calibrate) the router bit to the materiel.



Step 3b - Move the bit over the center mark. Press the Zero X and Zero Y buttons to calibrate the X,Y.

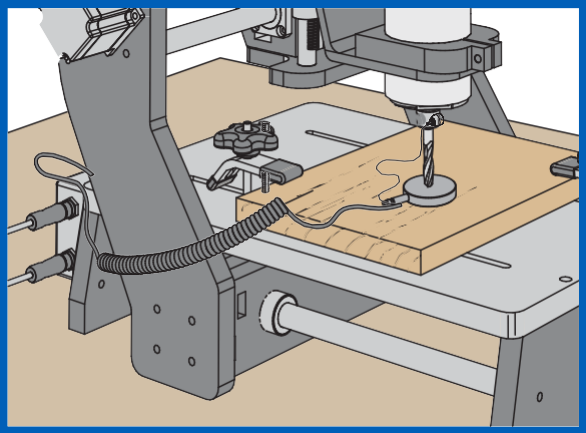


Step 3c - Move the bit down to a piece of paper and then press the Zero Z button to calibrate the Z.

Optional Z-Zero Touch Plate

To automatically zero the Z using the Touch Plate, plug the cord into the back of the SD101, place the touch plate on top of your material and attached the magnet to the bit or collet. Then and press the Touch plate button in Ready2 Control and follow the prompts.

(See page 28 for more information)



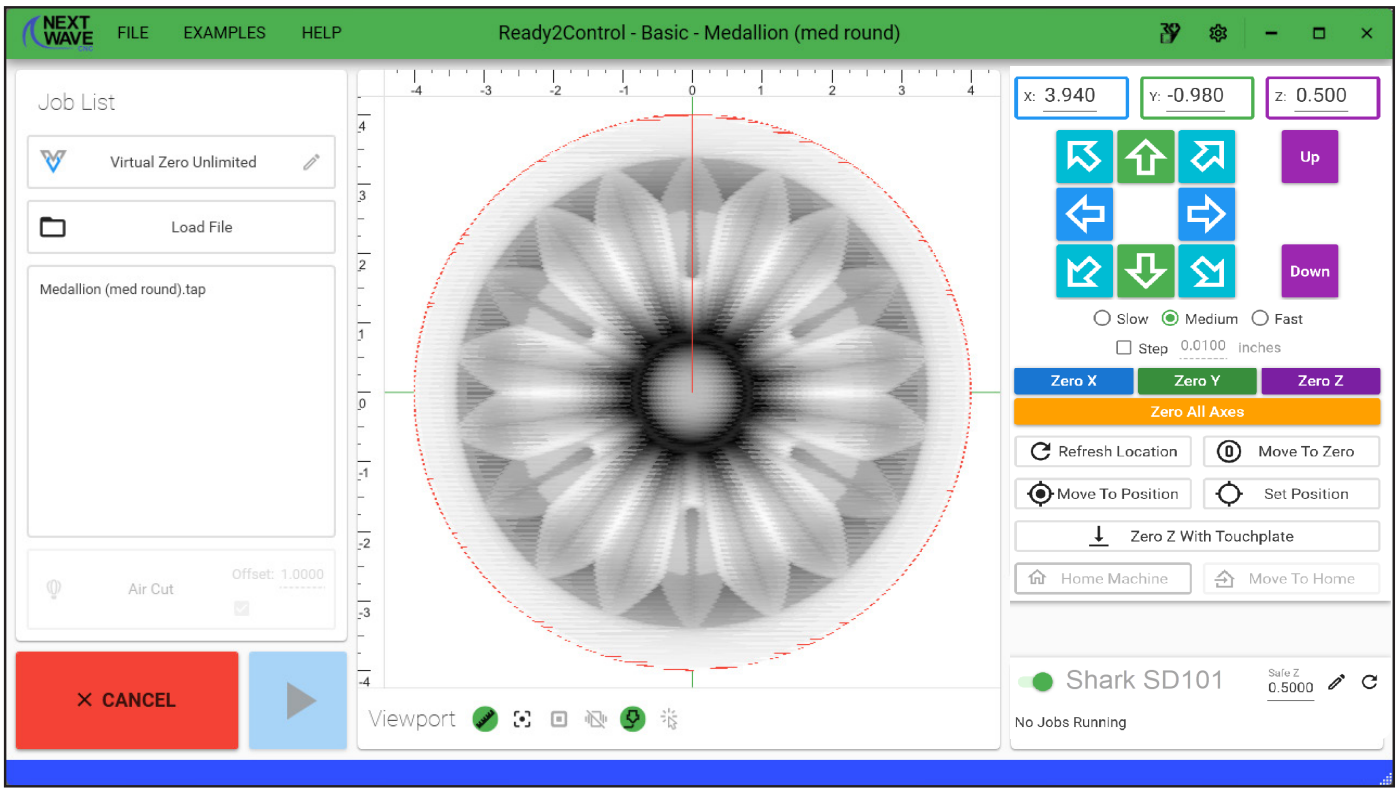
Step 4. Carve Your project

Review your setup to make sure you've selected the correct cutting file (tap/g-code file), have the right bit, and correctly Zeroed the X,Y and Z axes.

If these all check out, then you are ready to carve your project. Start by turning on the trim router and then press the blue Run arrow at the bottom left of the **Ready2Control** screen (Step 4a). The CNC will start moving and cutting your project.

