NEXT WAVE®
CNC

Shark SD100
(Barracuda)

User's Manual

The newest version of this manual can be downloaded from the Help menu in the Ready2Control-Basic software – see page 34

SHARK SWAP

TRADE IN. TRADE UP.

The Shark SD100 (Barracuda) comes with the unique opportunity to trade up to a larger Shark HD model. If you outgrow your Shark SD100 (Barracuda) and decide to trade it in on the purchase of a larger Shark HD model, your Shark SD100 (Barracuda) will be refurbished by Next Wave CNC and donated to a school (in your name) in cooperation with The MiLL National Training Center, Colorado Springs, Colorado. (www.themillco.org)

Please save the original box to help facilitate shipping if you plan to upgrade.

For further details contact tradein@nextwaveautomation.com

Table of Contents

To Our Customers

Thank you for purchasing a **Shark SD100 (Barracuda)**. Included with your purchase are software licenses for **Ready2Control-Basic** and **Vectric VCarve Desktop.**

The **Ready2Control-Basic** software runs on your computer and includes a broad set of machine control tools useful in operating your Shark SD100 (Barracuda) from your computer.

The **Vectric VCarve Desktop** software includes a broad set of CNC project design tools. Design tutorials and software support can be found at www.vectric.com

Pease read this manual carefully. It provides setup and operational information for your **Shark SD100 (Barracuda), Ready2Control-Basic** and **VCarve Desktop** software. This manual has been written with the assumption that the user is experienced with the basic operation of a computer as well as the technical knowledge required to safely operate power tools.

System Requirements

Ready2Control-Basic and **Vectric VCarve Desktop** software can be used on any PC computer that is running Windows 10 and has a USB output port.

The **Shark SD100 (Barracuda)** uses 110v power. Cutting files can be run on the Shark SD110 using a computer running Windows 10 and Ready2Control-Basic software. The Shark SD100 (Barracuda) can also be controlled with a Control Pendant, which is an optional accessory that is available from your local Next Wave CNC distributor or online at NextWaveCNC.com.

Technical Support

If you need technical assistance with Ready2Control-Basic software or any of your Next Wave Automation products please visit our Support webpage at: NextWaveAutomation.com/support or email our support team at support@nextwaveautomation.com Include your product model number, date of purchase, and any other pertinent information that may be helpful such as .tap files, .crv files, screen captures, and photos of your setup or problem.
Ready2Cotrol-Basic also has a build-in “Issue Reporting” tool that sends your Ready2Control-Basic software questions directly to our software team. See page 48 for more information.

Warranty

Shark SD100 (Barracuda)
Next Wave Automation warrants that the Shark SD100 (Barracuda) 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 SD100 (Barracuda) when purchased from an authorized Next Wave CNC distributor. This warranty covers parts and labor to correct the defect. It does not cover the cost of shipping the machine and/or parts to Next Wave Automation for repair.

This warranty does not apply to defects arising from normal wear and tear, misuse, abuse, negligence, accidents, unauthorized repairs, alterations, or lack of maintenance. This warranty is void if the Shark SD100 (Barracuda) or any portion of the Shark SD100 (Barracuda) is modified without the prior written permission from Next Wave CNC, or if the Shark SD100 (Barracuda) is located or has been used outside the country where the Shark SD100 (Barracuda) was purchased.

Please contact Next Wave Automation to take advantage of this warranty. If Next Wave Automation determines the Shark SD100 (Barracuda) is defective in material or workmanship, then 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 the Shark SD100 (Barracuda) provided the necessary 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 SD100 (Barracuda) machine.

Ready2Control-Basic software
Next Wave CNC warrants Ready2Contol 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.

Next Wave Automation, LLC,
info@nextwaveautomation.com
600 W. Boundary St., Perrysburg, Ohio 43551 USA
Main Office Phone (419) 318-4822

When operating machinery always wear the appropriate ear and eye protection and follow all safety instructions per your machine's owner's manual and related equipment manuals.

1. Read safety and operating instructions before using your Shark SD100 (Barracuda).
2. Take time to fully understand how to safely operate your Shark SD100 (Barracuda).
3. Setup your Shark SD100 (Barracuda) per the instruction in this manual.
4. Always wear appropriate eye and hearing protection when operating your Shark SD100 (Barracuda) and accessories.
5. **DO NOT** machine metal with your Shark SD100 (Barracuda).
6. Never attempt to adjust the work piece or move the Shark SD100 (Barracuda) while the it is running.
7. If needed, use the Cancel or Pause buttons to Stop or Pause your Shark SD100 (Barracuda) in the middle of an operation.
8. Never leave your Shark SD100 (Barracuda) unattended while it is running.
9. While operating your Shark SD100 (Barracuda) , keep a multipurpose dry chemical fire extinguisher nearby. It must be rated for both A & C fires.
10. For added safety and convenience, connect your CNC to a 110-115V power strip with an on/off switch. This provides an additional way to turn off the machine in case of an emergency.
11. Follow all Safety instructions provide with your Shark SD100 (Barracuda) and accessories.
12. Follow accepted safety precautions and practices for woodworking and machining.

START HERE – OVERVIEW (READ FIRST)

The **START HERE** instructions are divided into 6 major sections. They cover the steps involved in setting up your tool to use with the Ready2Control-Basic software.

IMPORTANT

- Follow the steps in order.
- Don't skip any steps unless instructed to do so.

START HERE Sections

PROBLEMS?

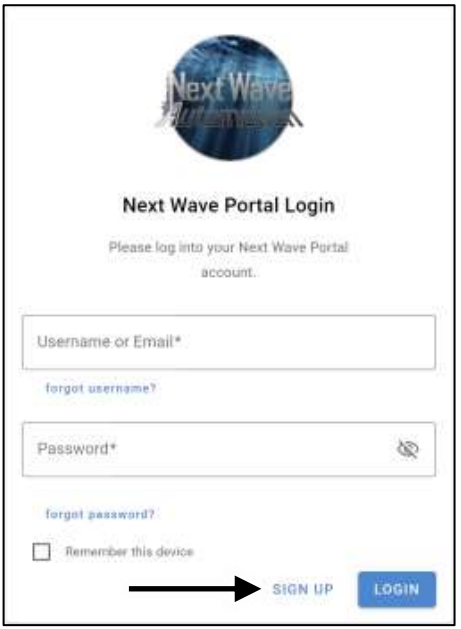
If something doesn't seem to be working correctly, try repeating the previous step(s) a couple times –it's easy to miss a step. If that doesn't solve the problem, please contact our Tech Support team by email or phone at:

Email: support@nextwaveautomation.com
Phone: (419)491-4520
Available 9am – 5 pm Monday-Friday (Eastern time).

Section 1 - Create a Next Wave Portal Account

1.1 You will use your computer to control the Shark SD100 (Barracuda)**.**
BUT DO NOT CONNECT THE TWO AT THIS TIME

1.2 Open a web browser on the computer you plan to use with your Shark SD100 (Barracuda) and go to https://portal.nextwaveautomation.com

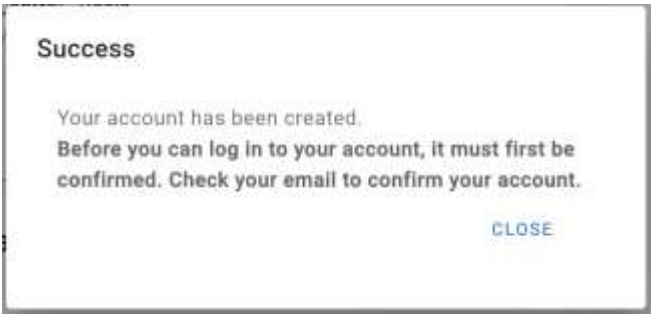


1.3 The Next Wave Portal Login screen will appear. Click on **SIGN UP***

* If you already have a Next Wave Portal Account click on Login and skip Step 1.8 on Page 10

Create a Next Wave Portal Account (cont.)

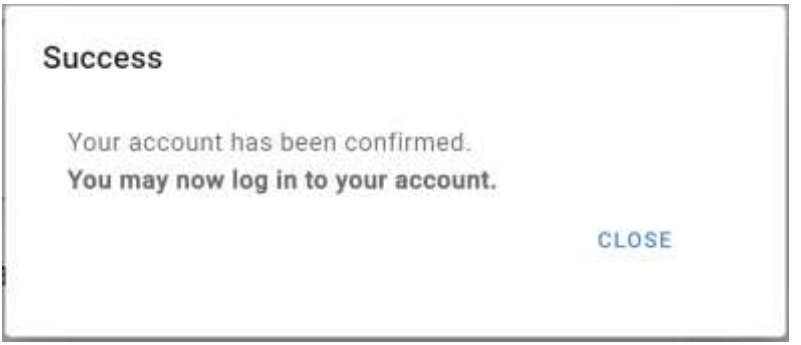
1.4 Fill in the information on the **Next Wave Portal Sign-up** page. Then click **Create**.



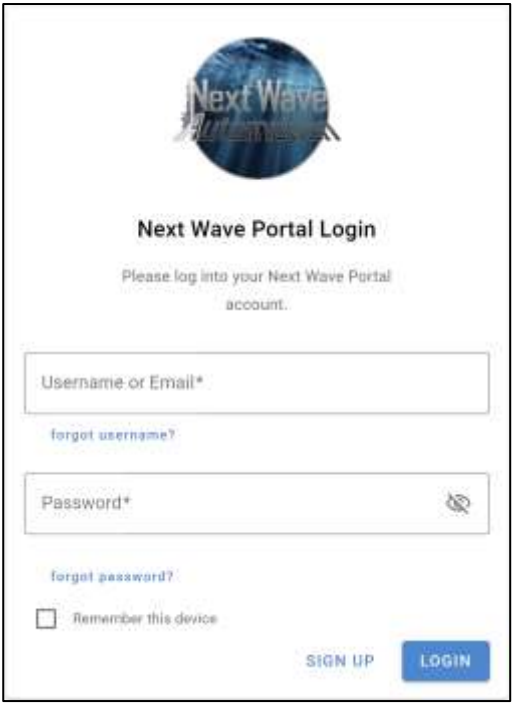
1.5 You should receive a **Success** message**.**
Check your email for a confirmation message.
If you don't see the email, check your Spam folder.

1.6 Click the Confirmation link in your email. You should receive a pop-up notice confirming that your account has been created (see next step).

Create a Next Wave Portal Account (cont.)



1.7 Once your Account is confirmed**, c**lick **Close**



1.8 Return to the Portal Login screen and **Login** with your Username and Password. This will take you the Software Registration and download page.

This completes Section 1 – Create a Next Wave Portal Account

Section 2 – Install Ready2Control-Basic

2.1 in the My Software window, click the **+ Software** button to start the download and install process for Ready2Control-Basic software.

2.2 Next, select **Ready2Control-Basic** from the dropdown menu.
Enter the **License Pair** codes from the card that came with your machine.

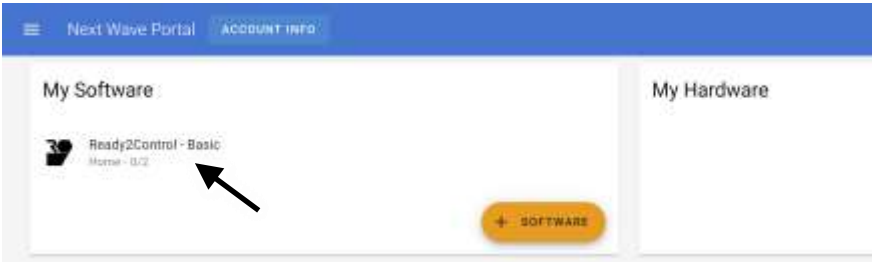
2.3 Press **Register.**

The software will now attempt an automatic download. This may take a minute or two.

Install Ready2Control-Basic (cont.)

