

# How to update to Firmware Version 6.0 on your Shark Pendant and Controller

Using the Ready2Update-Firmware application



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FAQ's <b>PLEASE READ</b>	3-13
Updating with internet in your shop	14-65
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# What machines use this update?

This update applies to all Pendant compatible machines



**SD100**  
(Barracuda)



**HD520**  
(HD5 Extended)  
(HD4 Extended)



**SD110**  
(Piranha FX)



**SD120**  
(Piranha XL)



**HD 400**  
(Shark II)



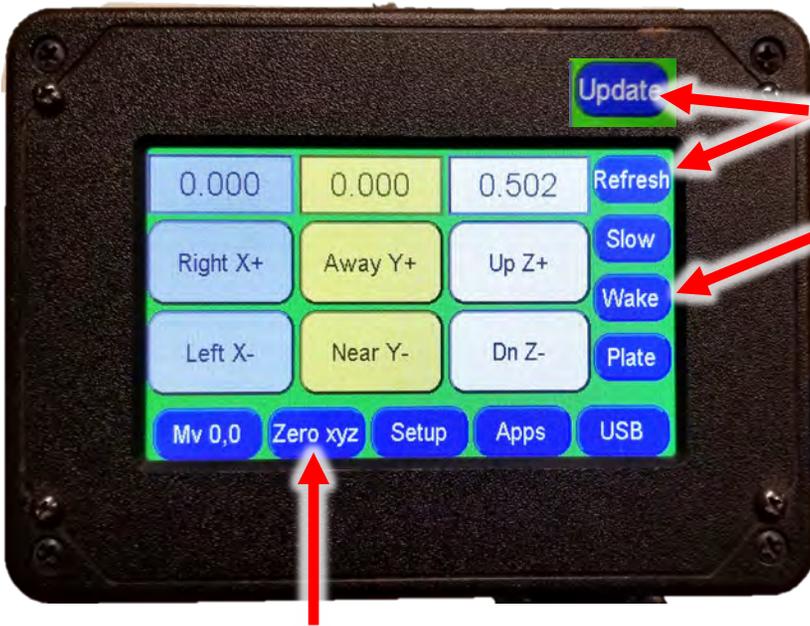
**HD510**  
(HD5)  
(HD4)

# What's new?

## New buttons on the Pendant's main screen

Previous Versions

**NEW** - Version 6.0

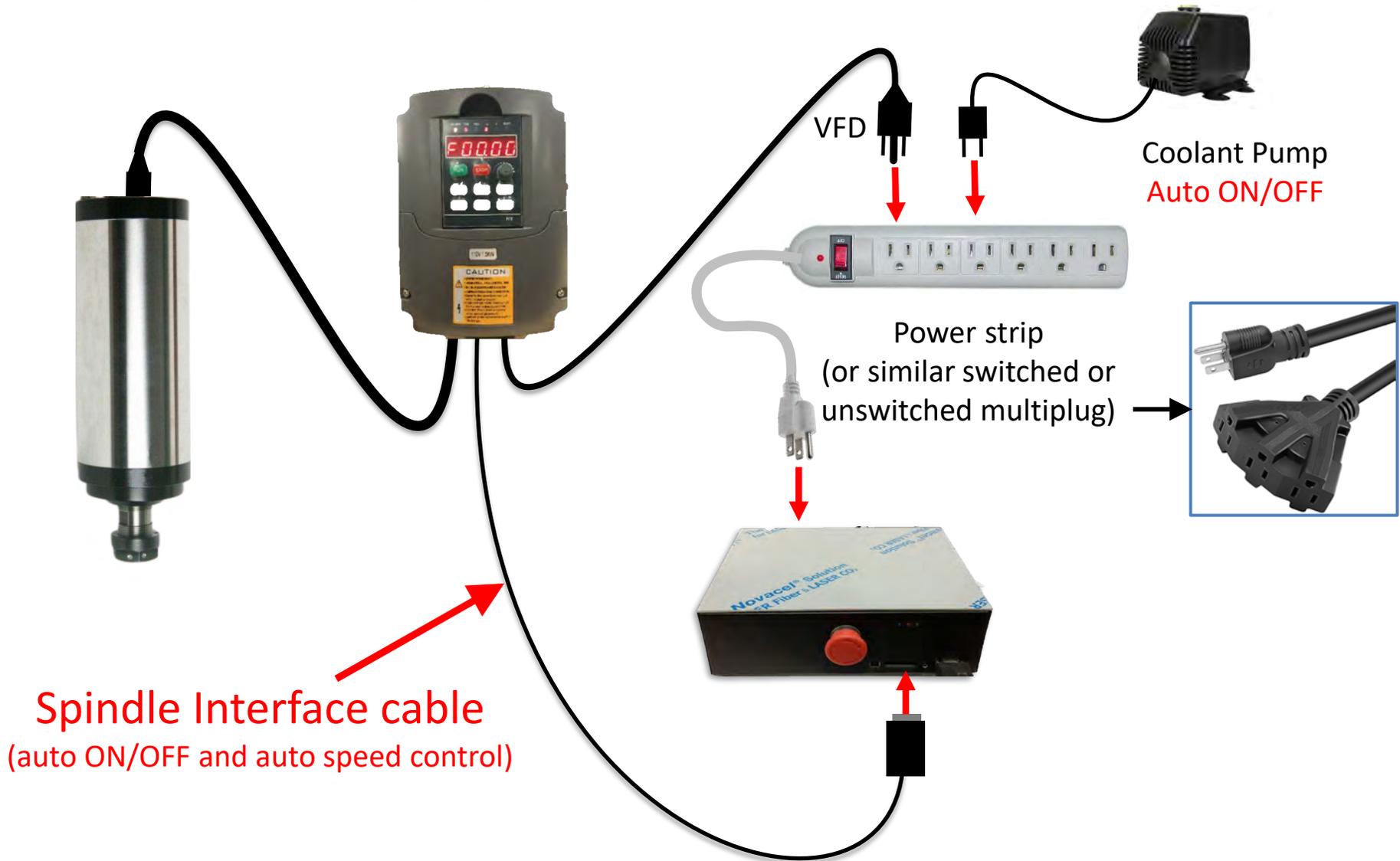


Visit [www.NextWaveCNC.com/webinars](http://www.NextWaveCNC.com/webinars)  
For the latest info on how to use the new Pendant features.

## What's new?

### If you have a Spindle with the interface cable:

The new firmware automatically controls both the spindle and coolant pump when connected as shown below.



# Do you need this new firmware?

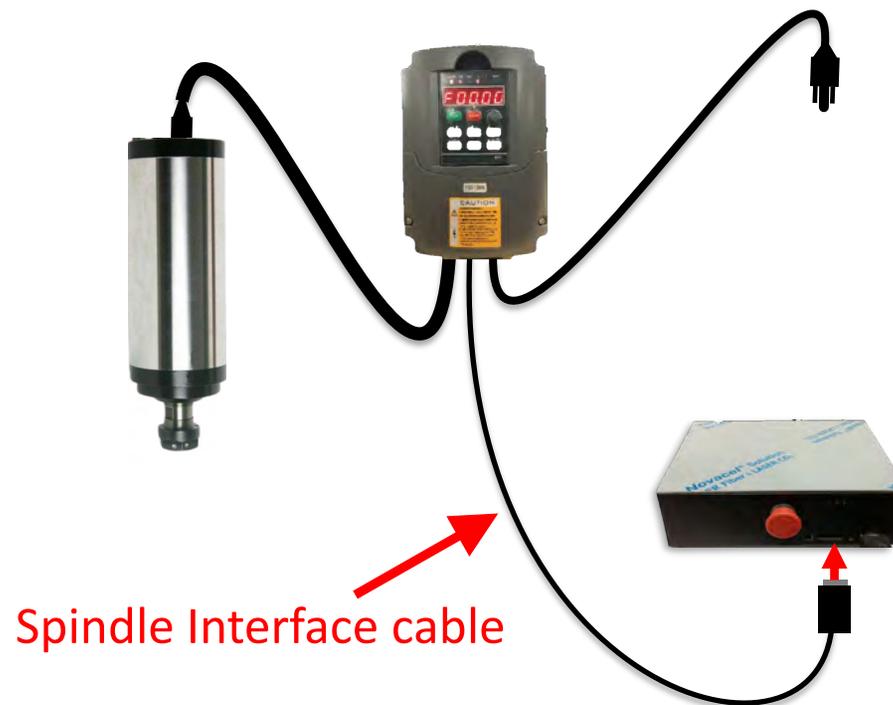
Yes

It has important functionality and reliability updates for all Pendant compatible Next Wave CNC machines.



# Do you need this new firmware?

It's Required  
if you have a Spindle with the Interface cable.



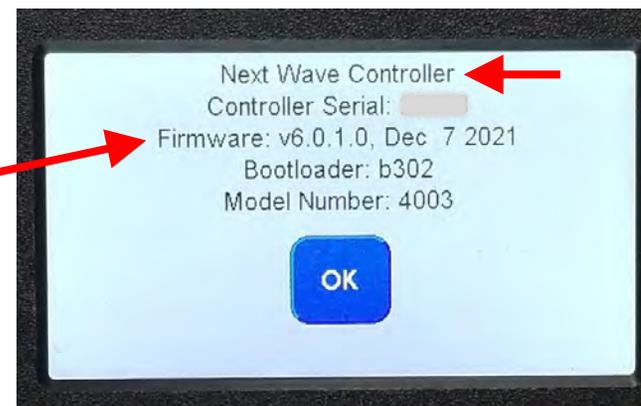
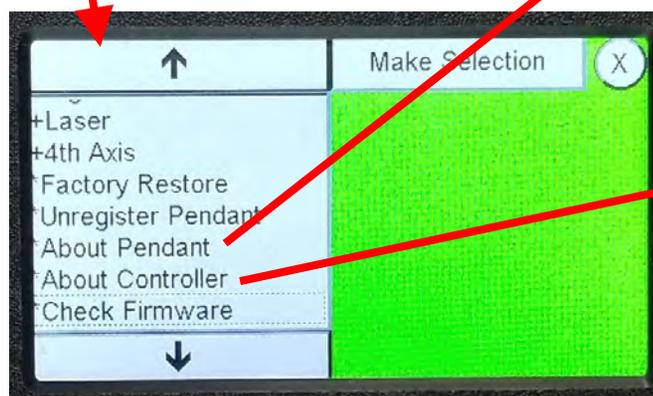
**Do you need this new firmware?**

**It's Required  
when using the Ready2Control software**



# How do I know what is on my Shark CNC?

Firmware information can be found under the “Apps” button on your Pendant



# What happens if you don't update to V6.0?

1. You won't have the latest Pendant functions
2. You won't be able to use the latest Ready2Control Software
3. A Spindle using the interface cable will lack the added control enhancements of V6.0
4. Your tool will still function with your current version - except for the above three items.

# Where do I get the new firmware?

From the Ready2Update-Firmware application.



Information on downloading and using Read2Update is covered in this guide.

# Do I need an internet connection to use the Ready2Update-Firmware application?

Yes – to use Ready2Update-Firmware application must have an internet connection.



# Do I need an internet connection “in my shop”?

## Yes and No



An internet connection is required to run the Ready2Update – Firmware application, and it's the easiest way to run firmware updates in your shop. See pages 14-65 for instructions on how to update your firmware WITH internet in your shop.



**HOWEVER**, if you don't have an internet connection in your shop, you can run the updates manually. See pages 66-115 for instructions on how to update your firmware WITHOUT internet in your shop.