If you need to pause the cutting, press the blue arrow again, and again to restart the cutting.

If you need to abort (end) the cutting press the red Cancel button or the power switch on the Control Box or the Power Strip (if you're using one). Any of these methods will stop the machines movement (and cannot be undone) Refer to the Owner's manual for detailed information about the other features in **Ready2Control**.



Step 4a - Press the blue Run arrow to start carving your project.

Sand and finish your project as needed.

A nylon bristel brush works well to remove the fuzz that occurs with some types of wood.

12 Safety Rules for CNC

- Read, understand, and follow the safety and operating instructions before using your SHARK CNC.
- Take time to fully understand how to safely operate your SHARK CNC.
- Set up your SHARK CNC following the instructions in this manual.
- Always wear appropriate eye and hearing protection when operating your SHARK CNC and accessories.
- Machine only non-ferrous metals with your SHARK CNC.
- Never attempt to adjust the workpiece or move the SHARK CNC while it is running.
- If needed, use the Cancel or Pause buttons to Stop or Pause your SHARK CNC during an operation.
- Never leave your SHARK CNC unattended while it is running.
- While operating your SHARK CNC, keep a multi-purpose, dry-chemical fire extinguisher nearby. It must be rated for both A & C fires.
- For added safety and convenience, connect your SHARK CNC to a 110-115V surge-protected power strip with an on/off switch. This provides an additional way to turn off the machine in case of an emergency.
- Follow all Safety instructions provided with your SHARK CNC and accessories.
- Follow all accepted and recommended safety precautions and practices for woodworking and machining.

Maintenance

Periodic maintenance and lubrication keeps your SHARK CNC running efficiently and smoothly.

Use a dry lubricant for the bearings, round guide bars, and lead screws. Dry lubricant doesn't attract dust. Purchase Dupont Silicon Teflon at your local Next Wave CNC retailer or online at: NextWaveCNC.com/shop. You will find similar dry lubricant products at your local hardware store.

Daily

- Check for damaged wires or components. Repair or replace them as needed.
- Check for loose parts. Tighten or adjust as needed.
- Vacuum or dust off machine and components, including the controller and router.

Every 8 hours of use

- Wipe down the round guide bars with a soft cloth.
- Clean the lead screws with a soft brush or vacuum.
- Apply dry lubricant to the round guide bars and lead screws, wiping off the excess with a soft rag.

Every 40 Hours of Use

- Deep clean the round guide bars and lead screws with mineral spirits or other mild solvent to remove wood resin, dust and dirt.
- Apply dry lubricant to the round guide bars and lead screws, wiping off the excess with a soft rag.

Resources

Next Wave CNC
Website - NextWaveCNC.com

Manufacturer of the **SHARK CNC** machines and accessories. The website offers software and documentation downloads, educational content, as well as information about the full line of **Next Wave CNC** products.

Next Wave CNC Technical Support
Website - NextWaveCNC.com/Support

For questions about your **SHARK CNC**, **Ready2Control** software, or other **Next Wave CNC** products, please contact our support team at support@NextWaveCNC.com

Next Wave CNC Owners Only Forum

forums.NextWaveCNC.com/

Join our group exclusively for Next Wave CNC owners. You'll find projects, ideas, project showcases, and valuable support from users of all levels.

CNC SHARK Talk User Forum

www.cncSHARKtalk.com

This discussion group is a valuable resource open to users of any CNC machine.

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Upgrade Accessories

Authentic SHARK Accessories

STANDARD 2 WATT SOLID STATE LASER

- Compatible with any of our CNCs
- Powerful enough to engrave just about any species of wood
- Cuts fabric and thin veneers
- Works with Vectric VCarve and Aspire software programs
- Free raster program allows quick conversion of photos to laser art

SKU 20002

NEXT WAVE CNC

Authentic SHARK Accessories

TOUCH PLATE

- Compatible with all Next Wave CNC machines.
- Required for using Virtual Zero Unlimited available on select machines
- Solid Aluminum Construction
- 4 ft Cord (6' extension cable also available)
- Sets Z axis at exact zero for precision cutting
- Lays flat on the material surface or machine bed

SKU 20141

NEXT WAVE CNC

Upgrade Accessories

Authentic SHARK Accessories

SIX PIECE STARTER BIT SET

We've put together a set of the most commonly used bits to help you get started carving. This 6-piece Starter Bit Set will help you complete any common projects right from the get-go. All have 1/4" shanks.

- 1/16" x 1.0" - 5.5 degree tapered solid carbide four fluted ball nose bit
- 1/8" x 1.0" - 3.8 degree tapered solid carbide four fluted ball nose bit
- 1/4" x 1.0" - 0 degree straight solid carbide four fluted ball nose bit
- 1/4" x 1.0" straight solid carbide two fluted up-cut bit
- 3/8" x 1/2" 60-degree carbide-tipped v-groove bit
- 1/2" X 1/2" 90-degree carbide-tipped v-groove bit

SKU 20119

NEXT WAVE CNC

Authentic SHARK Accessories

A Must-Have for **SHARK** Enthusiasts!

CNC ROUTER ESSENTIALS BOOK

Written by **Randy Johnson**

SKU 20136

NEXT WAVE CNC

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SHARK SD101
User's Manual

Version: 03/13/2024

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