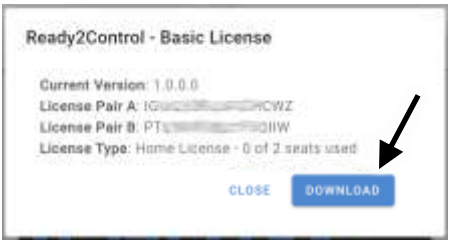
2.4 If a Save window appears, click **Save File,** then pick a folder and save the file. If the Save window doesn't appear, check your download folder, it may be there. If it's not there, do a Search on your computer for **Ready2Control** to locate the file. If you find it, then skip to step 2.7 on the next page.

If the file failed to download, go to Step 2.5 (below) for another way to download the program.



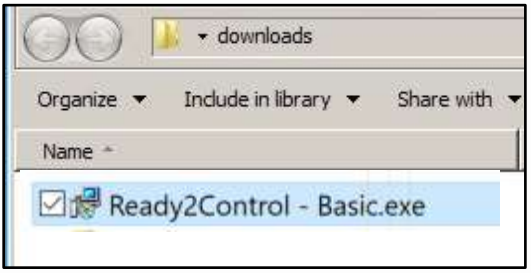
2.5 Ready2Control-Basic will now appear in the My Software window. Click on the software name to access the Software information window.

2.6 In the Software Information window, click the **Download** button to download Ready2Control-Basic.



What happens after you press the **Download** button will vary depending on computer setup. It may ask you to save it to a folder or it may save the file directly to your Downloads folder.
If you don't see where it downloaded, do a Search on your computer for **Ready2Control** to locate the file.

Install Ready2Control-Basic (cont.)



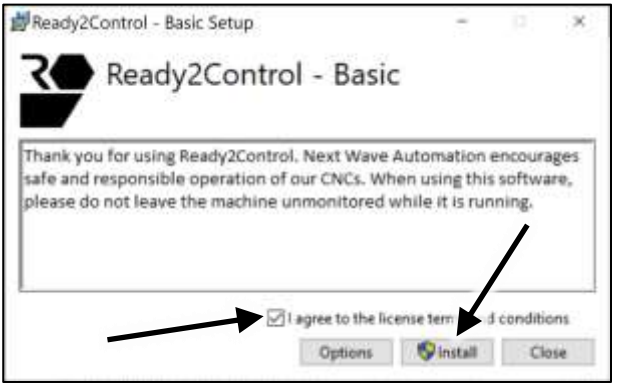
2.7 Locate the file on your computer and click on it to start the install process.

NOTE: You may need to grant permission to your computer if it does not recognize the Ready2Control-Basic program.

2.8 If you get this message, select **More Info.**

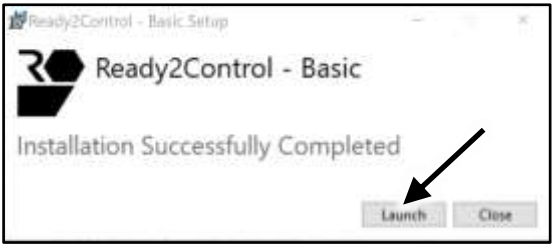
2.9 Then click **Run anyway.**

Install Ready2Control-Basic (cont.)



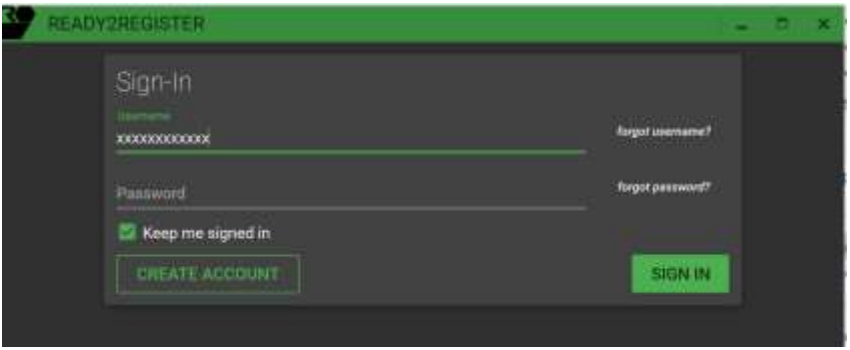
2.10 Check the **I Agree…** box and then click the **Install** button.

2.11 If you receive this message click **Yes**.

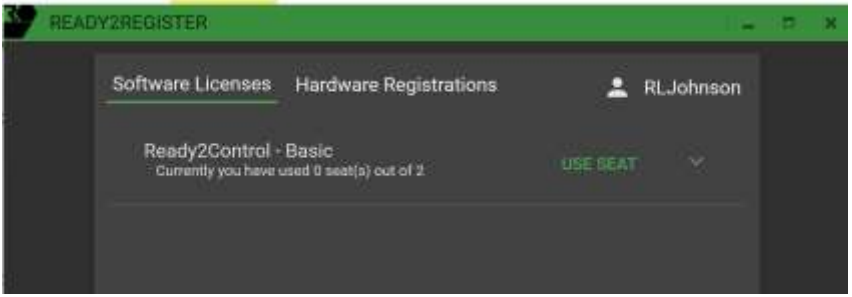


2.12 Press **Launch**
This will open Ready2Register window (see next step).

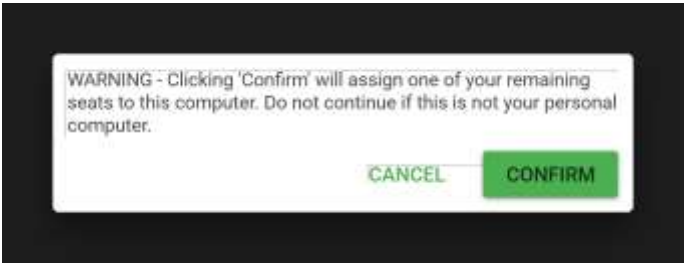
Install Ready2Control-Basic (cont.)



2.13 If the Sign-In window appears, sign in using your Portal account name and password. Also check the box for **Keep me signed in**. This will simplify the current install process and future updates.

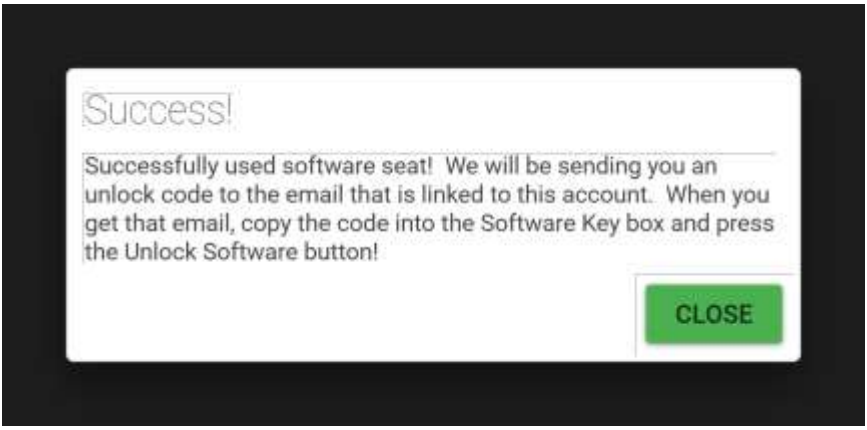


2.14 After you've signed in, you will see Ready2Control-Basic in the list. Click on **USE SEAT.** This process will assign a copy of the software to the computer you are currently using.

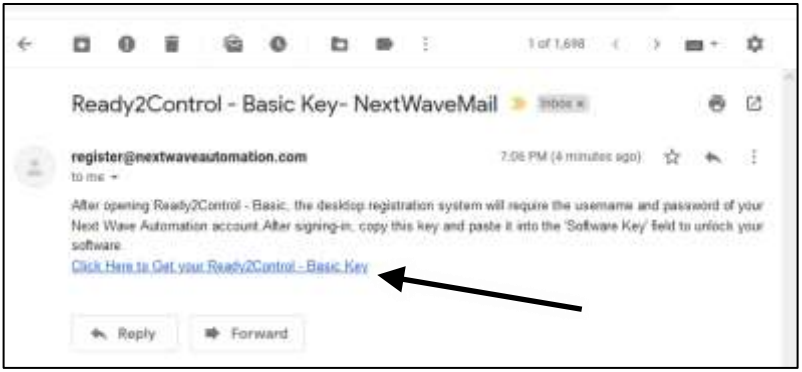


2.15 This message will appear next. Click **CONFIRM**.

Install Ready2Control-Basic (cont.)

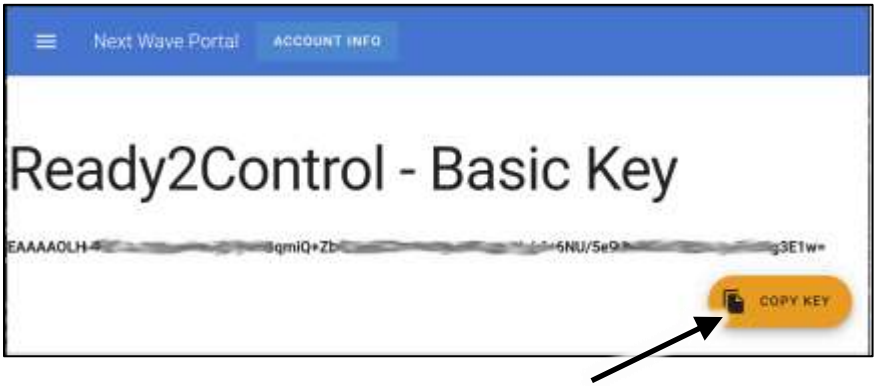


2.16 Next **check your email** for the Unlock Code/Software Key.



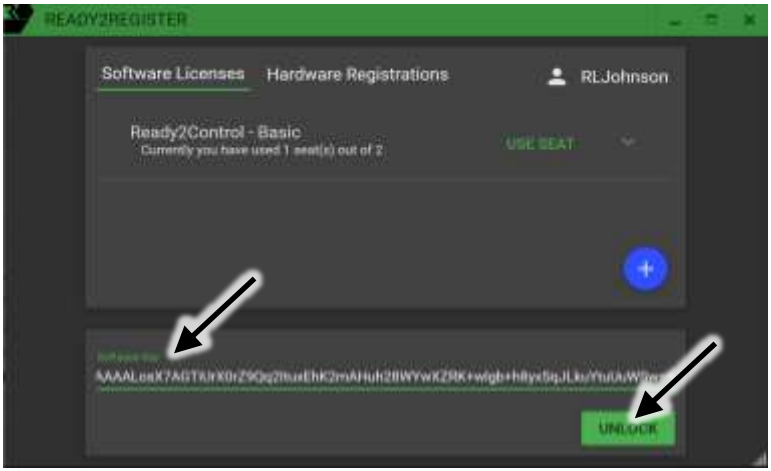
2.17 Click on the Link in your email to access your **Software Key.**

Install Ready2Control-Basic (cont.)



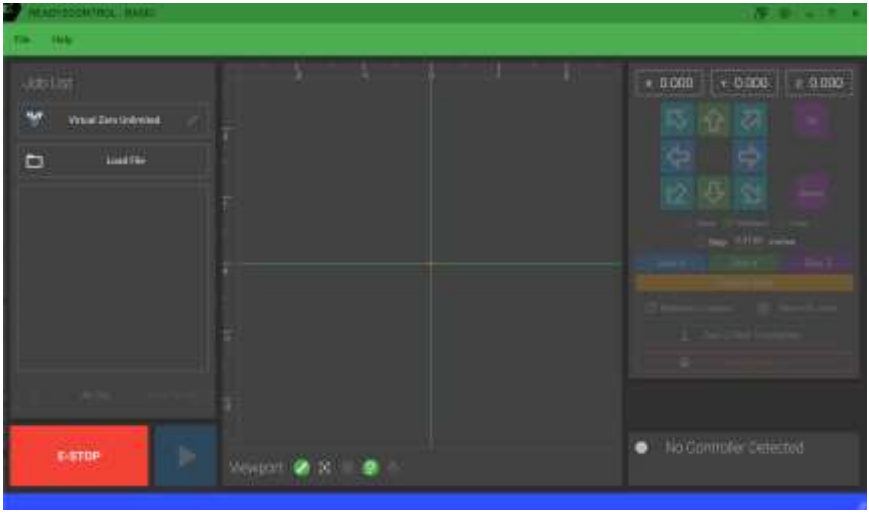
2.18 The software Key window will appear next. Click **Copy Key.** The software will attempt to automatically paste the Key into your copy of Ready2Contorl-Basic. If successful, Ready2Control-Basic will automatically open – See step 2.20 on the next page.