# Step-by-step guide to installing firmware updates WITH internet in your shop



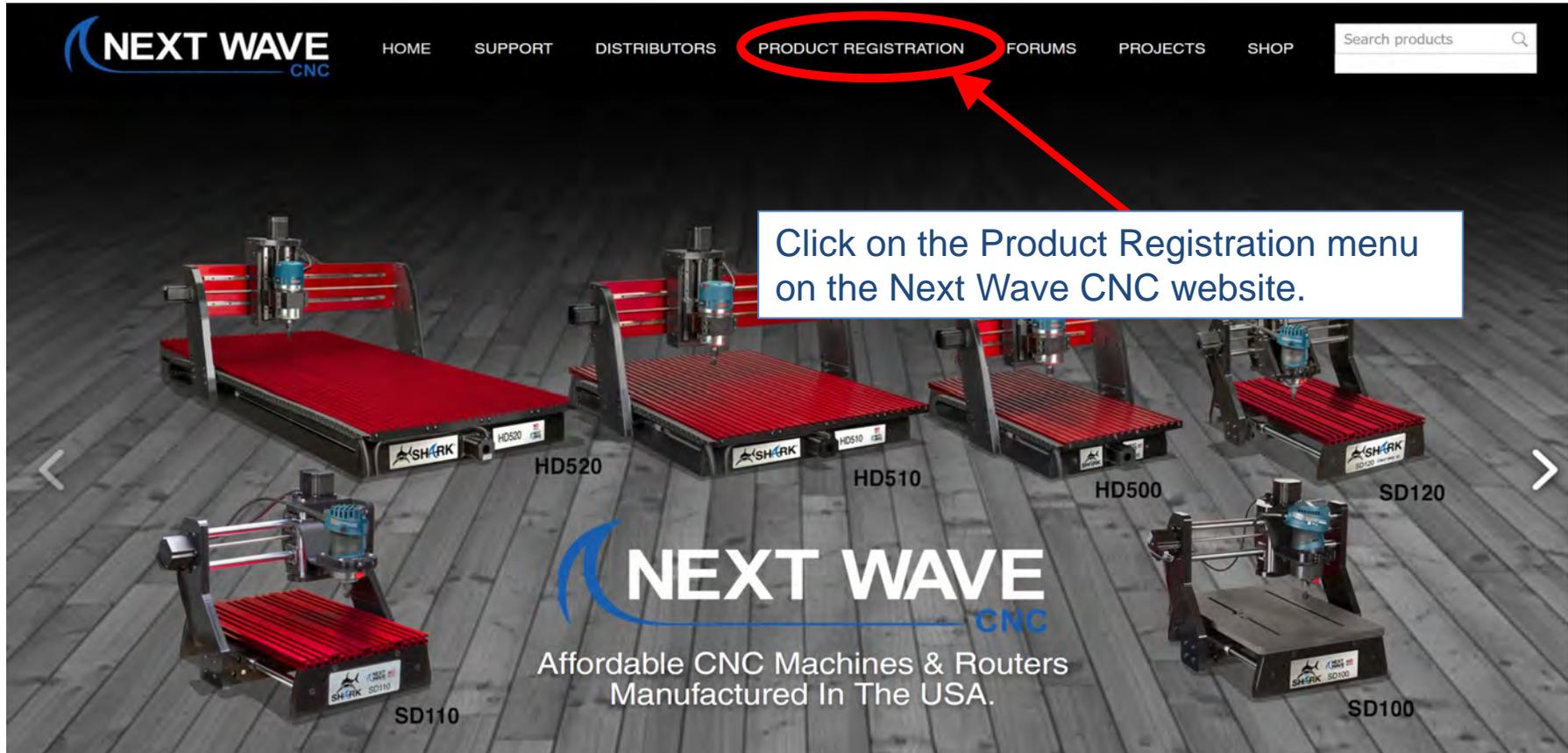
**If you already have the Ready2Update app  
installed on your computer:  
Open it and skip to page 29.**



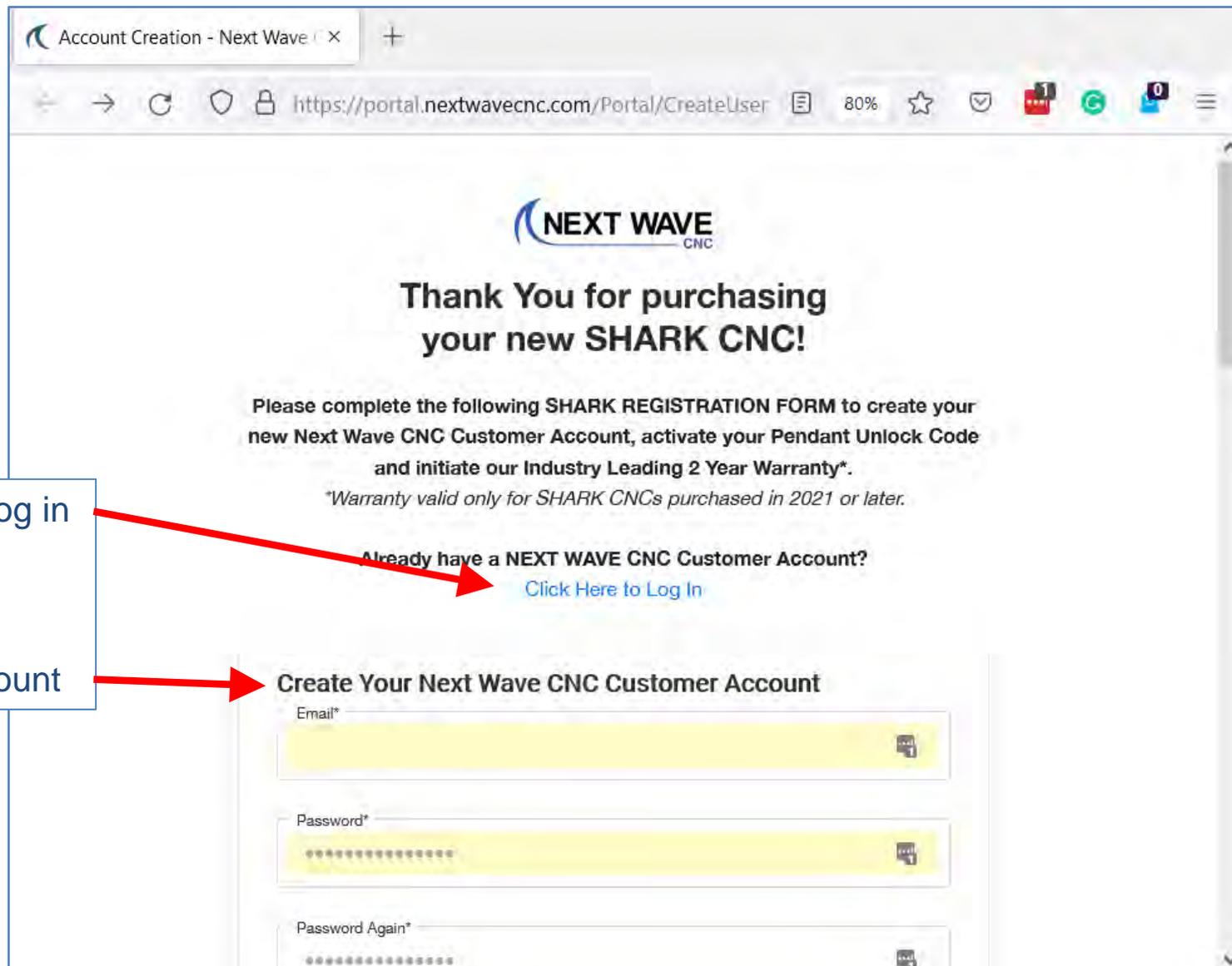
**If you are new to Ready2Update:  
Continue to the next page.**

# Download and install the Ready2Update – Firmware application

www.NextWaveCNC.com



# Installing Ready2Update – Firmware



Click Here to Log in

OR

Create an Account

# Installing Ready2Update – Firmware

Enter your email and password.

The screenshot shows a web browser window with the URL <https://portal.nextwavecnc.com/Portal/Login>. The page features the Next Wave CNC logo at the top, followed by the heading "Login to your Next Wave CNC Customer Account". Below the heading are two input fields: "Email\*" and "Password\*", both highlighted in yellow. A red box on the left contains the text "Enter your email and password." with two red arrows pointing to the input fields. Below the input fields are links for "Forget Password?" and "Don't have an account?". A blue "LOGIN" button is positioned to the right of the input fields, with a red arrow pointing to it from a box labeled "Login". At the bottom of the page, there is a copyright notice: "© 2021 - Next Wave CNC. All rights reserved."

# Installing Ready2Update – Firmware

Your registered machine(s) should appear in the list.

If your machine is not in this list, you should ADD it before proceeding with the firmware update.

The screenshot displays the Next Wave CNC web interface. At the top left is the 'NEXT WAVE CNC' logo. The main content is divided into three sections:

- Your Software:** Contains three items:
  - Ready2Control:** Includes a 'CLICK TO ACTIVATE' button.
  - Ready2Update - Firmware:** License Type: Free. Includes a 'Download' link and 'Seats Used: 0 of 99'.
  - Ready2Control - Basic:** License Type: Free. Includes a 'Download' link and 'Seats Used: 0 of 99'.
- Your Hardware:** Contains one item:
  - Shark HD 510:** Includes an image of the machine, 'Unlock Code: 29792', 'Firmware version: 6.0.1.0', and a link to the 'Shark HD 500 Series Manual'. An 'Add +' button is visible to the right.
- Free Software:** Contains four items:
  - Ready2Raaster:** Description: 'Easily convert images into files that can be used with a laser. Compatible with 2-Watt and 7-Watt laser attachments, as well as the Ready2Laser'. Includes a 'Download' link.
  - Ready2Update - Firmware:** Description: 'Keep all of your machines running on the latest firmware. Compatible with Piranha, Shark HD, and Ready2Laser machines'. Includes a 'Download' link.
  - Ready2Control - Basic:** Description: 'Control your machine with advanced G-Code previewing'. Includes a 'Download' link.
  - Two links: [Video](#) (How to update Firmware.) and [PDF Instructions](#) (How to update Firmware.)

# Installing Ready2Update – Firmware

The screenshot displays the Next Wave CNC web interface. At the top left is the 'NEXT WAVE CNC' logo. The main content is divided into three sections:

- Your Software:** Contains three items:
  - Ready2Control:** A grey button with a 'CLICK TO ACTIVATE' link.
  - Ready2Update - Firmware:** Includes a 'Download' link and 'Seats Used: 0 of 99'.
  - Ready2Control - Basic:** Includes a 'Download' link and 'Seats Used: 0 of 99'.
- Your Hardware:** Contains one item:
  - Shark HD 510:** Shows 'Unlock Code: 29792', 'Firmware version: 6.0.1.0', and a link to the 'Shark HD 500 Series Manual'.
- Free Software:** Contains three items:
  - Ready2Raster:** Description: 'Easily convert images into files that can be used with a laser. Compatible with 2-Watt and 7-Watt laser attachments, as well as the Ready2Laser'. Includes a 'Download' link.
  - Ready2Update - Firmware:** Description: 'Keep all of your machines running on the latest firmware. Compatible with Piranha, Shark HD, and Ready2Laser machines'. Includes a 'Download' link. A red arrow points from a callout box to this link.
  - Ready2Control - Basic:** Description: 'Control your machine with advanced G-Code previewing'. Includes a 'Download' link.

Below the 'Free Software' section, there are two links: 'Video How to update Firmware.' and 'PDF Instructions How to update Firmware.'

Download Ready2Update – Firmware application

## Installing Ready2Update – Firmware

**NEXT WAVE CNC**

**Your Software** Add +

- Ready2Control [CLICK TO ACTIVATE](#)
- Ready2Update - Firmware**  
License Type: Free

**Your Hardware** Add +

- Shark HD 510  
Unlock Code: 29792  
Firmware version: 6.0.1.0  
[Shark HD 500 Series Manual](#)

You have chosen to open:

- Ready2Update - Firmware.exe**  
which is: exe File (5.8 MB)  
from: <https://portal.nextwaveautomation.com>

Would you like to save this file?

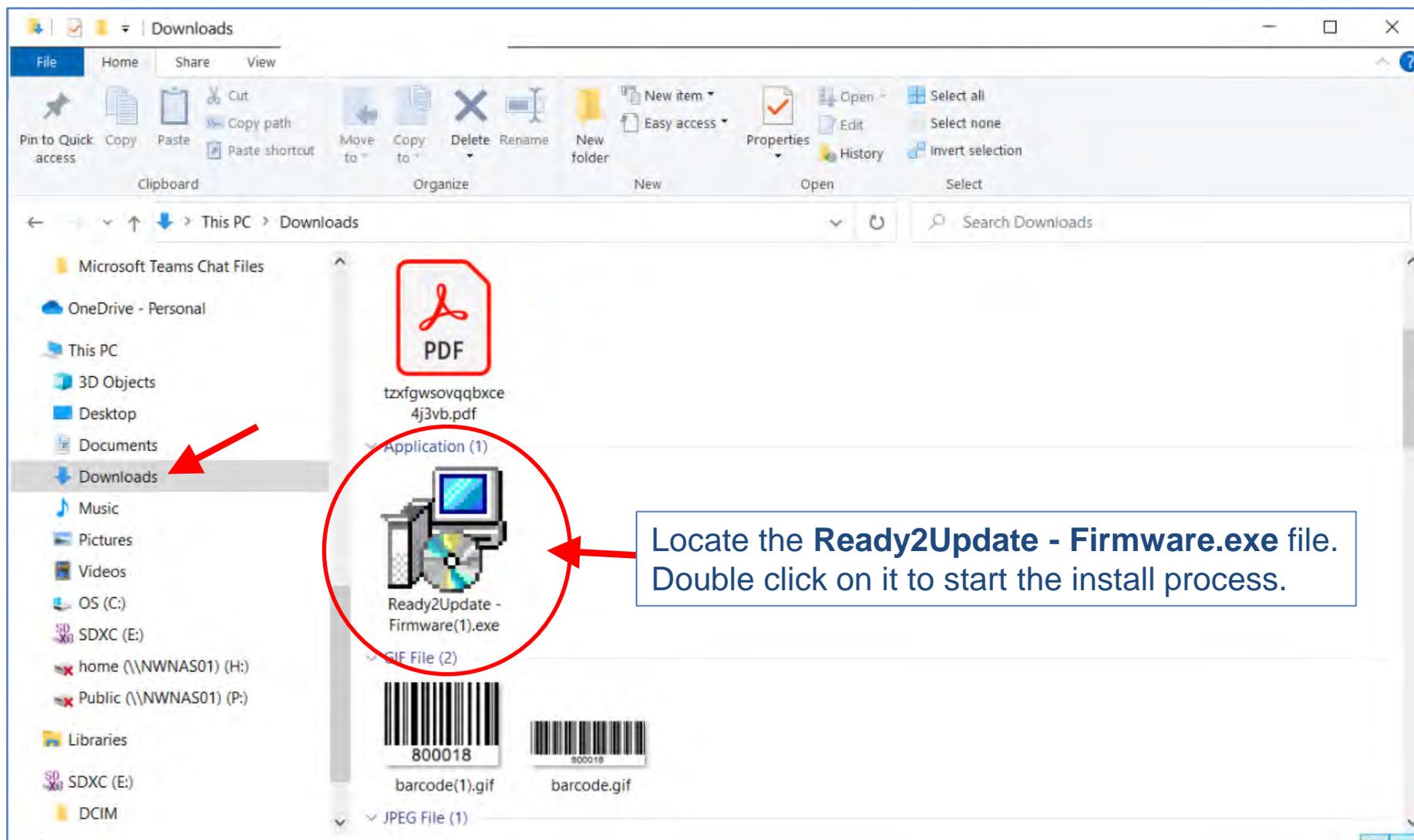
[Save File](#) [Cancel](#)

**Free Software**

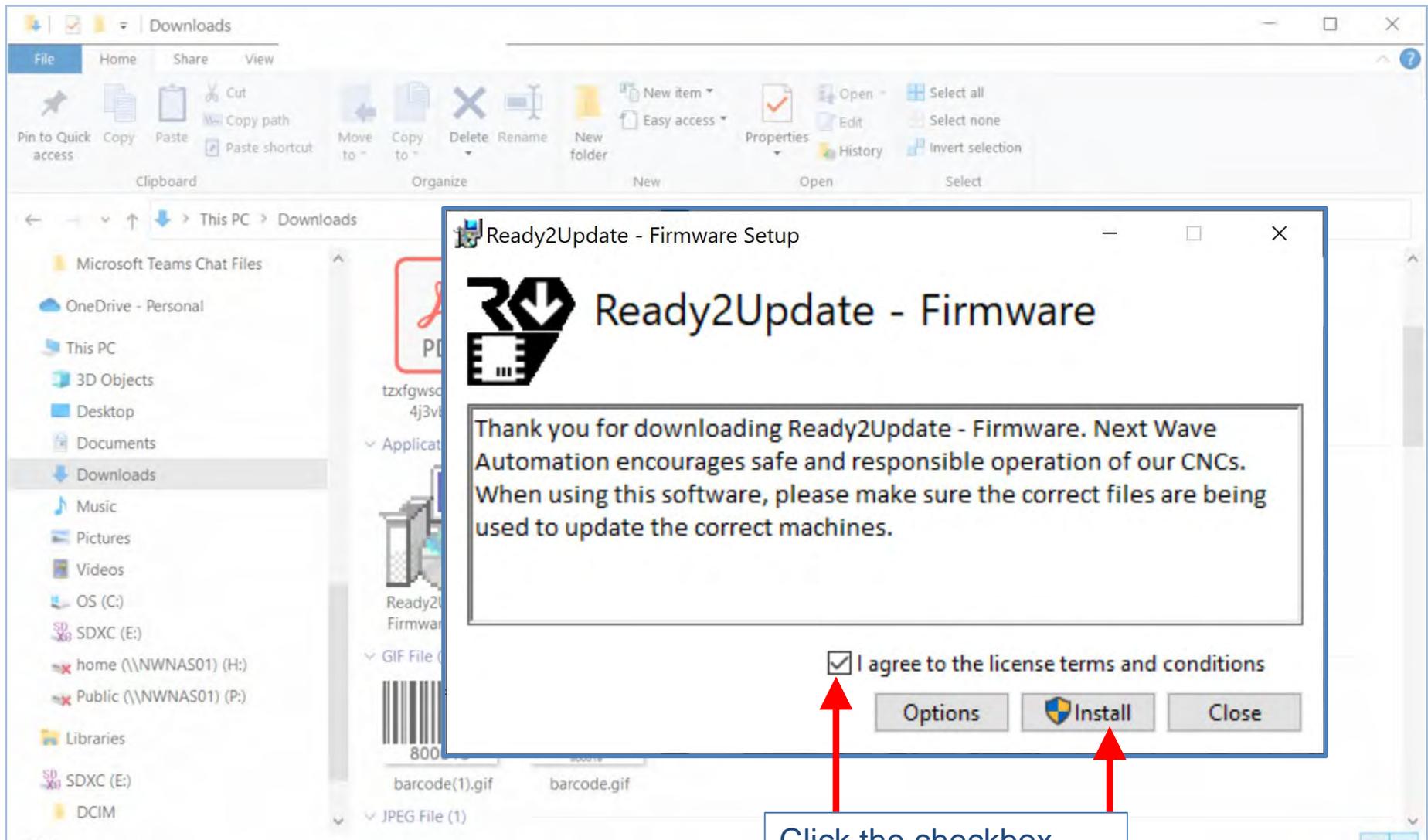
- Ready2Update - Firmware**  
Keep all of your machines running on the latest firmware. Compatible with Piranha, Shark HD, and Ready2Laser machines  
[Download](#)
- Ready2Control - Basic**  
Control your machine with advanced G-Code previewing  
[Download](#)

Save Ready2Update –  
Firmware to your computer.

## Installing Ready2Update – Firmware



## Installing Ready2Update – Firmware



Click the checkbox and the Install button.

## Installing Ready2Update – Firmware

You may encounter these security windows or something similar.



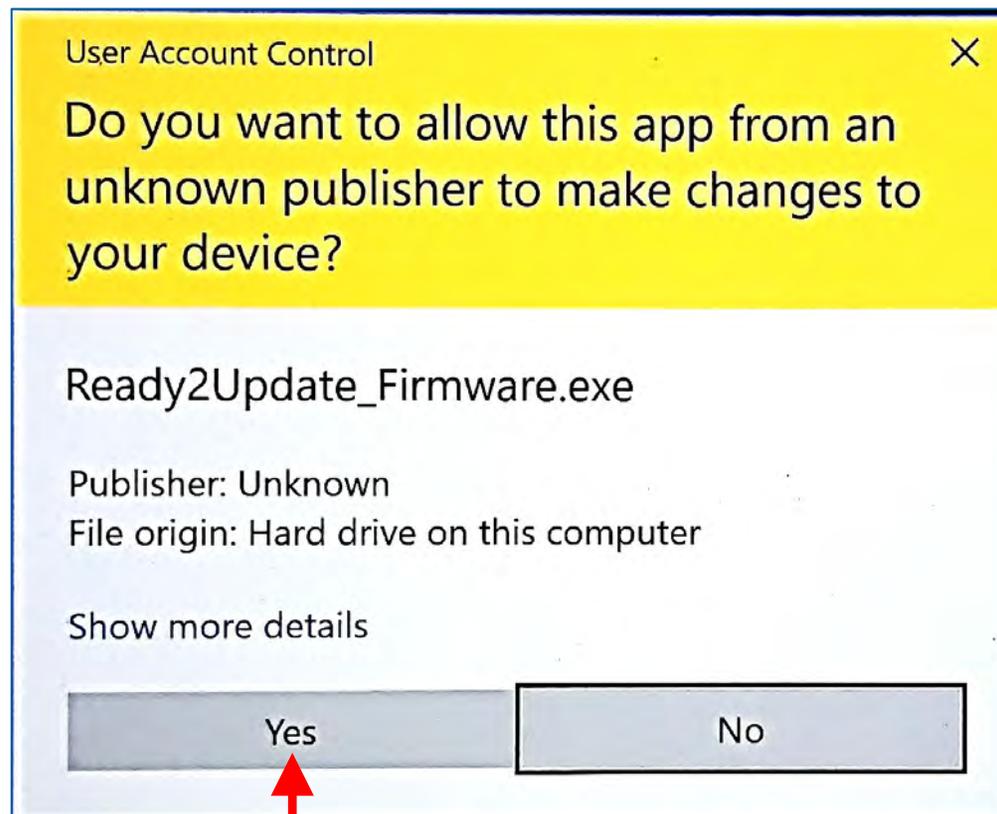
1. Click "More info"



2. Click "Run anyway"

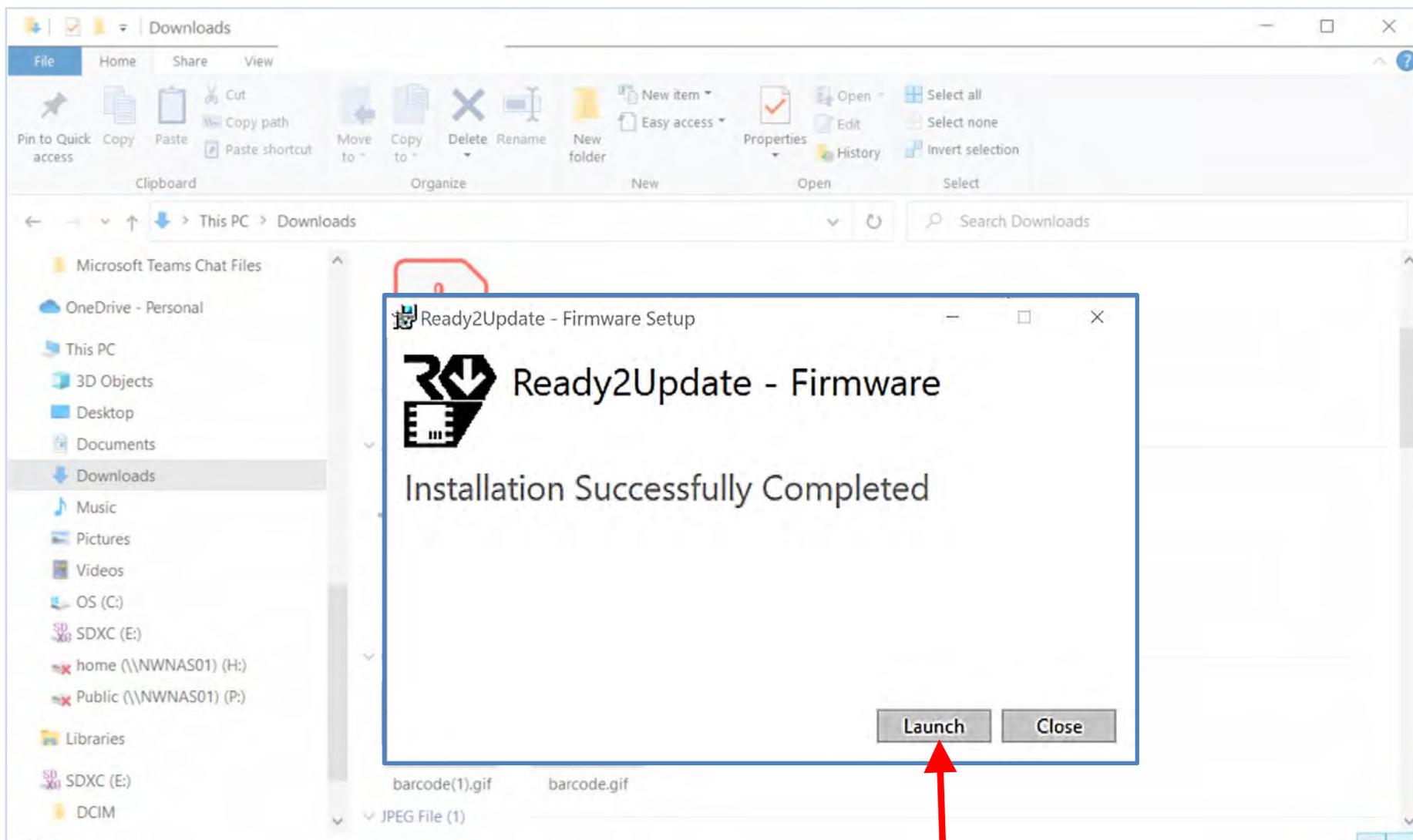
## Installing Ready2Update – Firmware

You may also encounter this security window or something similar.



Click "Yes"

## Installing Ready2Update – Firmware



Launch Ready2Update – Firmware.

## Installing Ready2Update – Firmware

Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines

No Machines Connected

Can't find machine

REFRESH

-- OR --

Next Wave CNC Customer Account Login

Email

Password

Keep me signed in

Login

Login to your  
Customer Account

## Installing Ready2Update – Firmware

Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines ?

No Machines Connected

Can't find machine ? REFRESH

-- OR --

My Machines ?