If it fails to auto-paste, you will be given the options to manually paste the Key into the software registration window – step 2.19 below.



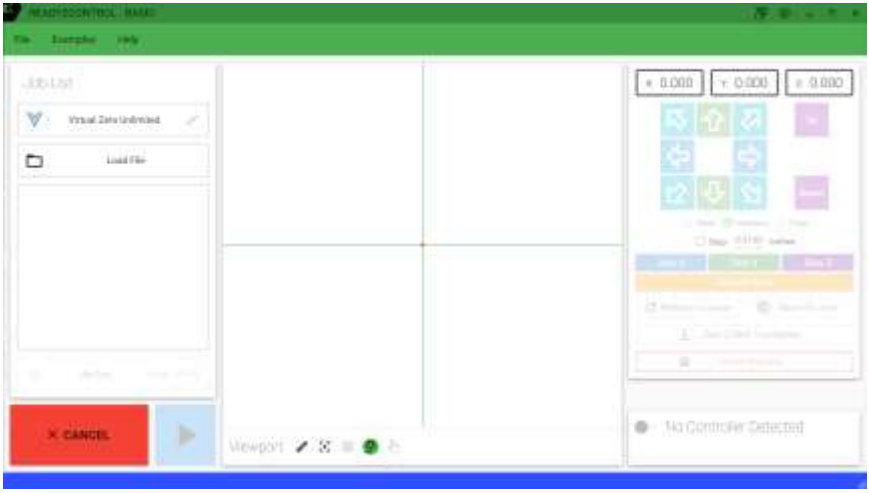
2.19 If this window appears, paste the KEY into the space at the bottom and click **Unlock**. This will unlock and launch Ready2Control-Basic – see next page.

Install Ready2Control-Basic (cont.)



2.20 The main Ready2Control-Basic window will now appear.

The default theme (color scheme) for Ready2Control-Basic is the “Dark” theme. You can switch to a “Light” (example below) in the General Settings window – see page 42 for instruction on how to change to a “Light” theme.



Ready2Control-Basic using a “Light” theme.

This completes **Section 2 – Install Ready2Control-Basic**

Contain dust and sound with a CNC machine encloser from Next Wave CNC.

Available from your local Next Wave CNC distributor or online at www.NextWaveCNC.com

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CNC machine enclosure

The **CNC machine enclosure** is designed to help control dust, add safety and reduce machining noise. Made with an aluminum frame, acrylic panels and steel connectors. Hinged access door with magnetic catch allows for easy material removal or bit changes. Pre-drilled 3” hole for cords allows for the case to be placed on any flat surface. Ships flat, assembly required.

Section 3 - Machine Setup

Specs:

- Table dimensions: 12'' x 18"
- XYZ travel: 12'' x 13'' x 3''
- Overall dimensions: 19-1/2 ''W x 20-1/2'' L x 18''H
- MDF bed with t-slots to allow a variety of clamping positions
- Includes the latest VCarve Desktop Design software
- Vector Art 3D Sampler Pack.
- Ready2Control-Basic software
- Requires a PC Computer with USB port (not included)
- Requires a Bosch, DeWalt, Porter-Cable, or similar style Trim Router (sold separately)
- Ships fully assembled.
- Made in USA

Machine Setup (cont.)

Bosch PR20EVS/PR20*
Trim Router Mount
(Installed)

DeWalt DWP611*
Trim Router Mount

Ready2Control-Basic
Software License Card

Vectric VCarve
Desktop Software

AB USB Cable

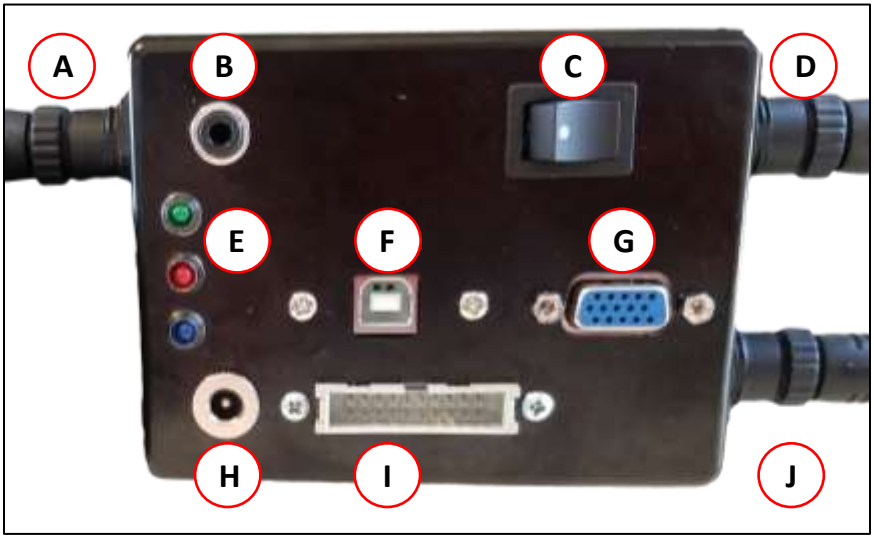
Power Supply

Clamping kit

3.1 Above are items that come with your Shark SD100 (Barracuda). Verify that you have all of these parts before you precede.
If anything is missing call 419-318-4822

*Router not included.

Machine Setup (cont.)



3.2 Control Box Overview
A – Y Axis motor connection
B – 1/8" port (connects to optional Touchplate accessory - see page 58)
C – On/Off power switch
D – Z axis motor connection
E – Diagnostic lights (will flash intermittently during normal operation)
F – USB port (connects to your computer with the AB USB cable)
G – 15 pin connection (connects to optional Pendant accessory)
H – Power cord connection
I – 20 pin connection (connects to optional Mini 4th axis (page 55) and Laser Module accessory (page 47)
J – X axis motor connection

3.3 Connect the power supply (included) to the control box (port H) and to a 120V outlet.

3.4 Turn ON the power switch (C)

3.6 Open Ready2Connect-Basic on your computer.

3.5 Connect the USB AB cable (included) to the USB port on the control box (F) and the USB port on your computer.

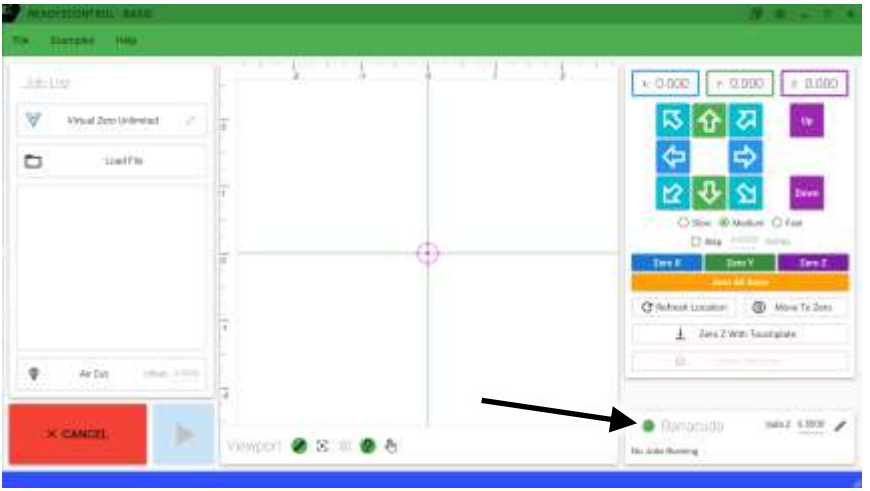
Machine Setup (cont.)

NOTE:
If you get this message, please follow the Firmware Update instructions on Page 52 and then return to step 3.6 below.

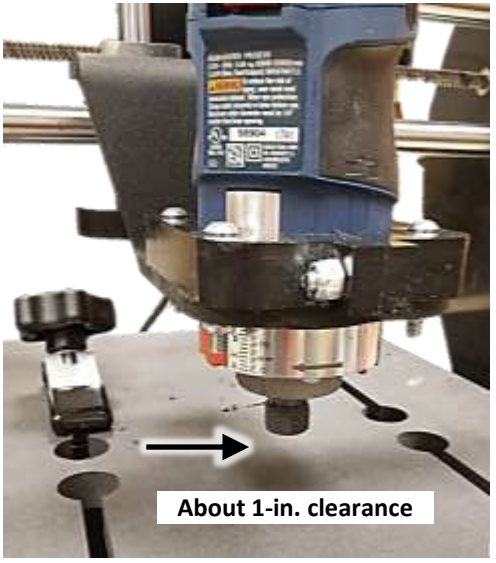
3.6 This message appears the first time you connect Shark SD100 (Barracuda) to Ready2Control-Basic. Clicking YES will register your machine to your Portal Account. If you're not log-in, it will also prompt you to log-in to your portal account**.**

3.7 Click **OKAY**

Machine Setup (cont.)



3.8 Your machine is now connected to Ready2Control-Basic. The name of your machine appears in the lower right.



Step 3.9
Install your trim router in the mounting bracket so the bottom of the collet is about 1 inch from the deck when the Z axis at its lowest position. This will provide enough reach for most router bits. If needed, you can reposition the router up or down in the future.

This completes the Machine Setup. Your machine is now ready to use.

See the next section for an overview of the workflow when using Ready2Control-Basic and your Shark SD100 (Barracuda).

Explore and expand your creativity with these accessories from Next Wave CNC.

Available from your local Next Wave CNC distributor or online at www.NextWaveCNC.com

Router bits – Find the right bit for your project. Available in a variety of sizes and shapes and as singles or sets. V-Bits, straight bits, upcut spirals, carving bits, small diameter bits and coated long lasting bits.

Starter sets

General purpose sets

1/8 dia.
tapered
ball nose

1/4 dia.
Spiral Upcut

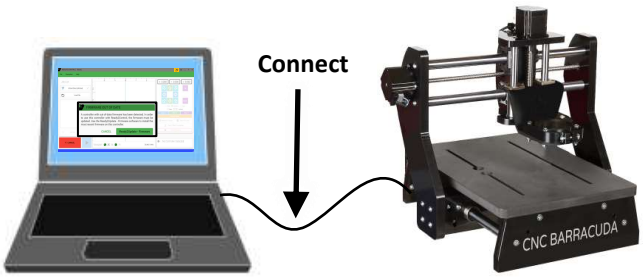
1/2 dia.
90 deg. V-bit

1/4 dia.
60 deg. V-bit

Section 4 – Ready2Control-Basic Workflow

This section provides an overview of the basic workflow of Ready2Control-Basic when connected to your Shark SD100 (Barracuda) machine.

For detailed information about specific functions in Ready2Control-Basic see pages 33-51



4.1 Open the **Ready2Control-Basic** software.

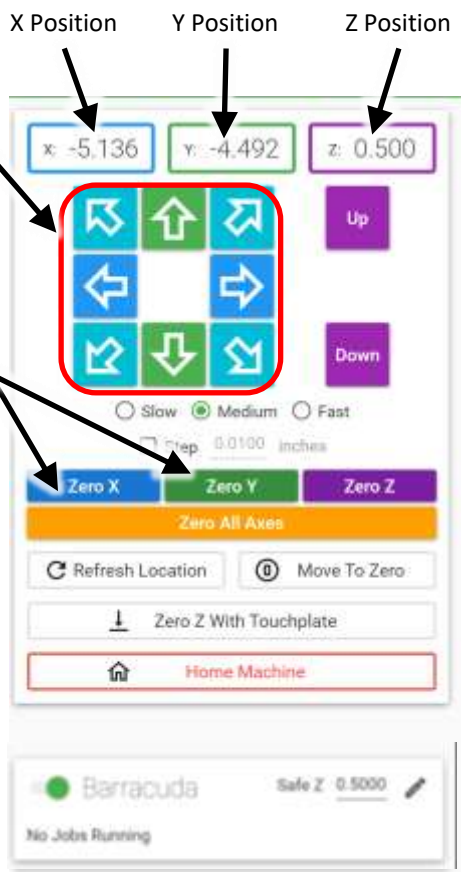
4.2 **Connect your computer** to the control box with the USB AB cable and turn ON the power switch on the control box.