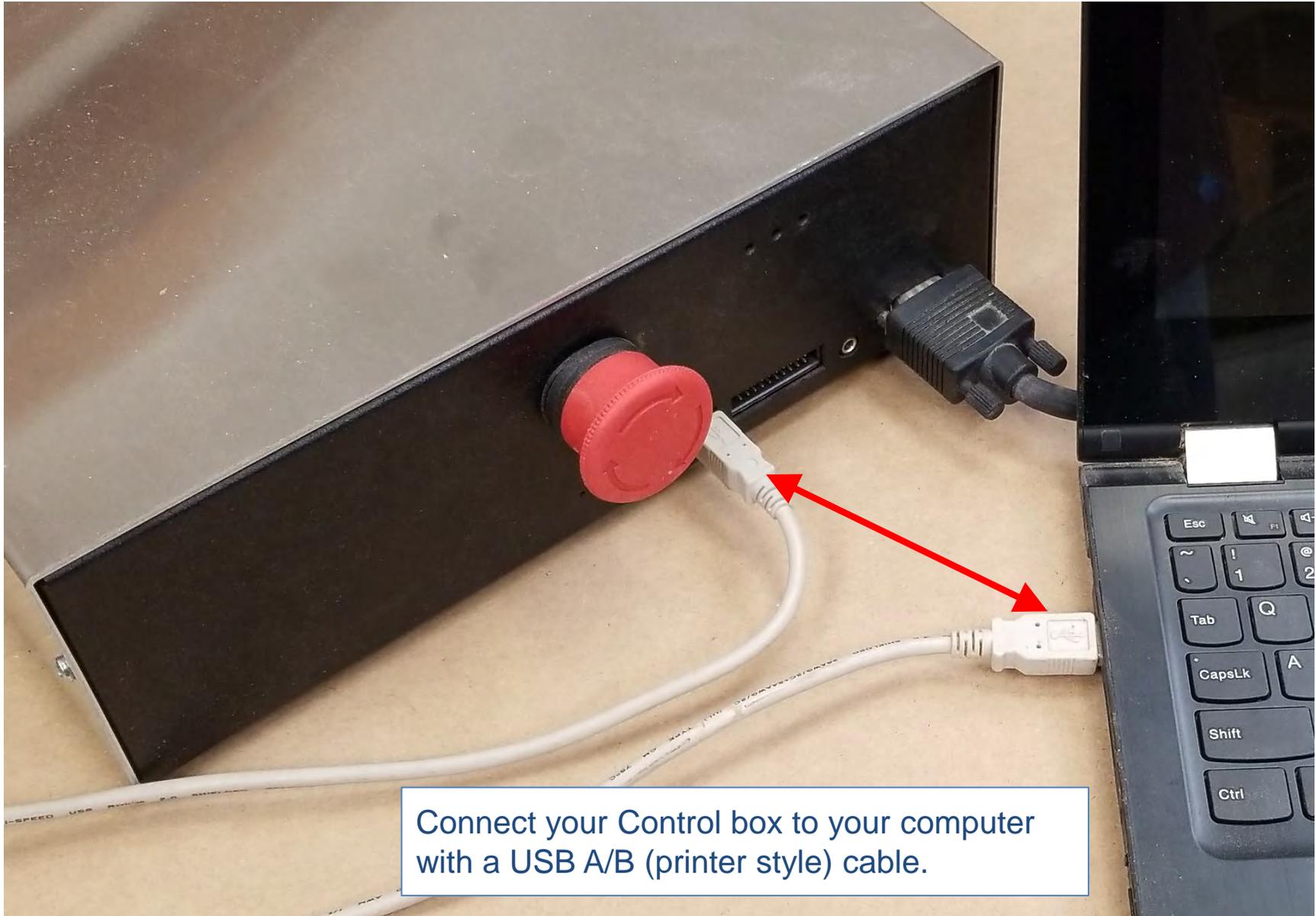
Shark HD 510

Download Controller - 6.0.1.0  
Already Up to Date [or download\\_exe](#)

Download Pendant - 6.0.0.0  
Already Up to Date

Your registered machines are listed under "My Machines"

## Connect your computer to the Control box



## Verify your “Connected” machine.

Your machine should now show in “Connected Machines”

If it doesn't show, check your connection and click “Refresh”

The screenshot displays the 'Ready2Update - Firmware' application window. At the top, there is a warning icon and text: 'Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates'. Below this, the 'Connected Machines' section shows a machine named 'Shark HD 510'. Underneath the machine name, there are two update items: 'Program Controller - 6.0.1.0' and 'Download Pendant - 6.0.0.0', both marked with a 'NEW' tag. A 'REFRESH' button is located at the bottom right of this section. Below the 'Connected Machines' section, there is a '- OR -' separator and the 'My Machines' section. This section also shows the 'Shark HD 510' machine, but the update items are now greyed out and labeled 'Already Up to Date'. A red arrow points from the 'REFRESH' button in the 'Connected Machines' section to the 'My Machines' section.

## Check for "NEW" Firmware

The Firmware buttons appear yellow when an update is available.

The screenshot displays the 'Ready2Update - Firmware' application window. At the top, there is a blue header with the title and a user profile icon. Below the header, a warning message with a yellow triangle icon states: 'Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates'. The main content area is divided into two sections: 'Connected Machines' and 'My Machines'. In the 'Connected Machines' section, a machine named 'Shark HD 510' is listed. Below it, two update buttons are shown: 'Program Controller - 6.0.1.0' and 'Download Pendant - 6.0.0.0'. Both buttons have a yellow background and a 'NEW' label, indicating that updates are available. A 'REFRESH' button is located at the bottom right of this section. The 'My Machines' section shows the same machine, but the update buttons are greyed out and labeled 'Already Up to Date', indicating that no updates are available for these machines.

# Controller Update Process



## Controller Update Process

**Unplug your router or VFD from its power source.**



Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines

Shark HD 510

NEW Program Controller - 6.0.1.0  
[or download\\_exe](#)

NEW Download Pendant - 6.0.0.0

Can't find machine [?](#) [REFRESH](#)

- OR -

My Machines

Shark HD 510

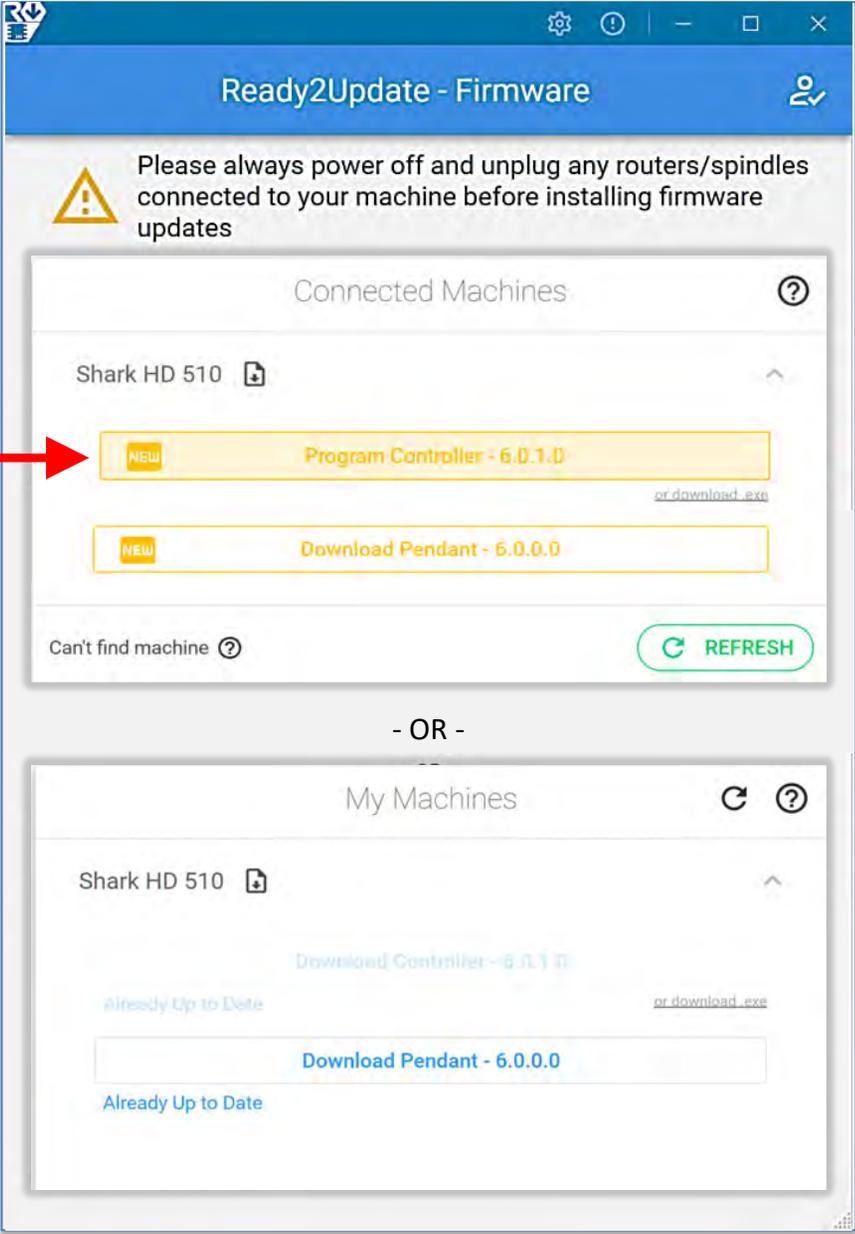
Downloaded Controller - 6.0.1.0  
Already Up to Date [or download\\_exe](#)

Download Pendant - 6.0.0.0

Already Up to Date

# Controller Update Process

Click on "Program Controller" button to start update process

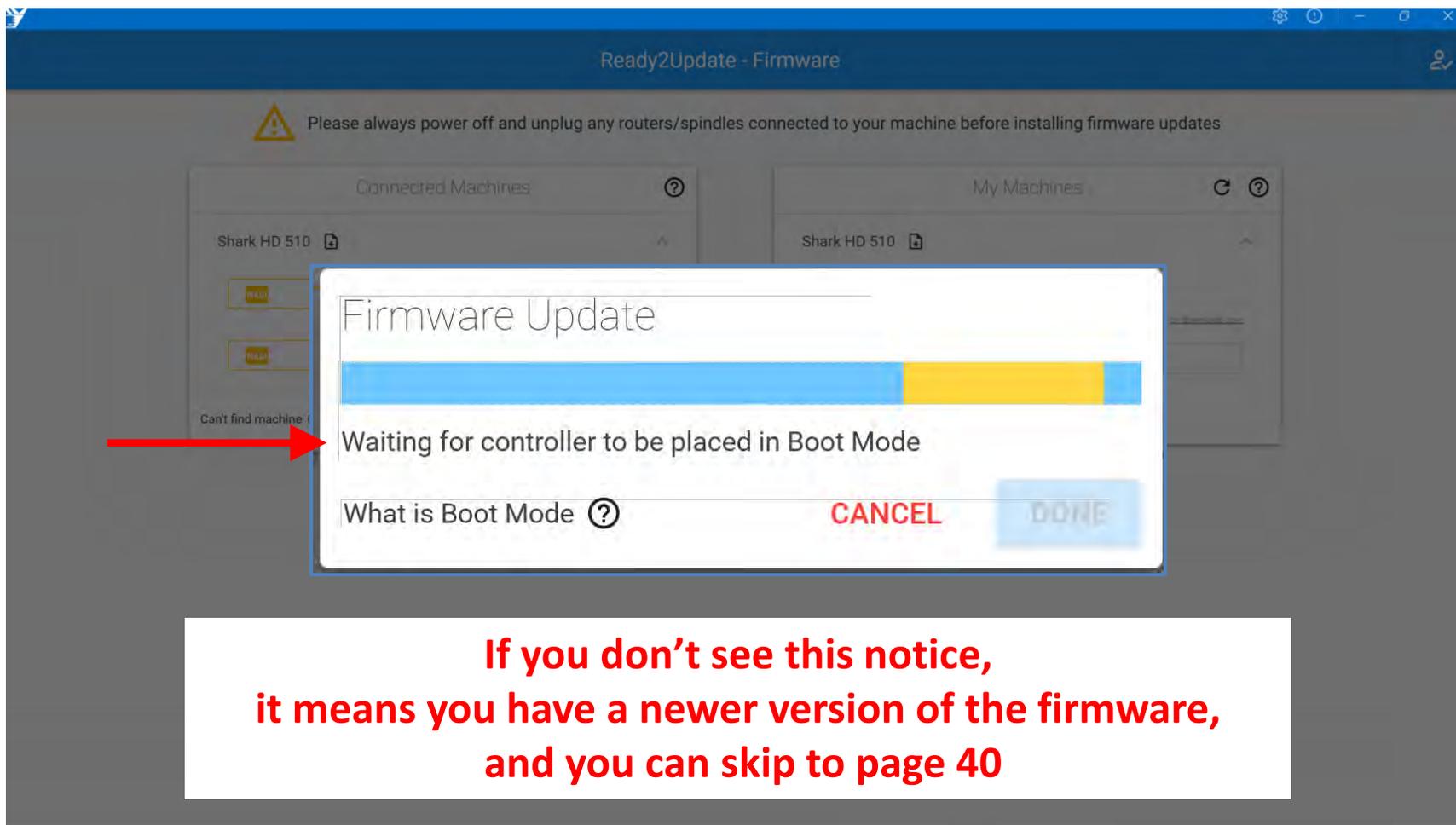


## Controller Update Process

If you see a moving yellow bar, it means you need to take the action listed below.