4.3 Install the appropriate bit in the router and secure your project material to the table of your machine using the provided clamps and carriage bolts. **Note**: The T bolts that came with the clamps are **not** used with the Shark SD100 (Barracuda) deck.

4.4 Use the Arrow buttons to move the X and Y Axes (router bit) to the XY Zero (datum point) for your project.

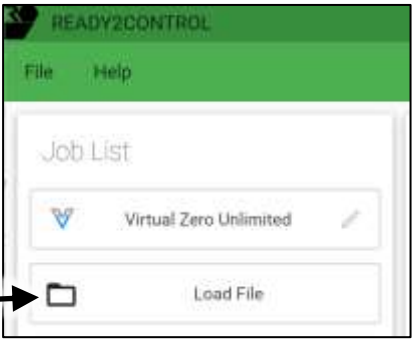
4.5 Zero the X and Y axes using the **Zero X** and **Zero Y** buttons. The X and Y position fields at the top of the window will zero-out and display 0.000

4.6 Use the purple Z Up and Down buttons to position the tip of the router bit to the Z Zero location you set up in your VCarve file. When the bit is positioned, press the purple **Zero Z** button. The Z position field at the top of the window will zero-out and display 0.000. Next, use the purple **Up** button to move the Z axis up so the router bit is safely above the material.



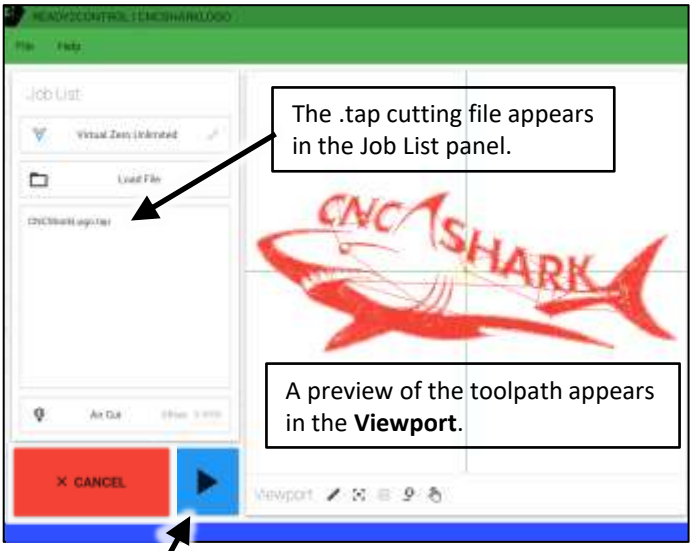
OR If you have a Touchplate, use the process described on pages 59

Ready2Control-Basic Workflow (cont.)



4.7 Click on **Load File.**

4.8 Select your .tap cutting file.

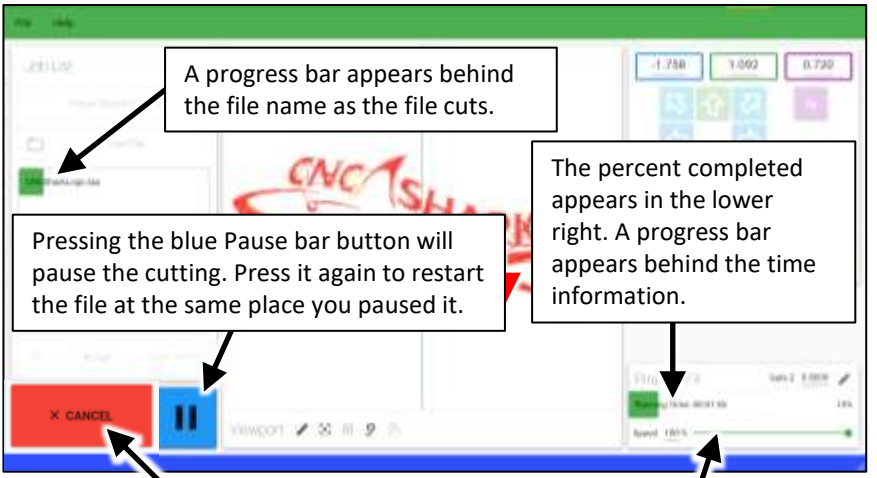


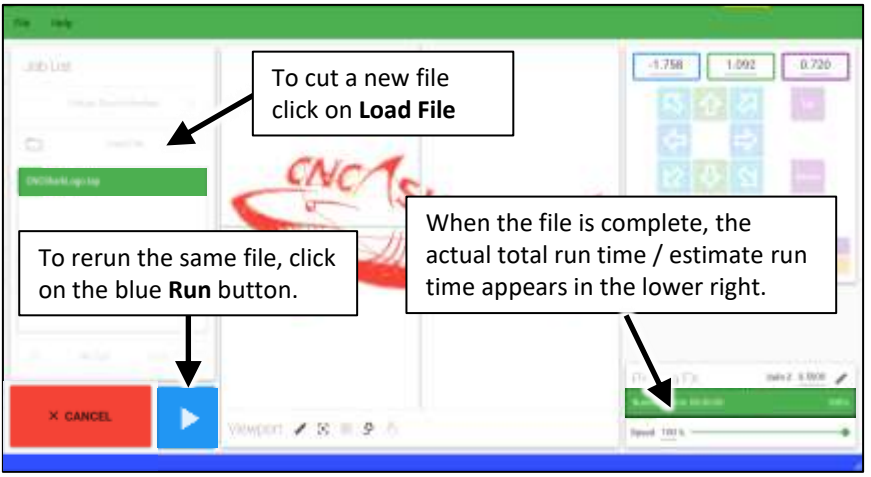
4.9a Start the router.

4.9b Then press the blue **Run** button to start the file. The CNC will not start moving and cutting the design.

Ready2Control-Basic Workflow (cont.)

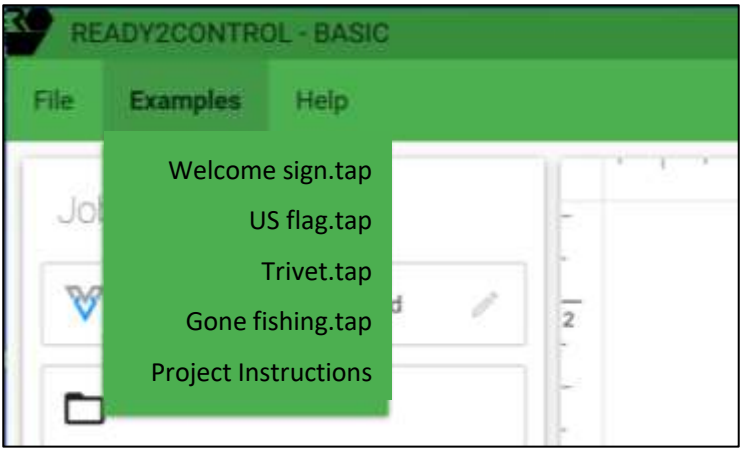
The information below describes some of the basic functions that are useful when running a file.





This completes the Workflow Overview.
If you would like to practice the workflow, check out the next section for some sample projects that require no design work and are ***Ready 2 Cut.***

Section 5 – Ready2Cut Projects



5.1 There are **Ready2Cut** projects available under the Examples menu. These projects are predesigned and load directly into Job List Panel in Ready2Control-Basic. They are a good way to get a quick understanding of how to operate your new Shark SD100 (Barracuda).

5.2 Start by downloading the Instruction from the Examples menu. The instructions contain detailed information on how to setup your Shark SD100 (Barracuda) to run these projects.

Section 1 – Install Vectric VCarve Desktop software

A thumb drive (color may vary) containing the **Vectric VCarve Desktop software** is included with your Shark SD100 (Barracuda). Insert the thumb drive into your computer and follow the prompts for installation.

VCarve Desktop is used to design projects and create the cutting files that are used to make your Shark SD100 (Barracuda) move. Vectric provides a variety of training materials at their website – see page 63 for more information about Vectric and other resources to help you get the most from your new tool.

Explore and expand your creativity with these Free Projects

Online at NextWaveCNC.com/cncprojectplans

Custom Coaster Project

MAKE THE CUSTOM COASTERS

These beautiful custom wooden coasters are the perfect gift for the person that has everything...or keep them for yourself.

INSTRUCTIONS

COASTER PROJECT INSTRUCTIONS: CLICK TO DOWNLOAD
COASTER PROJECT CRV FILES: CLICK TO DOWNLOAD
COASTER DESIGNING VIDEO: CLICK TO VIEW
COASTER MACHINING VIDEO: CLICK TO VIEW
COASTER EPOXY INLAY VIDEO: CLICK TO VIEW
COASTER SANDING & FINISHING VIDEO: CLICK TO VIEW

Edge Lit Signs

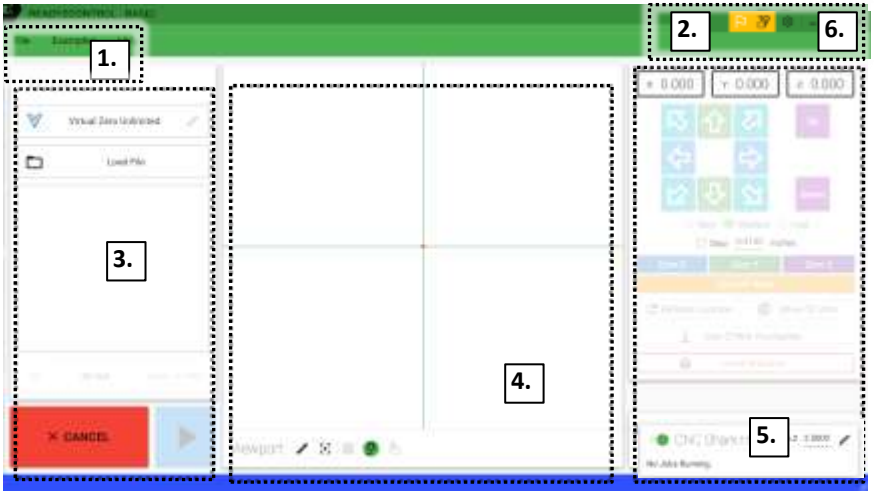
MAKE EDGE LIT SIGNS

Build these Signs to light up someones life!

INSTRUCTIONS

EDGE LIT SIGN INSTRUCTIONS CLICK TO VIEW
DESIGNING VIDEO CLICK HERE
MACHINING VIDEO CLICK HERE
ASSEMBLING VIDEO #1 CLICK HERE
ASSEMBLING VIDEO #2 CLICK HERE
MERRY CHRISTMAS CARVING FILES CLICK HERE
DISPLAY BOX CARVING FILES CLICK HERE
WHERE TO BUY LIGHTS

Ready2Control-Basic Main Panel overview



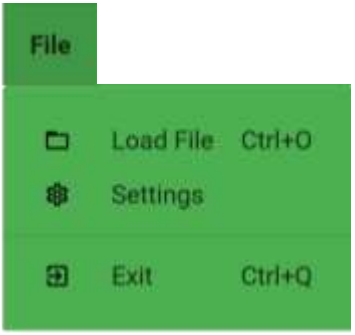
Main Control Main Panel

The **R2Control -Basic** main window contains six main sections:

1. **Menu Bar** (see page 34)
2. **Update** icons (see page 35)
3. **Job List, Virtual Zero** and **Run** functions (see page 36)
4. **Viewport** window and commands (see page 38)
5. **Machine controls** (see page 39)
6. **General Settings** (see page 42)

   More Settings menu (see page 49)
   - Controller settings
   - Software Shortcuts
   - Registration window
   - About window.

Menu Bar



File menu

Load File – Loads a .tap cutting file to Job List window.

Settings - Opens General Settings window. See Page 42 for more information.

Exit - Closes Ready2Control-Basic program. **Ctrl+Q** – keyboard shortcut to Exit program.

Examples menu

Contains cutting files and instructions for Ready2Cut projects. See Page 30

Available project may vary from those shown here.

Help menu

About– Opens the About window that contains Current Version information and Change Log history

Shortcuts - Opens the Ready2Control-Basic keyboard shortcuts window.

View manual – A link to most recent version of the Shark SD100 (Barracuda) User's manual appears here when the software is connected to the internet.

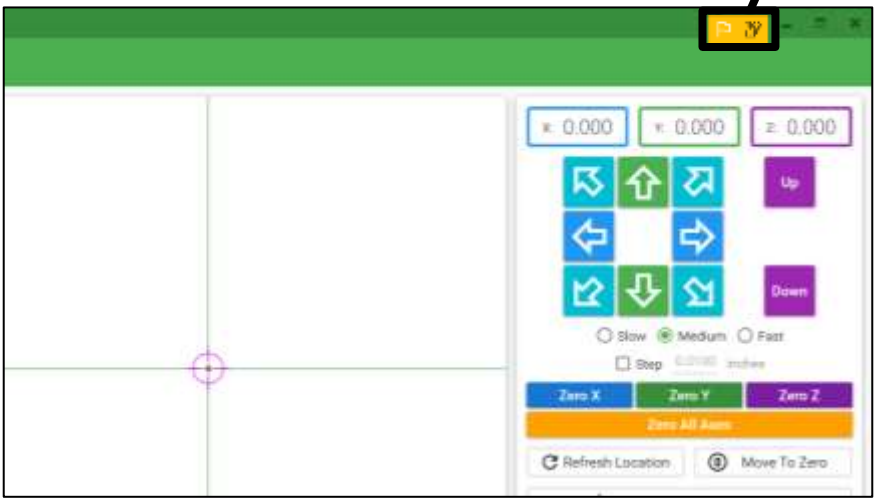
Update Icons

Firmware Update Icon

When icon on the right is glowing yellow it means a machine firmware update is available. Clicking on the icon starts the update process. See page 52 for instruction on how to update the firmware for your machine's control box. If a red exclamation mark is showing, it means an update is available, but you need to log into your portal account.

Software Update Icon

When this icon is glowing yellow it means a **Ready2Control-Basic** software update is available. Clicking on the icon starts the update process. Ready2Control-Basic automatically closes during the update process. Follow the screen prompts to update the software. Step-by-step information on updating the software is also found on page 56.



Job List panel

Virtual Zero Unlimited is not available in this version of Ready2Control-Basic. To purchase Virtual Zero Unlimited visit nextwaveautomation.com/shop or call the Next Wave Sales team at 419-318-4822

Press **Load File** to load a .tap cutting file.

The currently "loaded" file appears here.

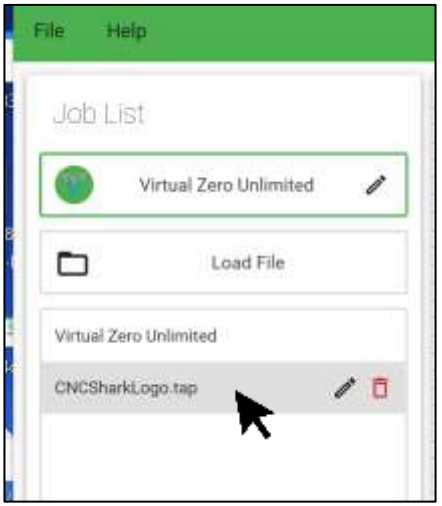
Press **Air Cut** to test cut the loaded .tap file.

Set **Offset** to thickness of the material plus a clearance amount. For example for .75" material thickness add .25" clearance for an **Offset** amount of 1.00". This will keep the router bit at least .25" inches above your material during the Air Cut.

Press this button to **RUN/PAUSE/RESUME** the cutting file.

Press the **CANCEL** to stop the machine movement and cancel the cutting file. After pressing CANCEL the cutting file must be restarted from the beginning. For a temporary stop, use the blue Pause button

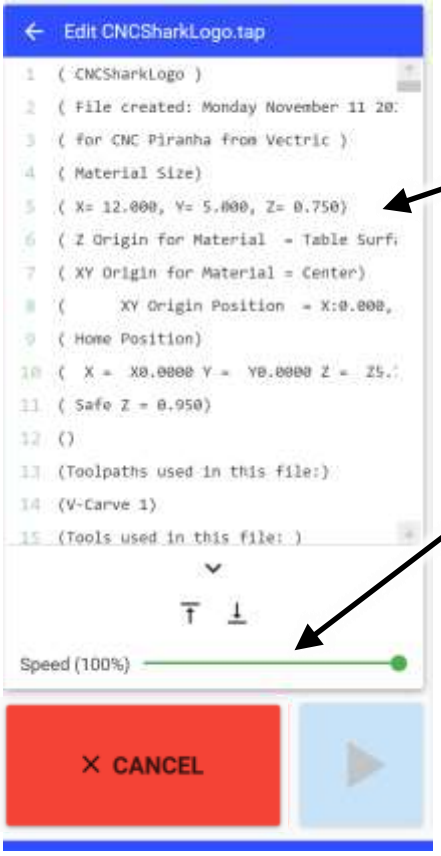
Job List panel (cont.)



Holding the cursor over the .tap file name reveals the Pencil icon and the Trash icon.

Use the Trash icon to delete the .tap file from the list.

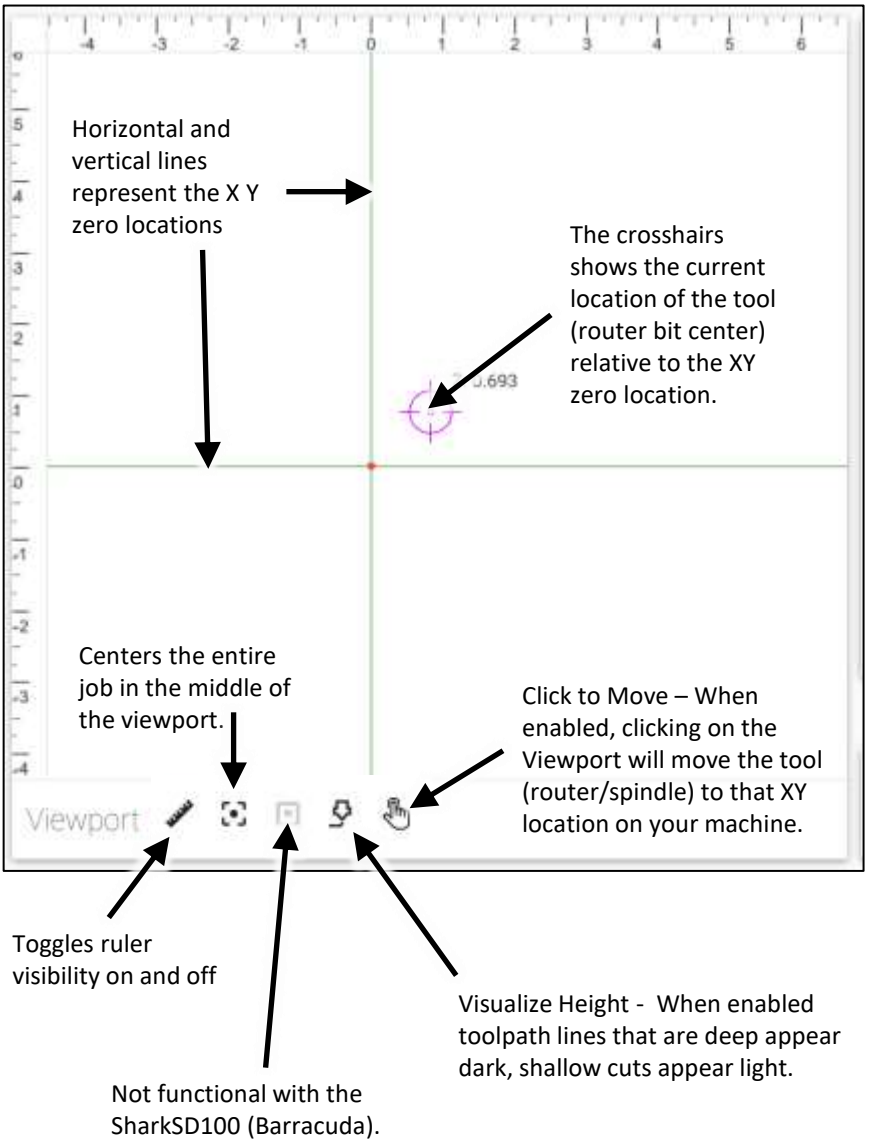
Click on the Pencil icon to view the G-code for this file and to access the feed speed override slider (see below).



G-code file. G-code can be viewed, but not edited.
G-code editing will be available in a future “Pro” version of Ready2Control.

Feed speed override slider

Viewport window



Machine control panel

Keypad ENABLED view

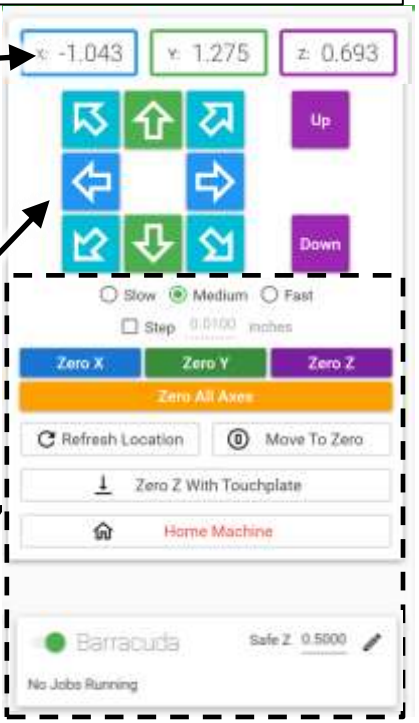
The **Keypad ENABLED view** provides quick access to the axis keypad. You can activate the keypad by clicking on one of the axis position fields. This will open the keypad control for that axis as shown at the bottom of this page. See page 44 on how to enable and disable the Keypad

Axis Position fields

- Show the current location of each axis.
- Clicking on one of these fields will open the **Keypad** control for that axis – see bottom of this page.

Arrow buttons – press arrows to move axis in that direction.
To change arrow buttons can also be changed to the "classic" pendant style layout - see page 45.

See pages 40 and 41 for information on these buttons and functions



Axis Keypad (pop-up view)
Position fields

- They show the current location of each axis.
- Clicking on a position field will activate the keypad for that axis and the keys will change color to match.
- The location fields can be edited and used in conjunction with the **Move to Position** and **Set Position** buttons.
- The keypad also functions as a simple calculator.

Machine control panel (cont.)

Keypad DISABLED view

The **Keypad DISABLED view** prevents access to the keypad. Instead axis location can be entered directly in the axis position fields.
See page 44 on how to enable and disable the Keypad.

Axis Position fields
- Show the current location of each axis.
- When the Keypad is disabled, values can be entered directly into these fields and used in conjunction with the **Move to Position** and **Set Position** buttons below.

Jog speed setting (to change default speeds see page 43)

Step – check this box to jog by the entered amount. (To set the default Step amount see page 43)

Zero X, Y, Z, All Axes buttons Clicking these button will set the Position field(s) to zero.

See page 41 for information on these buttons and functions

Machine control panel (cont.)

(Cont.) Keypad DISABLED view

Refresh Location button -
Click this button if Position fields fail to update or if the machine stalls. The need to refresh can sometimes be caused by an underpowered computer, too many programs open or a program problem in Ready2Control-Basic. If you frequently need to use the Refresh Location button, contact support@nextwaveautomation.com or call 419-318-4822.

Move to Zero – Click this button to move one or all axis to its zero location.

Move to Position – Press this button after entering an amount in one or all the Axis Position fields

Set Position – Press this button after entering an amount in one or all the Axis Positions fields.

Zero with Touchplate (optional accessory)
See page 59 for a step-by-step guide to using a touchplate.