The screenshot displays the Next Wave CNC software interface. At the top, a warning message reads: "Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates". Below this, there are two panels: "Connected Machines" and "My Machines", both showing a "Shark HD 510" machine. A "Firmware Update" dialog box is open in the foreground. The dialog box has a title bar "Firmware Update" and a progress bar. The progress bar is mostly blue, with a yellow segment on the right. A red arrow points from the text box above to this yellow segment. Below the progress bar, the text reads "Waiting for controller to be placed in Boot Mode". A red arrow points from the left side of the dialog box to this text. At the bottom of the dialog box, there is a link "What is Boot Mode" with a question mark icon, and two buttons: "CANCEL" (in red) and "DONE" (in blue).

## Controller Update Process



Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines

Shark HD 510

My Machines

Shark HD 510

Can't find machine

**Firmware Update**

Waiting for controller to be placed in Boot Mode

What is Boot Mode ?

CANCEL DONE

**If you don't see this notice,  
it means you have a newer version of the firmware,  
and you can skip to page 40**

## Controller Update Process

Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines

Shark HD 510

My Machines

Shark HD 510

Firmware Update

Waiting for controller to be placed

What is Boot Mode ?

**Only enter Boot Mode when prompted to by the software**

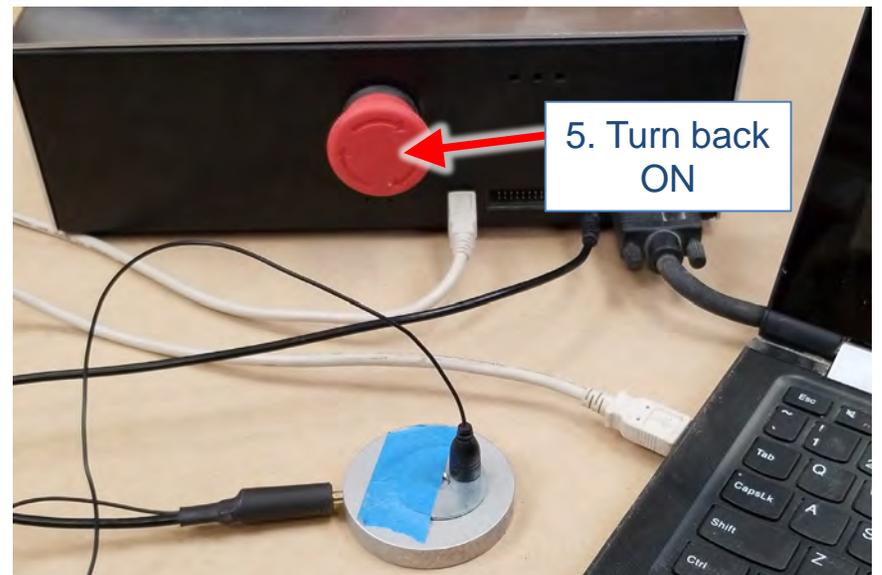
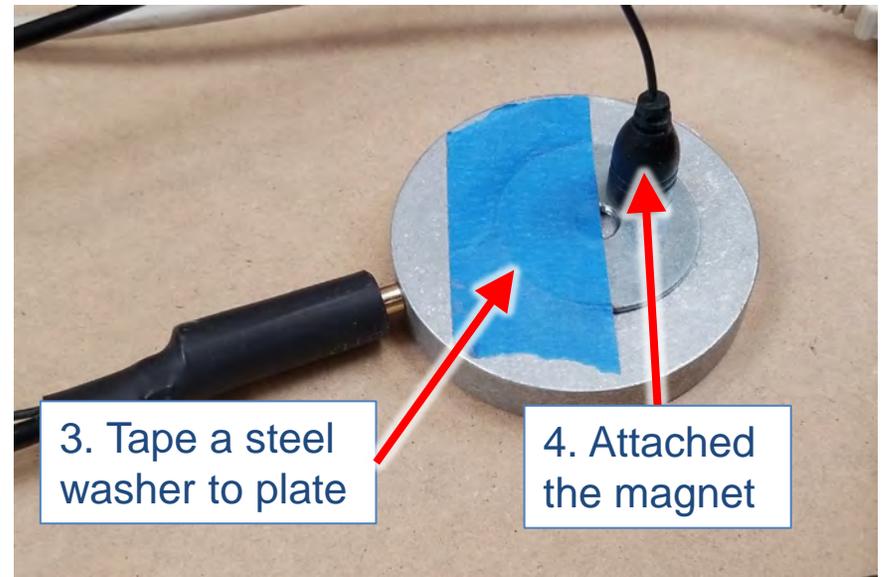
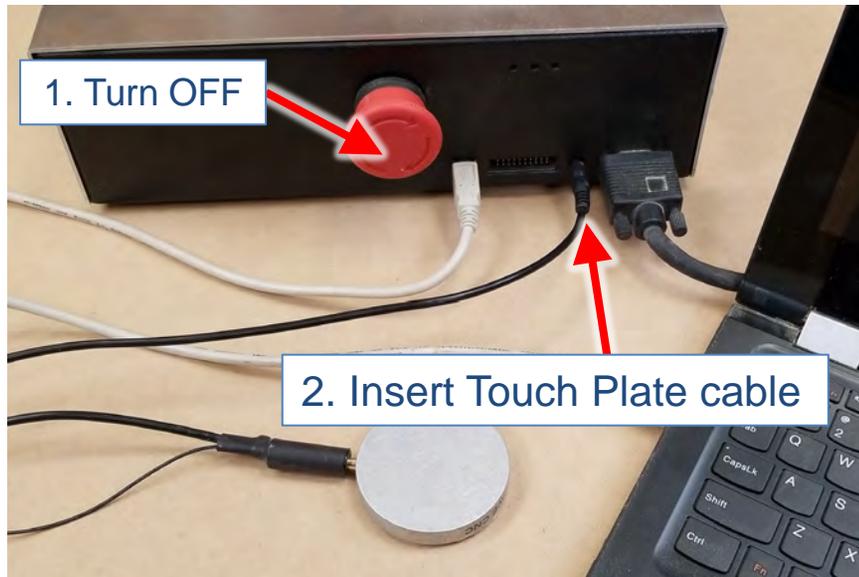
"Boot Mode" is the state in which a Next Wave Automation controller is ready to receive firmware updates. While in Boot Mode, the controller cannot be detected by this software and will not appear in the list above. Only put your controller in Boot Mode when this software prompts you to do so.

To enter Boot Mode, power off your controller while it is still connected to your computer via USB. The auxiliary port on the controller needs to have its circuit closed. This can be done by plugging in a touchplate accessory and holding the magnet to the aluminum touchplate. If no touchplate is owned, inserting a 1/8" bit into the port will also work. While the circuit is closed, turn on the controller. The controller is now in Boot Mode.

**Only put your controller in Boot Mode when this software prompts you to!**

## Controller Update Process

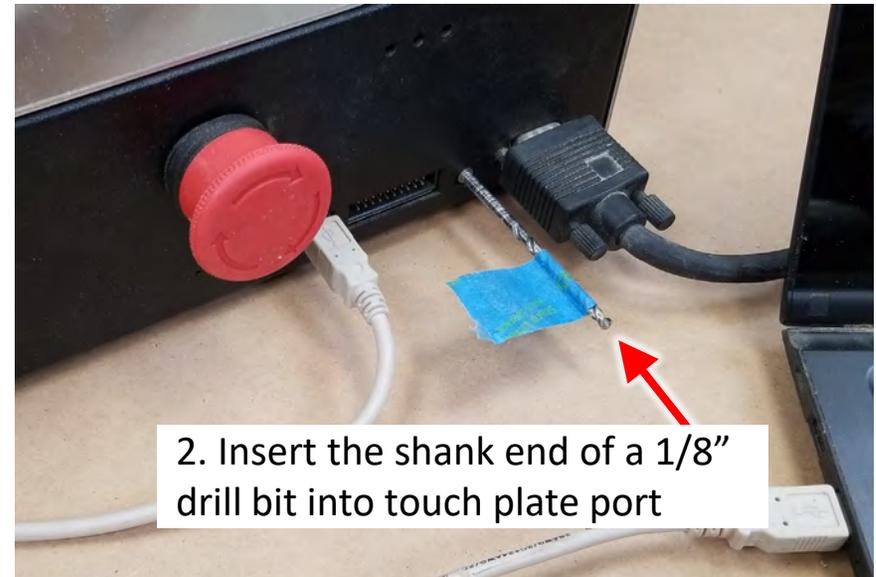
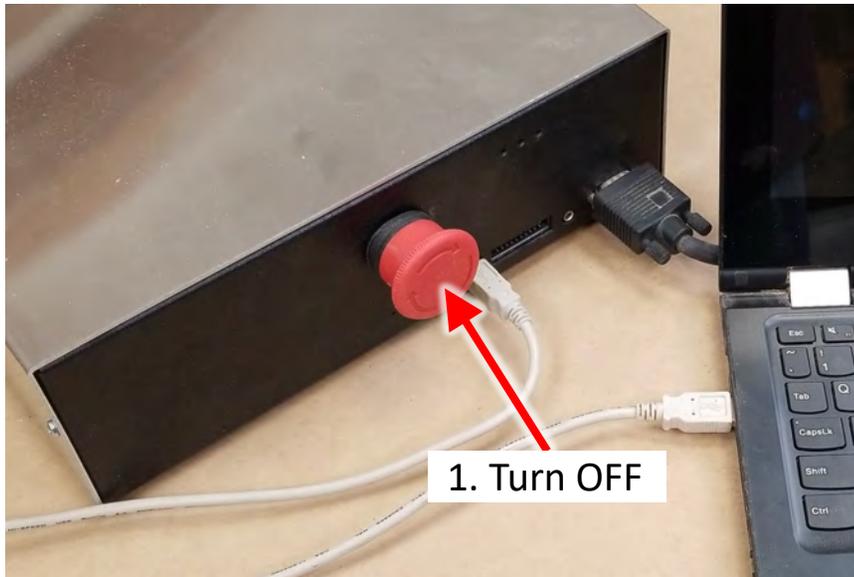
### TOUCH PLATE technique How to put controller into boot mode.



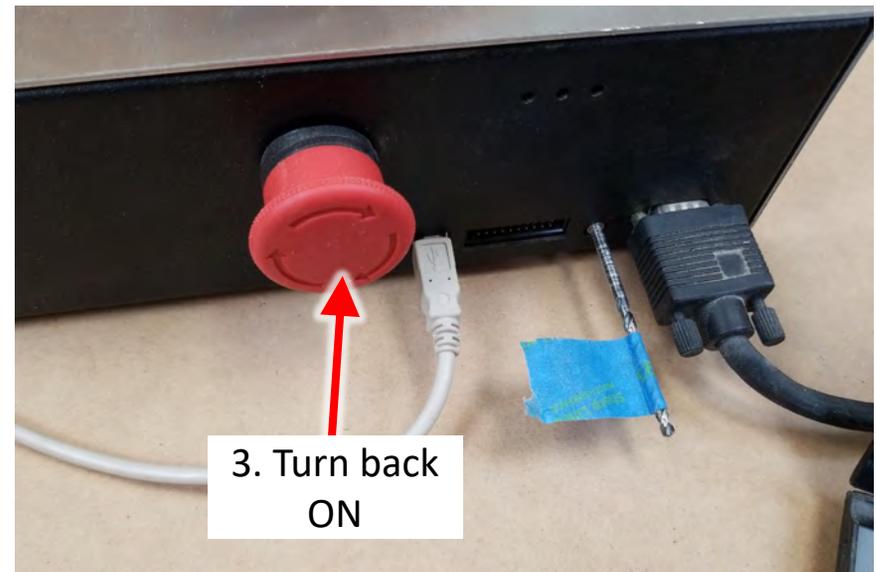
## Controller Update Process

### DRILL BIT technique

How to put controller into boot mode.



1/8" dia. drill bit.  
Tape added for  
easier handling.



## Controller Update Process

The moving yellow bar means you need to take the action listed below.

Firmware Update

Restart controller (not in boot-mode)

How do I restart the controller ?