Home Machine – Only available on Piranha XL and Shark HD tools that use a Pendant.

Safe Z – Enter the amount that you want the bit to raise above Z zero between cuts. Set to a height that keeps the bit from colliding with clamps or other objects. This amount can also be set in the Control settings window, see page 50.

Controller Toggle – Switches control between Ready2Control-Basic and the Pendant (The pendant is an optional accessory).

Job Progress – Shows the runtime and progress of the active job.

Feed Speed Slider – Adjusts the Feed Rate during operation.

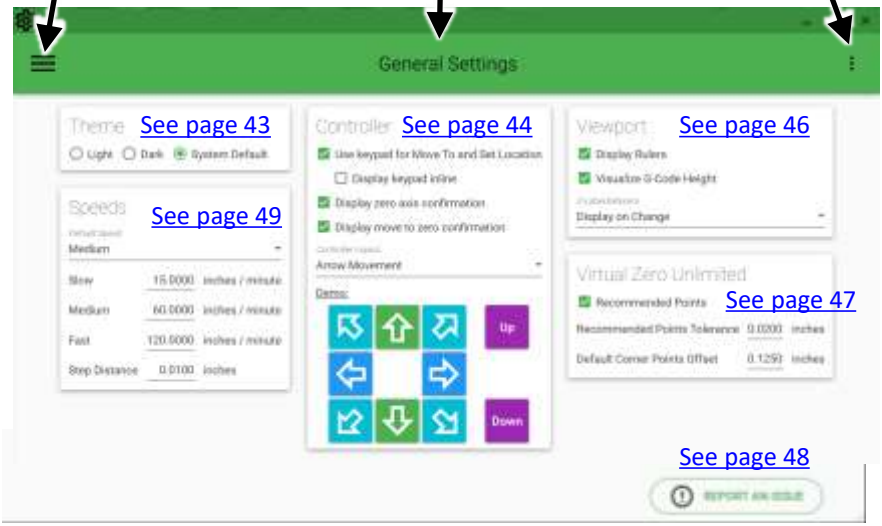
General Settings

Settings icon
Click the Setting Icon to open the **General Settings** window (below)
Additional setting and options can be access by clicking on the **More Settings** and **More Option** icons.

General Settings window
See the pages listed below
for detailed information.

More settings menu
Opens a menu with access to additional settings and information windows.
See page 49 for details.

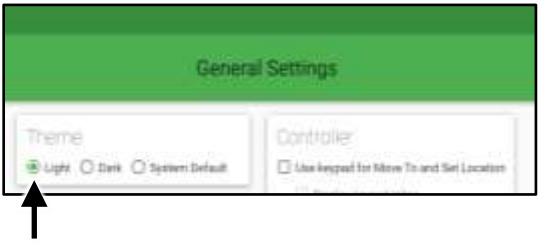
More options
Opens access to the **Hard Reset** option, which resets all program functions to original default settings.



General Settings (cont.)

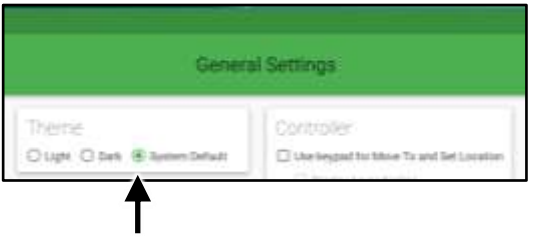
Theme Settings

The **Light** theme setting uses a light background color



The **Dark** theme setting uses a dark background color

The **System Default** theme setting uses your computer's theme setting (light or dark or other)



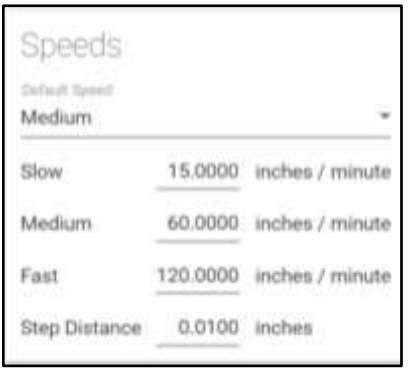
Speeds settings

Use this area to adjust the default jogging speeds for the three jog speed buttons in the main control window.

Default Speed – Sets the default jog speed option in main Control window. (See page 39)

Slow, Medium, Fast - Set the default speed for each of these settings.

Step Distance - Sets the default step distance when using the "Step" option in the main Control window. (See page 40)

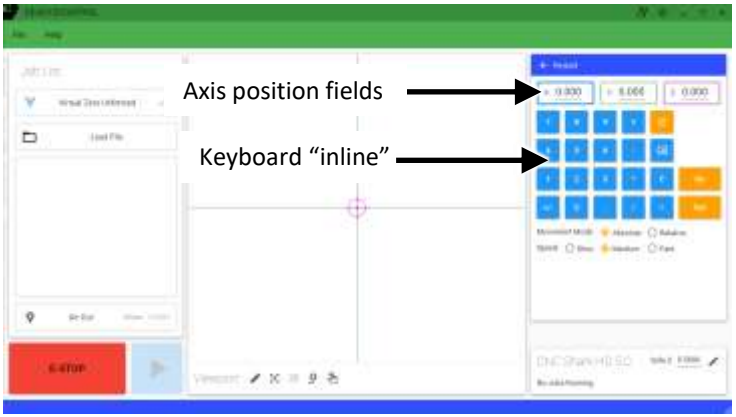


General Settings (cont.)

Control settings

Check this box to enable the Keypad. When enabled the Keypad will pop-up when you click in one of the axis position fields in the main Control Panel (see bottom image)

When checked the Keypad will replace the direction controls. When unchecked the Keypad will appear as a separate pop-up when clicking on one of the axis position fields. (See images below)



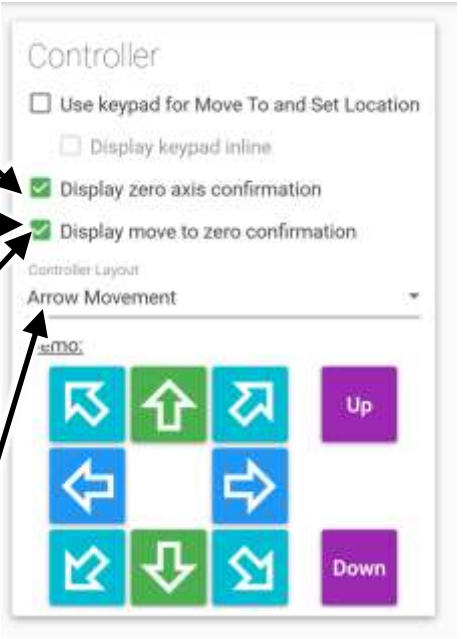
General Settings (cont.)

Control settings (cont.)

Checking the box makes the **Zero Axis** confirmation message pop-up by default in the main control window.

Checking the box makes the **Move to Zero** confirmation message pop-up by default in the main control window.

IMPORTANT NOTE:
When this box is UNCHECKED, the machine will move to XYZ zero when the Move to Zero button is clicked in the control panel.



Click on the name dropdown menu to toggle between the **Arrow Movement** layout and the **Classic CNC Controls** buttons. The Classic layout is similar to the Pendant control button layout.

General Settings (cont.)

Viewport settings

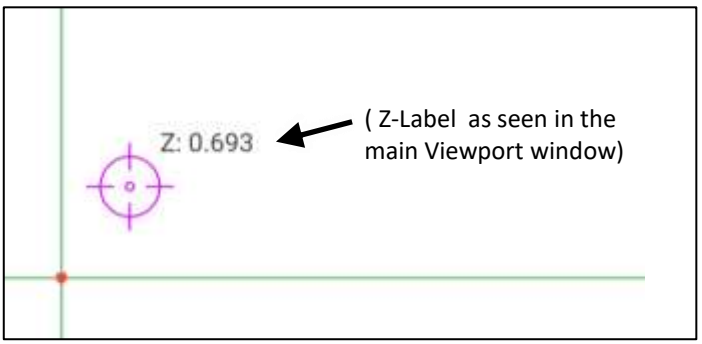
Display Rulers – Check this box to make ruler visibility the default setting in the main Viewport window. (See page 38)

Visualize G-Code Height – Check this box to turn on this option as the default in the main Viewport window. (See page 38)

(dropdown menu)

Z-Label Behavior

- The Z label becomes visible for a few seconds each time the machine moves to a new X or Y or Z location.
- The Z label is always visible
- The Z label is always hidden



(Z-Label as seen in the main Viewport window)

Explore and expand your creativity with these accessories from Next Wave CNC.

Available from your local Next Wave CNC distributor or online at www.NextWaveCNC.com

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VIRTUAL ZERO UNLIMITED ®

Virtual Zero Unlimited – Carve your designs into a curved or uneven surface such as a chairback, gun stock or rough sawn board. (A larger Shark HD machine is required for large projects such as the Chair back shown above).

Laser Module (available with 2- or 7-watt power)* Engraves in a variety of soft materials such as wood, paper, and leather. Also cuts thin materials**.

* Using the 7-watt with your Shark SD100 (Barracuda) requires a special mounting bracket.

** Cutting thin materials requires the 7-watt model.

General Settings (cont.)

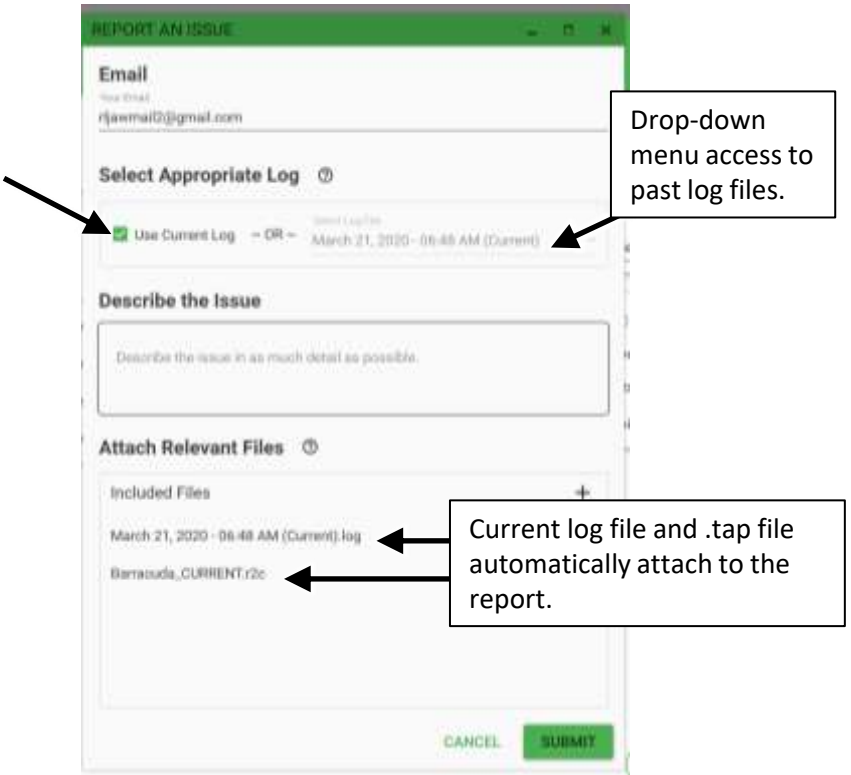
Report an issue

Click the button to open the **Report An Issue** window. Use this window to report issues (software problems) related to Ready2Control-Basic software. The reported issue is forwarded to the software support team.

You can also use this window to submit "Wish List" items for features you'd like to see added to Ready2Control-Basic.

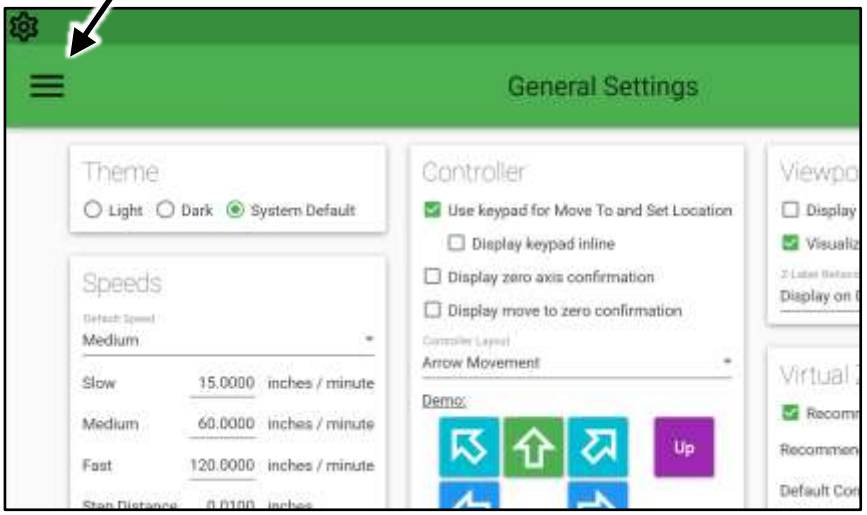
Current Instance checkbox

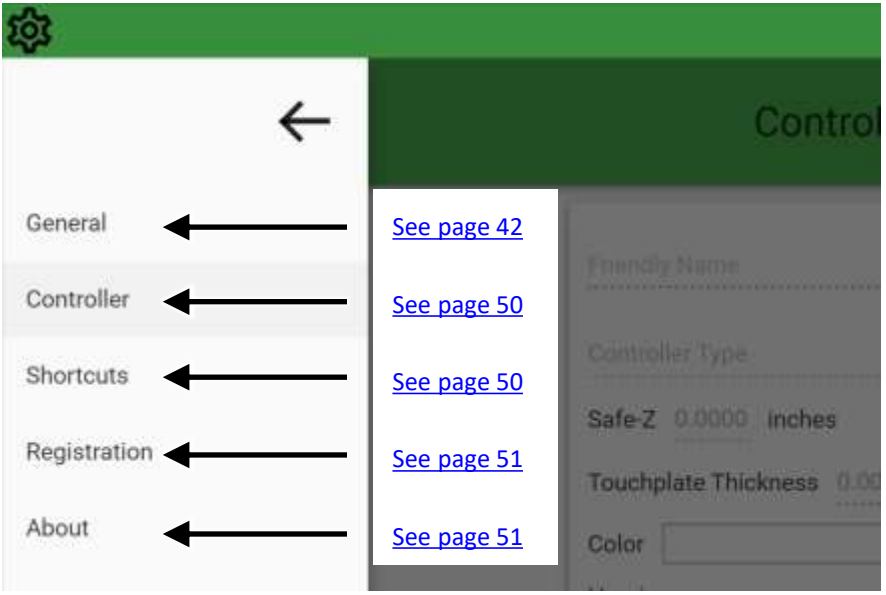
- Check this box to automatically attach a log file (history) of your current usage of Ready2Control-Basic. The log file is helpful to the programmers because it provides information about the problem you encountered and things that may have contributed to the problem .
- Leave the box unchecked if you wish to submit a comment or suggestion not directly related to your current instance of Ready2Control-Basic, or submit a older log file from an earlier session.



More Settings Menu

The **More Settings Menu** icon is in the top left corner of the Settings window

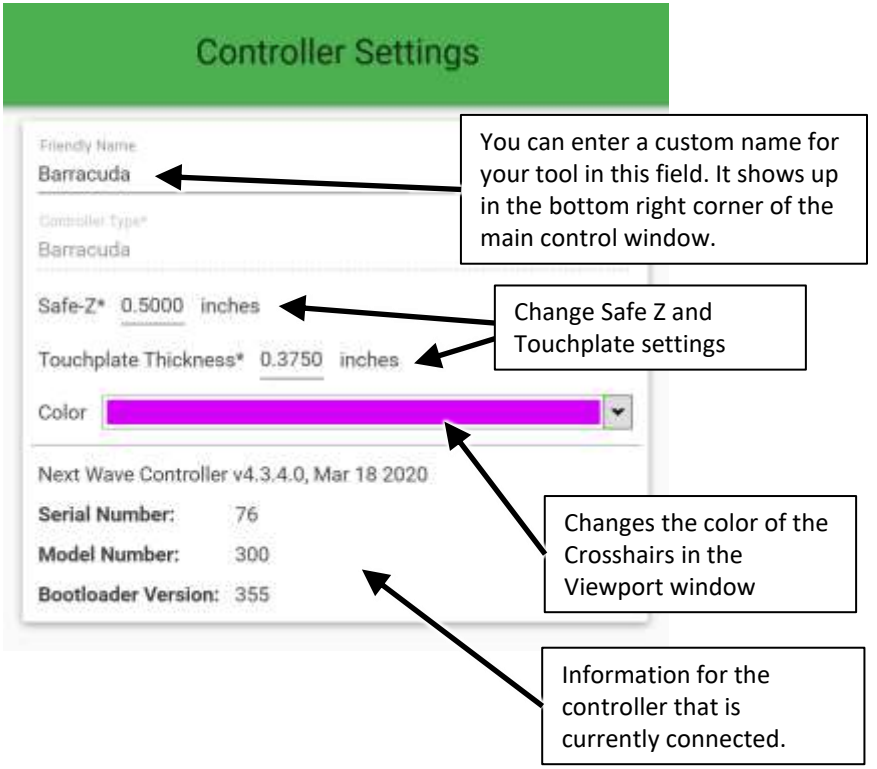




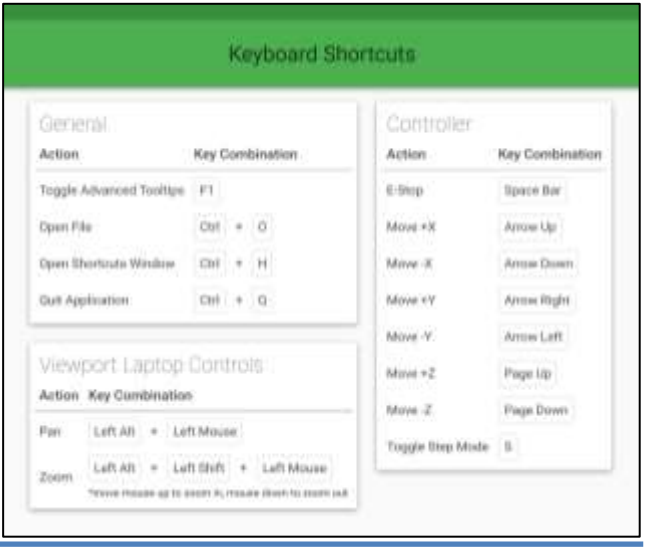
Click on the name in the menu to go to that window. See the pages listed above for detailed information on each window.

More Settings Menu (cont.)

Controller Settings (Applies to the Connected Controller)

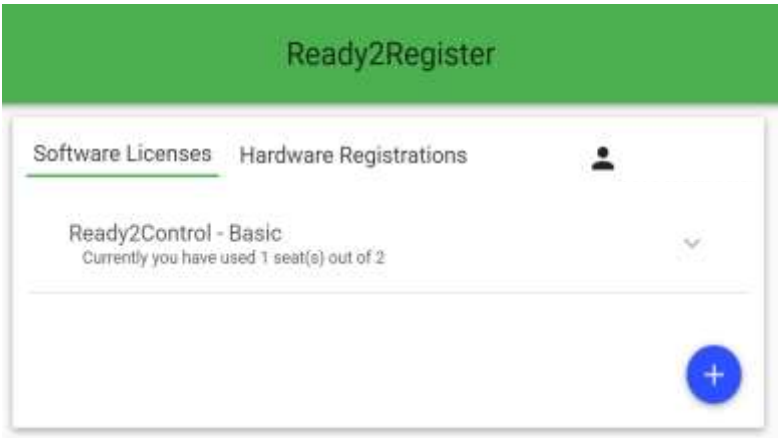


Keyboard Shortcuts



More Settings Menu (cont.)

Registration window

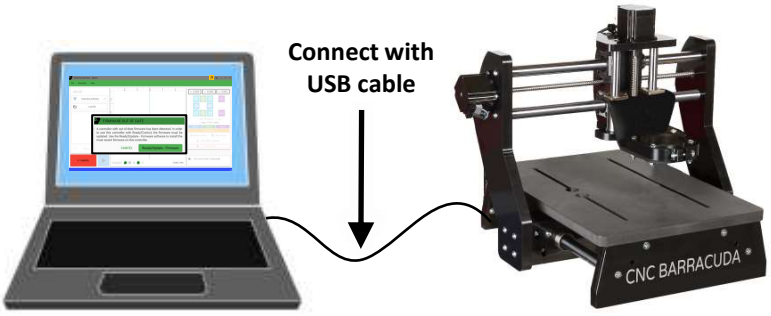


The Registration window lists the software and hardware that you've registered.

About window

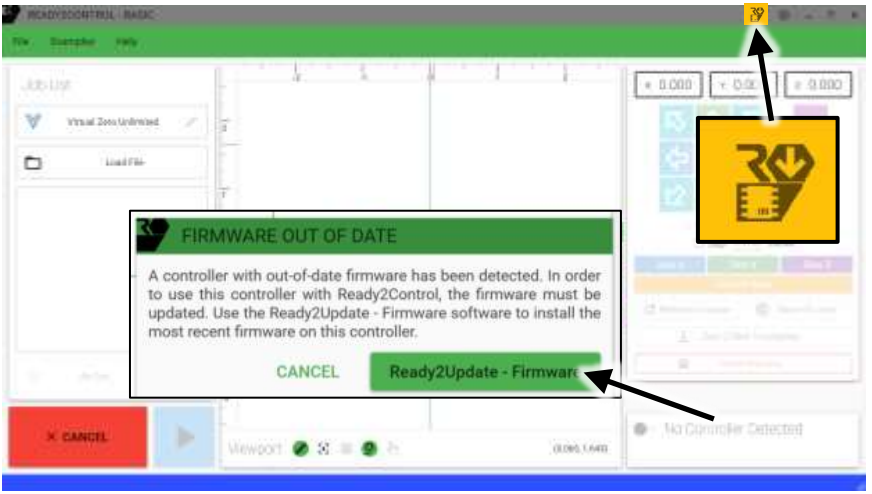
Provides program version and change history information.

How to Update the Machine Firmware



Open Ready2Control-Basic **Turn ON machine**

4.1 Before you attempt to update the firmware on your machine's control box, make sure your computer is connected to the machine with the USB cable and the machine is turned on.



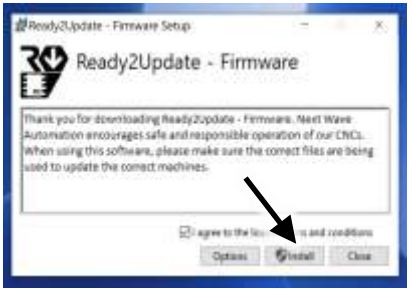
4.2a You will know the firmware in your machine's control box needs updating because you will either get a pop-up message (shown above) or the Ready2Update icon in the upper right corner will glow yellow.

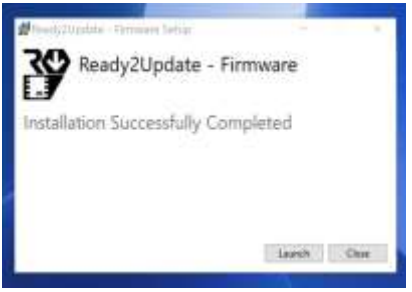
4.2b If you get the pop-up message, click on the green button and proceed to Step 4.3 on the next page.

4.2c If you see the yellow icon, click on the icon and proceed to Step 4.5 on the next page. NOTE

NOTE: Launching Ready2Update will close Ready2Control-Basic.

How to Update the Machine Firmware (cont.)