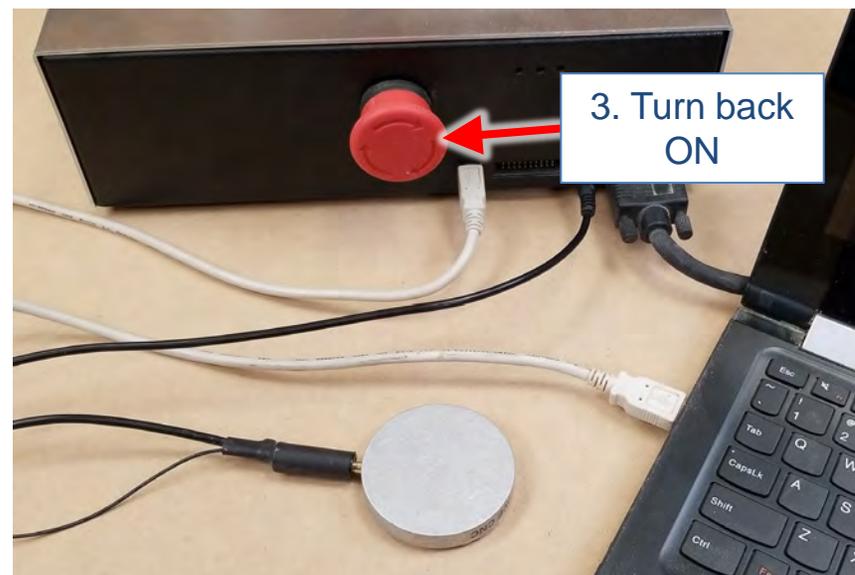
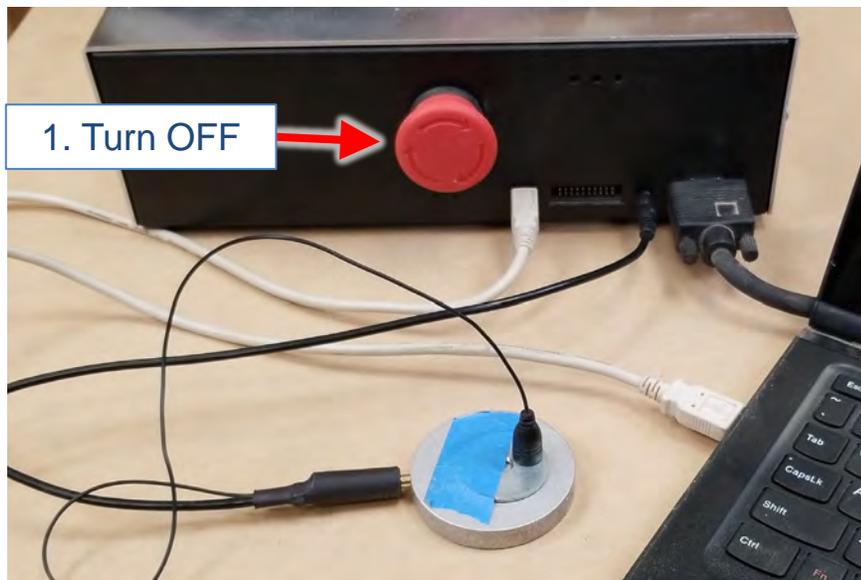
CANCEL DONE

The screenshot shows the Next Wave CNC software interface. A dialog box titled "Firmware Update" is displayed in the foreground. It features a progress bar with a yellow segment on the left and a blue segment on the right. Below the progress bar, the text "Restart controller (not in boot-mode)" is shown, with a red arrow pointing to it from the left. Below this text is a help link "How do I restart the controller ?" and two buttons: "CANCEL" and "DONE". A text box at the top of the dialog says "The moving yellow bar means you need to take the action listed below." with a red arrow pointing to the yellow part of the progress bar. The background shows a "Connected Machines" panel with "Shark HD 510" and a "My Machines" panel.

## Controller Update Process

### TOUCH PLATE technique

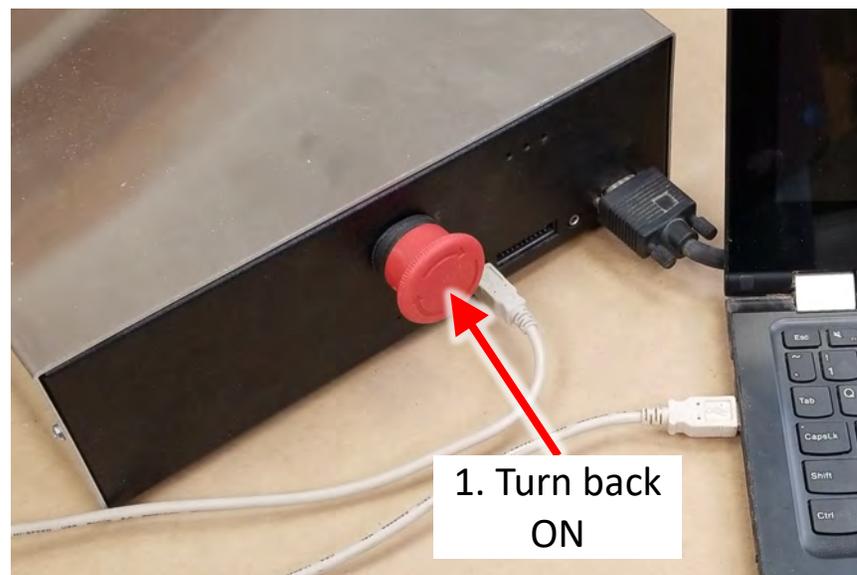
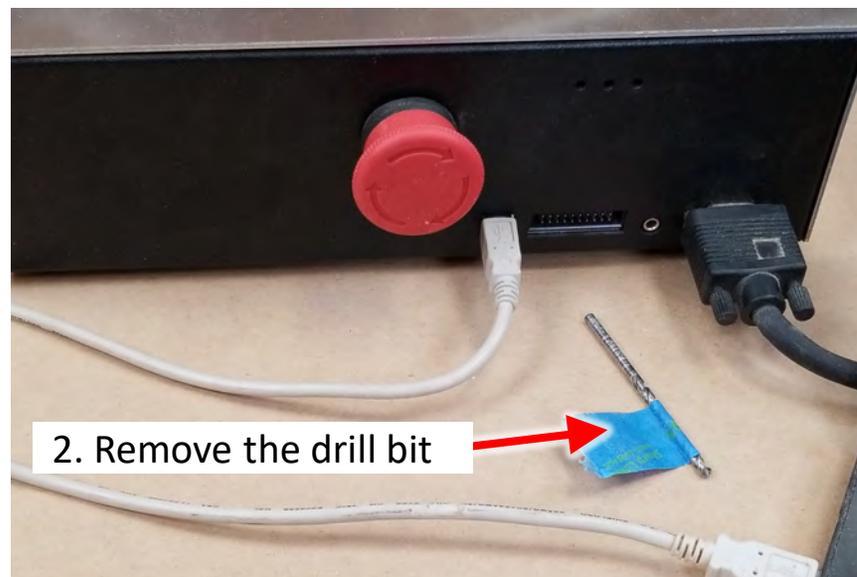
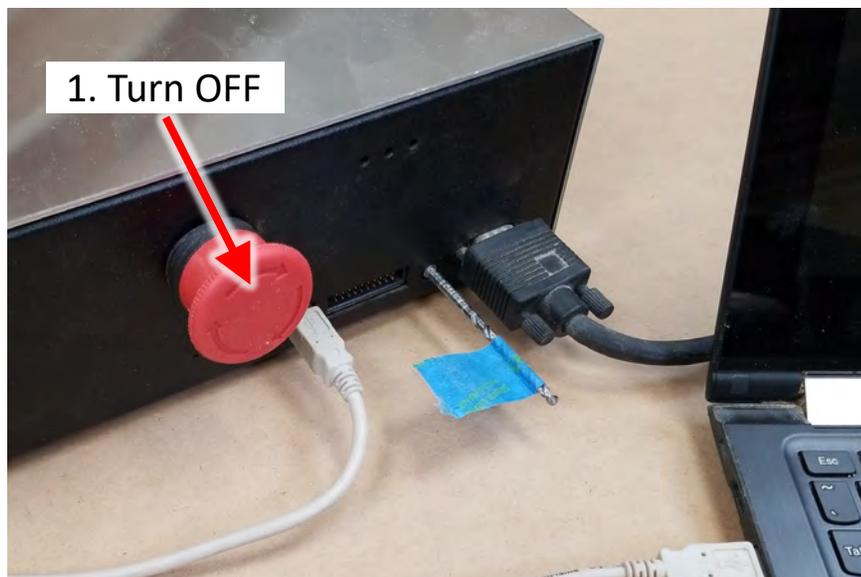
How to restart the controller – **NOT** in boot mode.



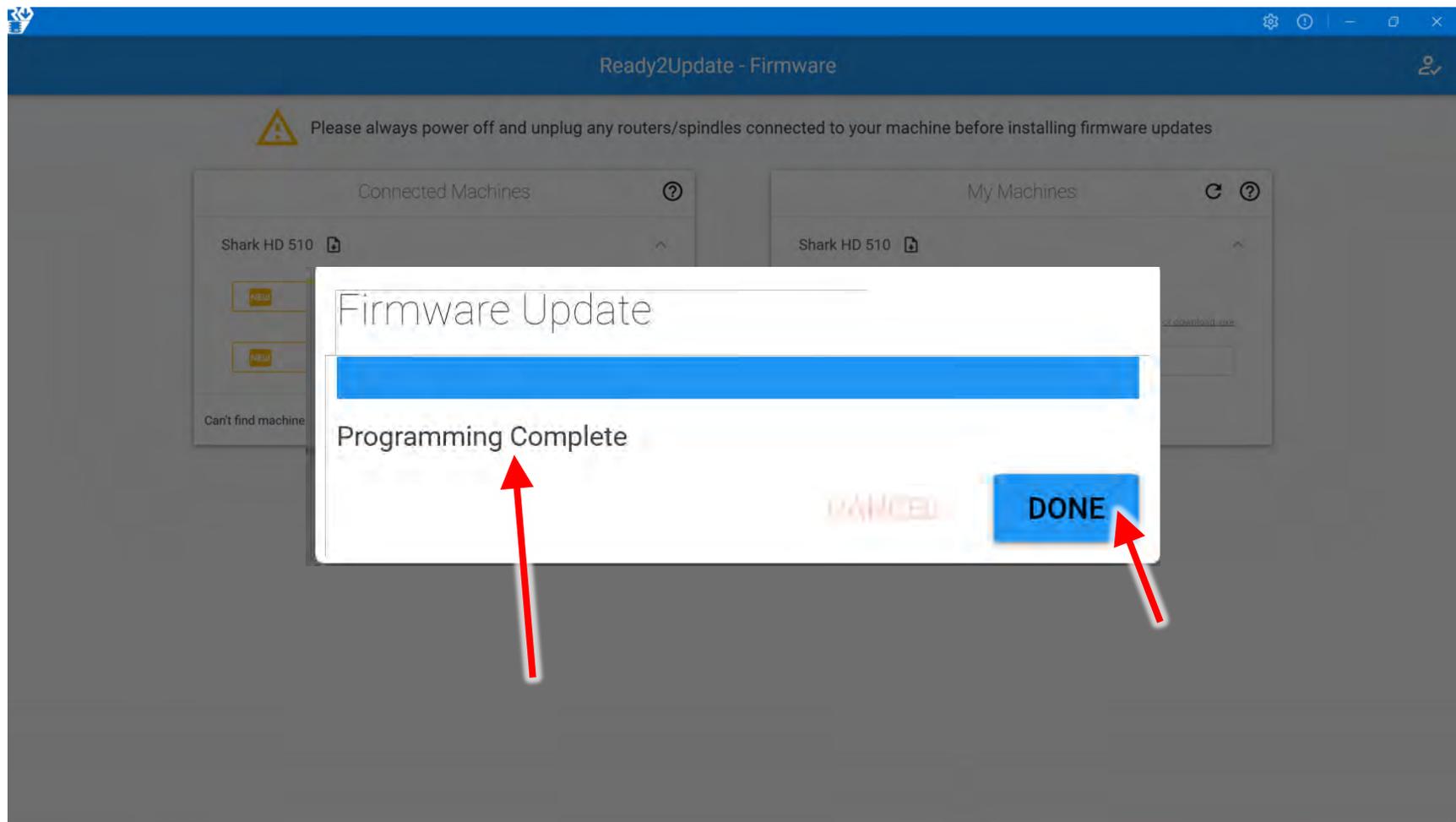
## Controller Update Process

### DRILL BIT technique

How to restart the controller – **NOT in boot mode.**

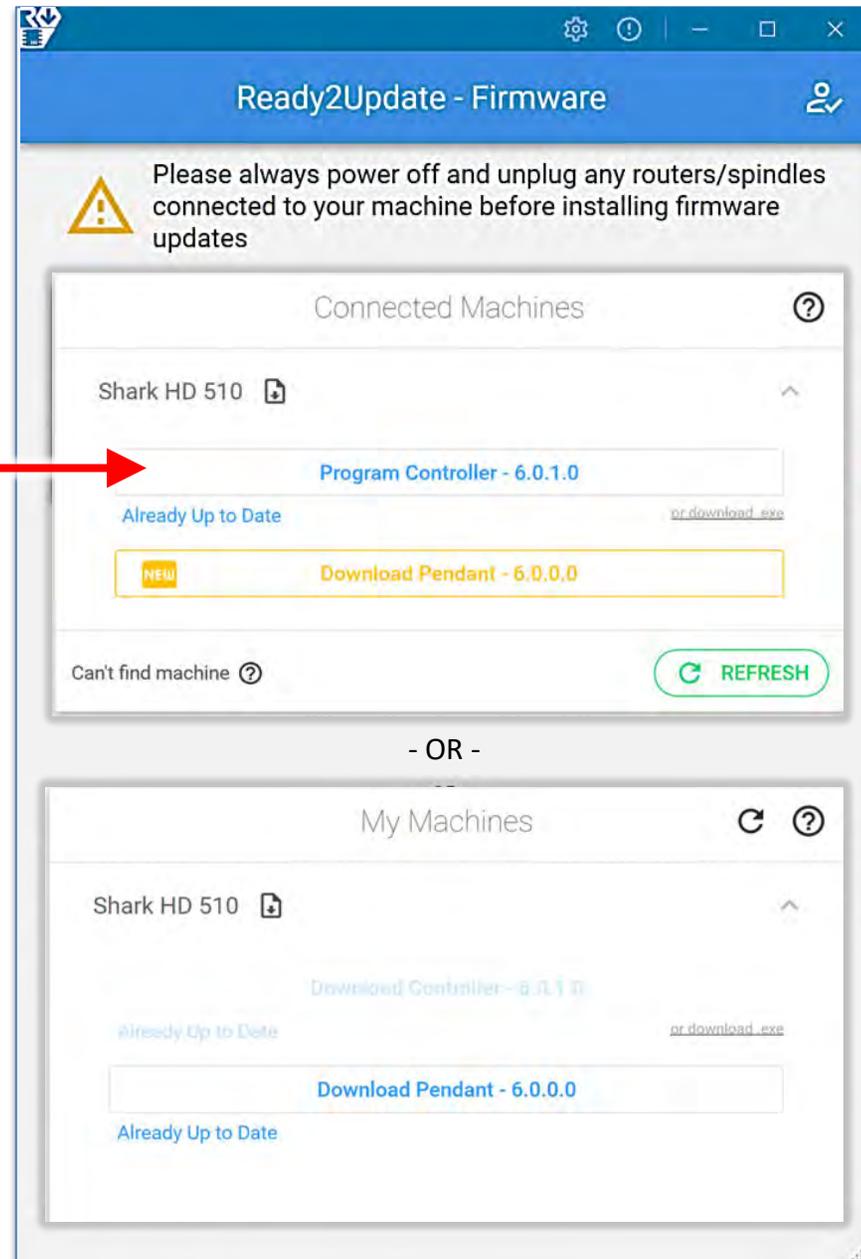


# Controller Update Process



# Controller Update Process

Controller firmware button should now appear blue.



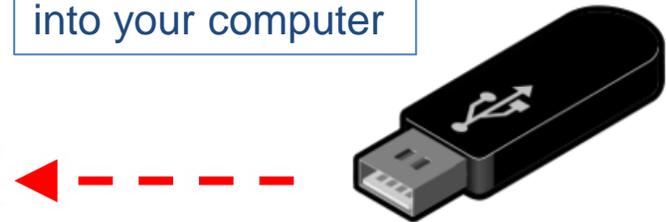
# Pendant Update Process



## Pendant Update Process



Insert a USB drive  
into your computer



## Pendant Update Process

Click on "Download Pendant" button to download firmware to your USB drive.

The screenshot shows the 'Ready2Update - Firmware' application window. At the top, there is a warning icon and text: 'Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates'. Below this, the 'Connected Machines' section lists 'Shark HD 510'. Underneath, it shows 'Program Controller - 6.0.1.0' with the status 'Already Up to Date' and a 'download.exe' link. A prominent yellow button labeled 'NEW' and 'Download Pendant - 6.0.0.0' is highlighted with a red arrow. At the bottom of this section, there is a 'Can't find machine' link and a 'REFRESH' button. Below the 'Connected Machines' section, there is a '- OR -' separator and the 'My Machines' section, which also lists 'Shark HD 510' and shows the 'Download Pendant - 6.0.0.0' button.

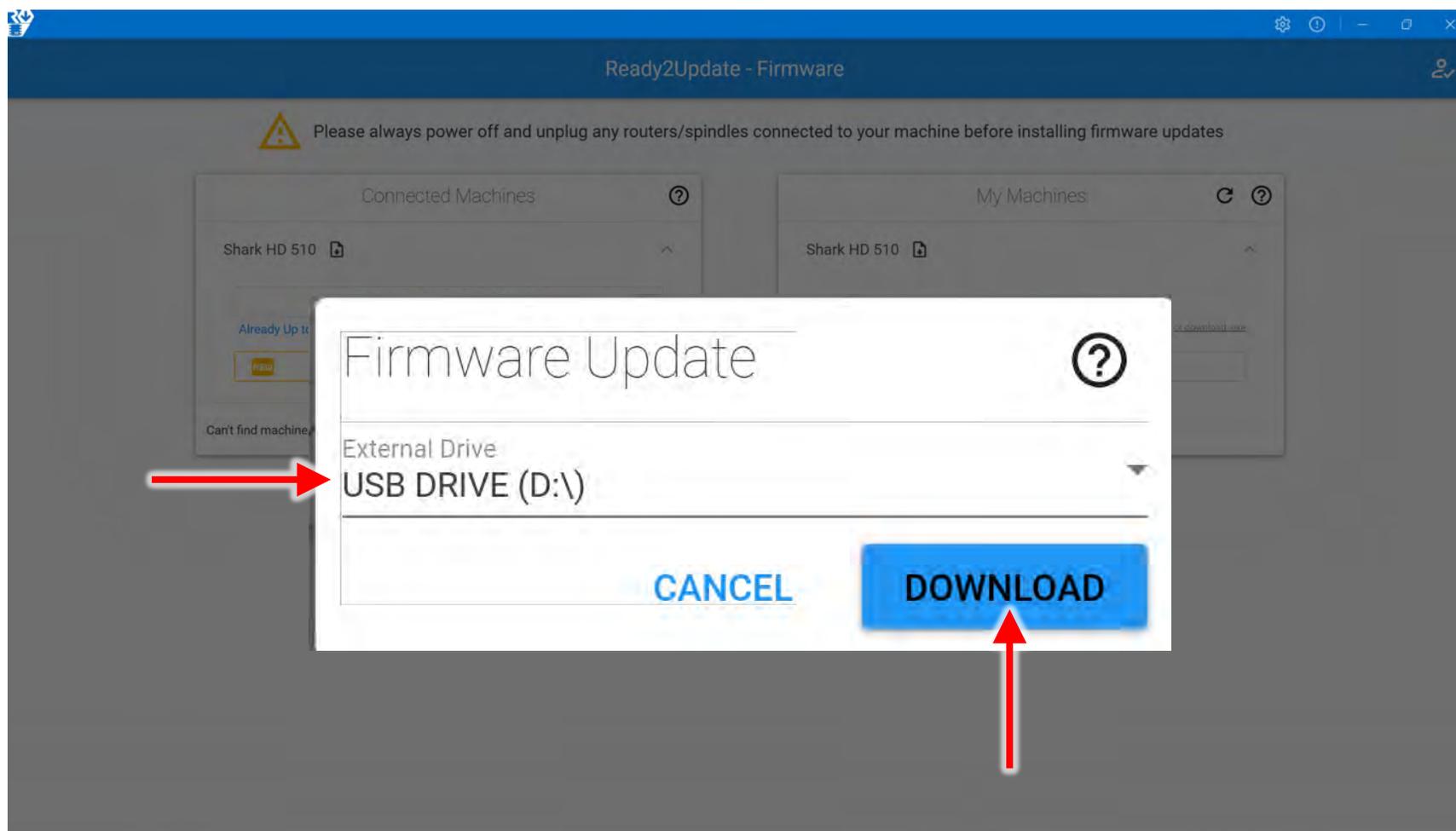
# Pendant Update Process



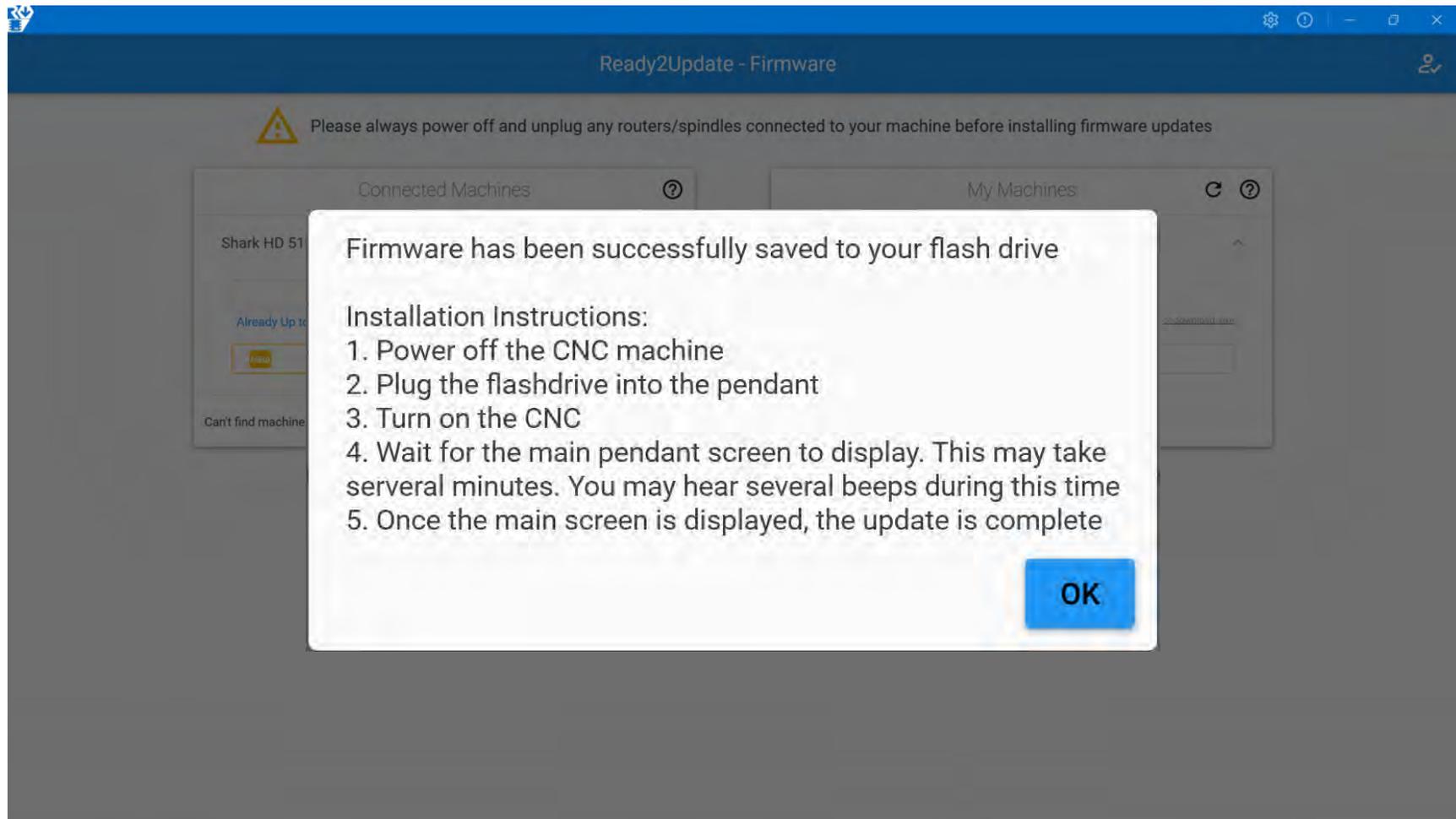
Wait . . . it may take a minute for it to find the USB drive.

The screenshot shows the 'Ready2Update - Firmware' application window. At the top, there is a warning icon and text: 'Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates'. Below this, there are two main sections: 'Connected Machines' and 'My Machines'. The 'Connected Machines' section shows a machine named 'Shark HD 510' with a 'Program Controller - 6.0.1.0' update that is 'Already Up to Date'. A yellow button labeled 'NEW' and 'Download Pendant - 6.0.0.0' is highlighted with a red arrow. Below this is a 'Can't find machine' section with a 'REFRESH' button. The 'My Machines' section shows the same machine with a 'Downloaded Controller - 6.0.1.0' that is 'Already Up to Date' and a 'Download Pendant - 6.0.0.0' button that is also 'Already Up to Date'. The application title bar includes standard window controls and a user profile icon.