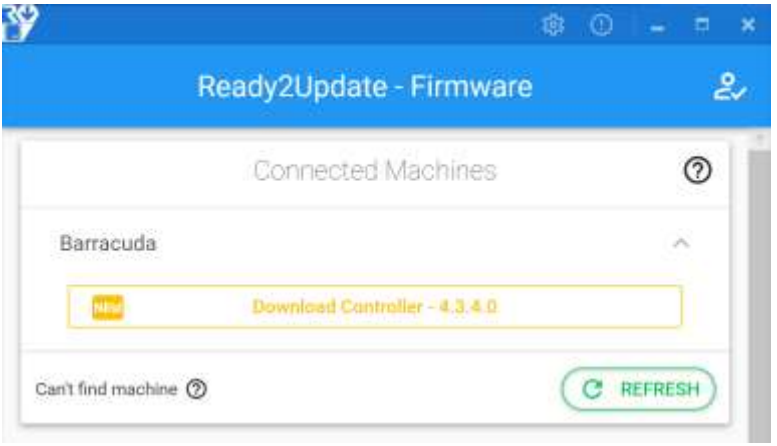




4.3a Check the **I agree** checkbox and the **Install** button.
This will installs a firmware updating program on your computer. It also helps automate the process in the future.

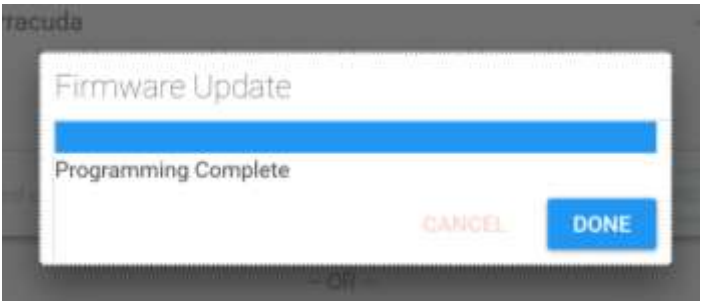
4.3b Click **Launch** when the Installation Successful window appear.

4.4 Ready2Update-Firmware program will launch

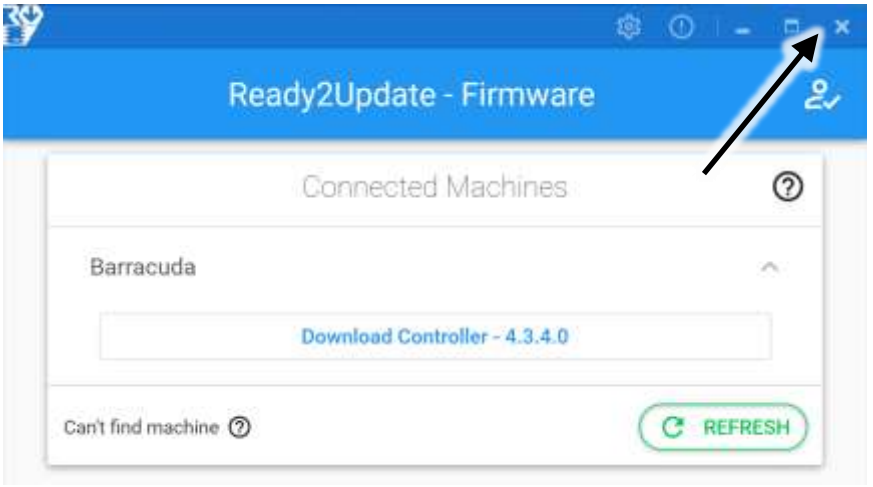


4.5 Click on the **Download Controller** button. When it's yellow it means a new version of the firmware is available.

How to Update the Machine Firmware (cont.)



4.6 Click **DONE** when the update is complete.



4.7 Click on the X in the upper right to close the Ready2Update window.
This completes the Firmware update process.

You can now re-open Ready2Control-Basic and start using it again.

Explore and expand your creativity with these accessories from Next Wave CNC.

Available from your local Next Wave CNC distributor or online at www.NextWaveCNC.com

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Mini Rotary 4th Axis – Works like a wood lathe but can also carve intricate patterns and designs in your CNC project. Excels at turning pens and tool handles.

How to Update the Ready2Control-Basic Software

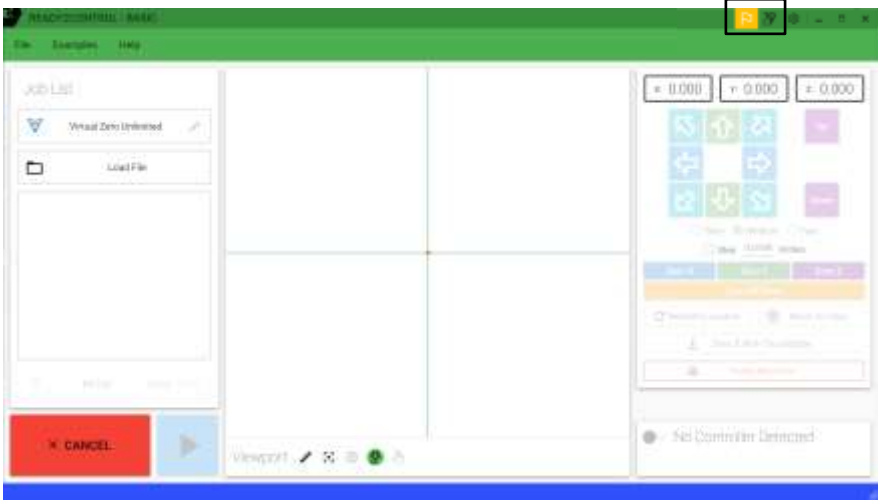
Ready2Connet-Basic and your computer must be connected to the internet for it to detect and download the software updates. You should do this periodically.

Your computer does not need to be connected to your machine during this update process – but it's OK if it is connected.

5.1 Open the **Ready2Control-Basic** program.

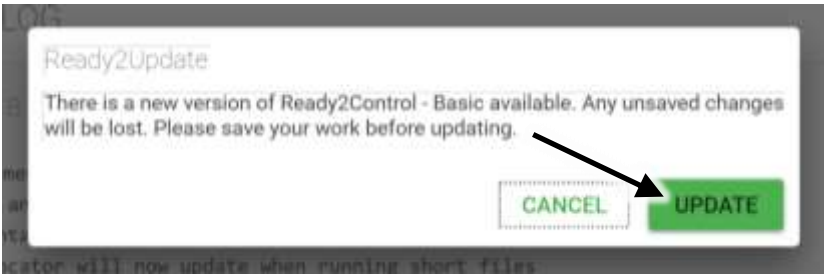
5.2 If the **Software Update flag** is showing then a new version of the software is available.

5.3 Click on the flag to start the update process.



How to Update the Ready2Control-Basic Software (cont.)

5.4 Click the **UPDATE** button



5.5 Click the **UPDATE** button. This will start the update process.

NOTE: The Ready2Control-Basic program will automatically close during the update process.

5.6 Check the **I Agree** box and click the **Install** button

5.7 Click **Launch** to reopen Ready2Control-Basic.

This completes the Ready2Control-Basic Software update process.

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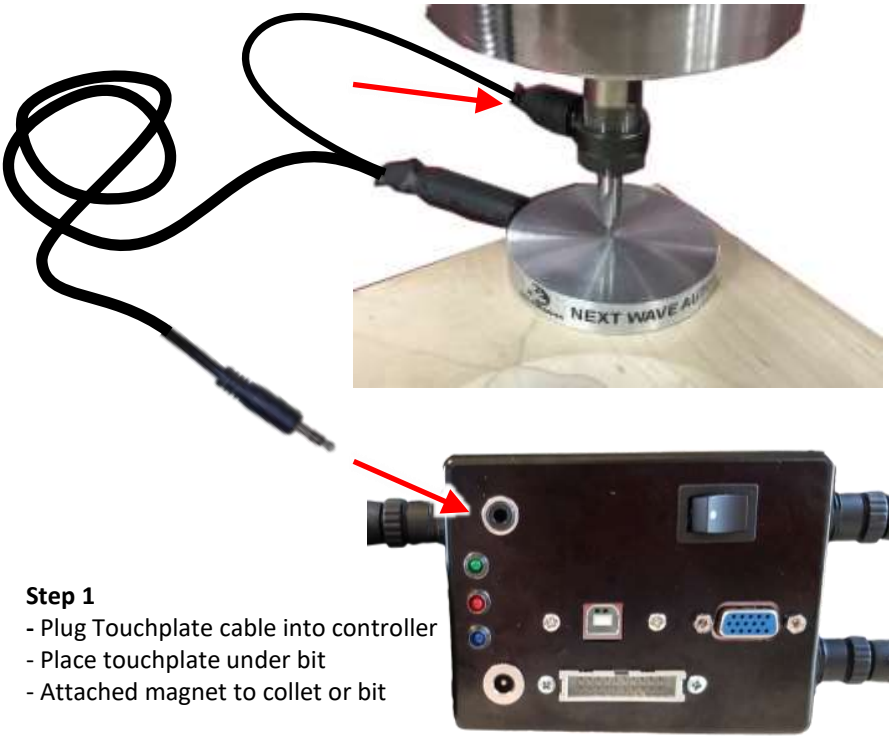
Z Zero Touchplate – Automate your Z zeroing process with accuracy and convivence. Standard model is 2-inch diameter. The mini touchplate is 1-inch diameter and is an add-on to the standard model.

How to Use a Touchplate to Zero the Z axis



Step 1
- Plug Touchplate cable into controller
- Place touchplate under bit
- Attached magnet to collet or bit

Step 2
Start the routine by clicking on the **Zero Z With Touchplate** button.

How to Use a Touchplate to Zero the Z axis (cont.)

Step 3 Prepare the touchplate per the instruction in the pop-up window

The **Touchplate Thickness** can be edited in this pop-up or in the Control Settings window (see page 50). Editing the Touchplate Thickness is useful if the plate is slightly over or undersize or if you want the routine to set the Z Zero slightly deeper or shallower. The Touchplate Thickness setting can also be used to accommodate the thickness of a custom-made plate.

Step 4 After the Confirmation notice appears, click **NEXT**.

How to Use a Touchplate to Zero the Z axis (cont.)

Step 5 The Z axis will move down until the tip of the router bit touches the touchplate. It will then retract up to the Safe Z Height that was set in the control panel (page 41).

Step 6 Remove the magnet and touchplate from the machine before proceeding.

This completes the Z Zero process using the Touchplate accessory.

Maintenance

Daily

- Check for damaged wires or components. Repair or replace as needed.
- Check for loose parts. Tighten or adjust as needed.
- Vacuum or dust-off machine and components including Controller and router.
- Wipe down the bars with a soft cloth.
- Clean the leadscrews with a soft brush or vacuum.

Monthly or every 40 hours of use.

- Apply a light coat of dry lubricant to to bars and leadscrews. Wipe off excess with a soft rag.

Dupont Silicon Teflon spray works well as a dry lubricate and is available at your local Next Wave CNC retailer or online at: nextwaveautomation.com/shop

Similar products are available at hardware stores. Make sure it is the dry type, so it doesn't attract dust and cause buildup.

Resources

Next Wave Automation

www.nextwaveautomation.com

Manufacturer of the SharkSD100 (Barracuda), Shark HD series, CNCPiranha series, Moray Laser and CNC accessories. The website has software and documentation downloads as well as information about the full line of Next Wave CNC products.

Next Wave CNC Technical Support

For questions about your Shark SD100 (Barracuda) or Ready2Contorl-Basics software or other Next Wave CNC products, please contact our support team at support@nextwaveautomation.com

NWA Owners Only Forum

https://forums.nextwaveautomation.com/

An online group of the CNC users geared around Next Wave CNC machine owners. The website has projects, ideas, showcase, and valuable support from users of all levels.

CNC Shark Talk User Forum

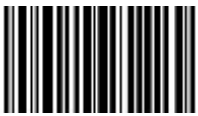
www.cncsharktalk.com

CNC forum open to all CNC users.

Vectric

www.vectric.com

Producers of the VCarve and Aspire software package. The Vectric website has product information, FAQs, on-line tutorials, and an excellent user forum. Keep in mind that Vectric only supports Vectric software. They are a separate company. They do not provide technical support for Next Wave products.



Shark SD100 (Barracuda)
Owner's Manual
04/2020