## Pendant Update Process



## Pendant Update Process



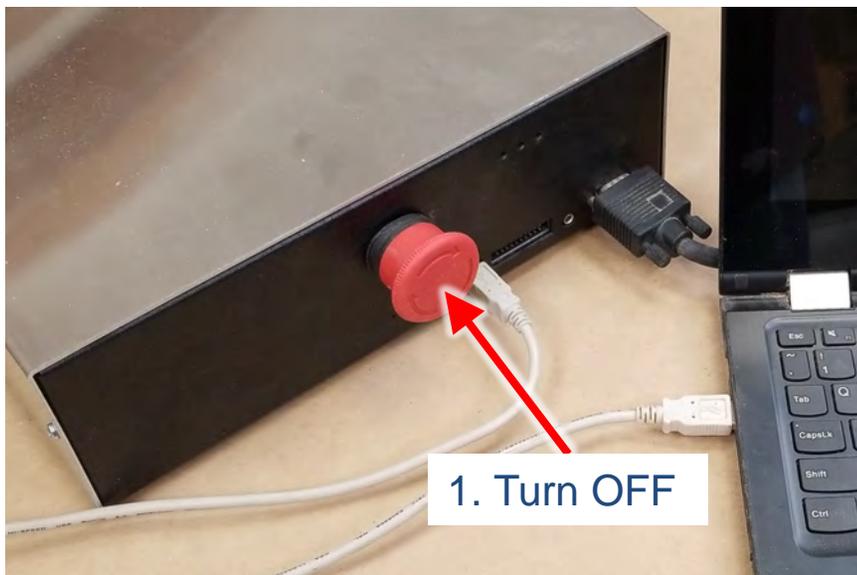
## Pendant Update Process



Remove USB drive



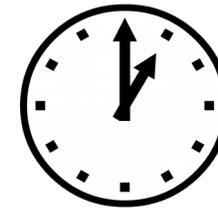
# Pendant Update Process



## Pendant Update Process



The Pendant screen stays blank during the update process.



**The update may take a few minutes and you may hear a couple of beeps during the update process.**

## Pendant Update Process



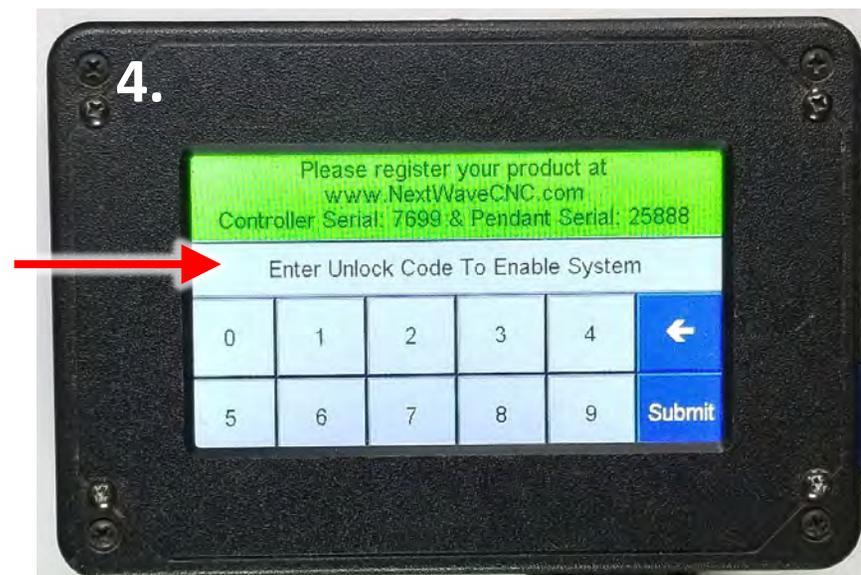
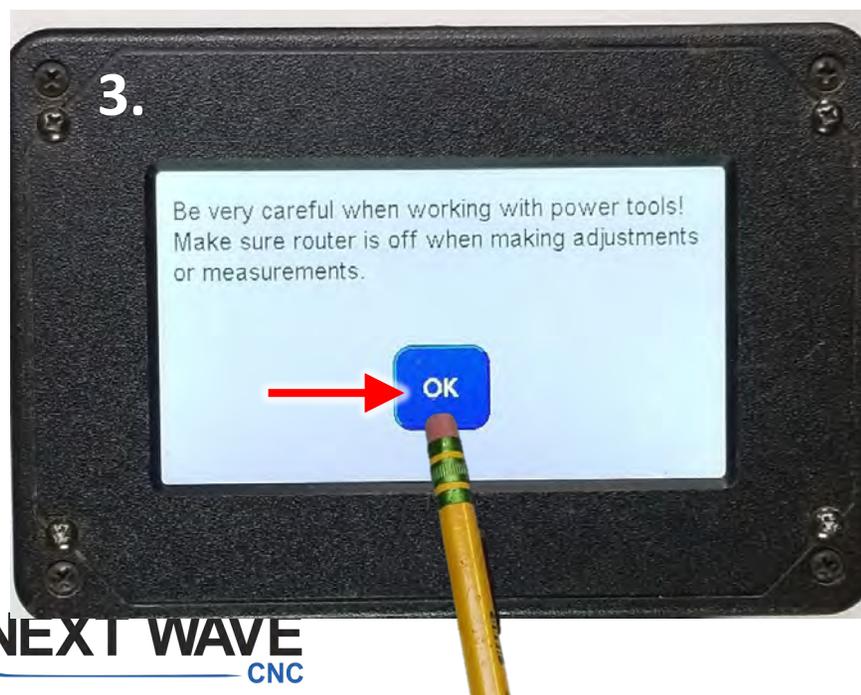
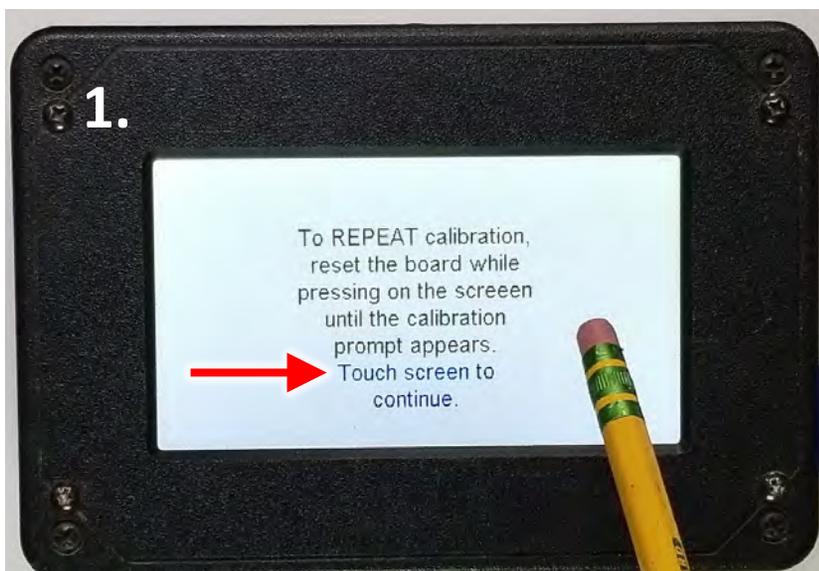
This screen appears next.  
Touch the screen to continue.

# Pendant Update Process

Touch the spots to calibrate the screen.



## Pendant Update Process



## Pendant Update Process

The main screen now appears with the new buttons.



Visit [www.NextWaveCNC.com/webinars](http://www.NextWaveCNC.com/webinars)  
For the latest info on how to use the new Pendant features.

## Pendant Update Process

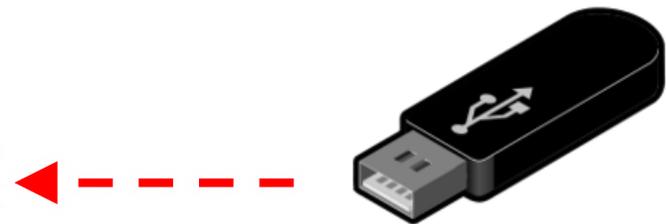


Remove USB drive

## Pendant Update Process



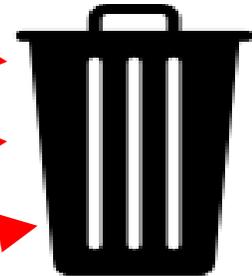
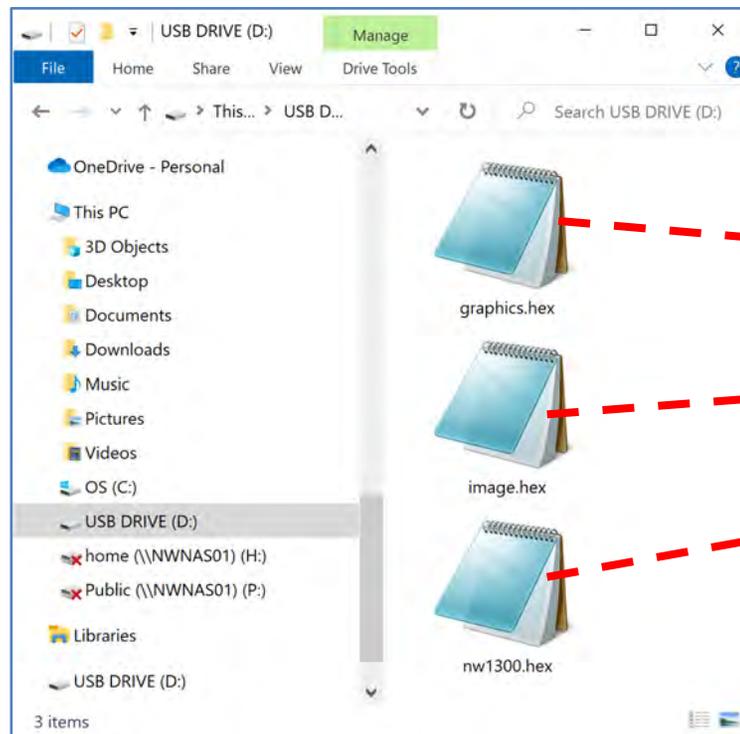
Insert the USB drive into your computer



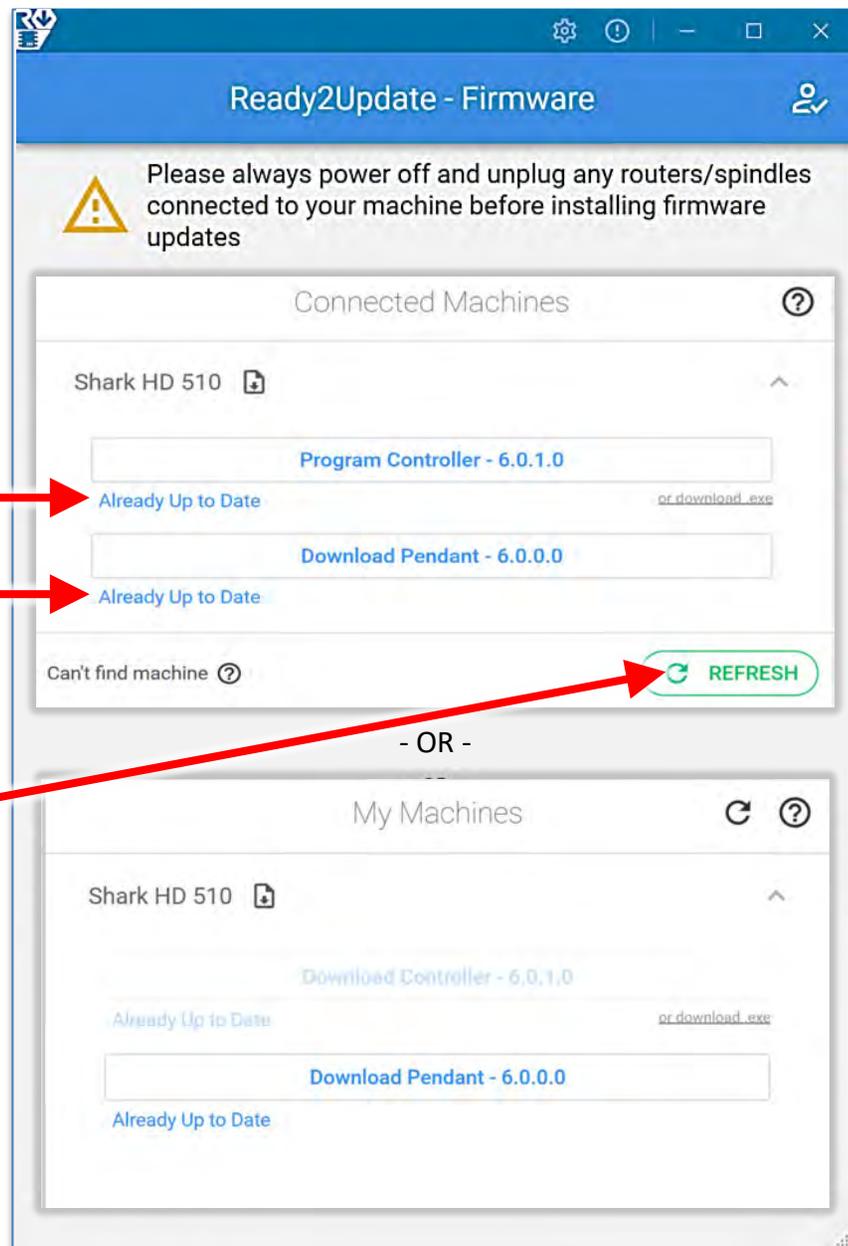
## Pendant Update Process

Delete the Pendant firmware files.

This prevents you from accidentally running the firmware update again the next time you use this USB drive.



# Update Complete



Both firmware buttons should now appear blue.

If not try clicking "Refresh"

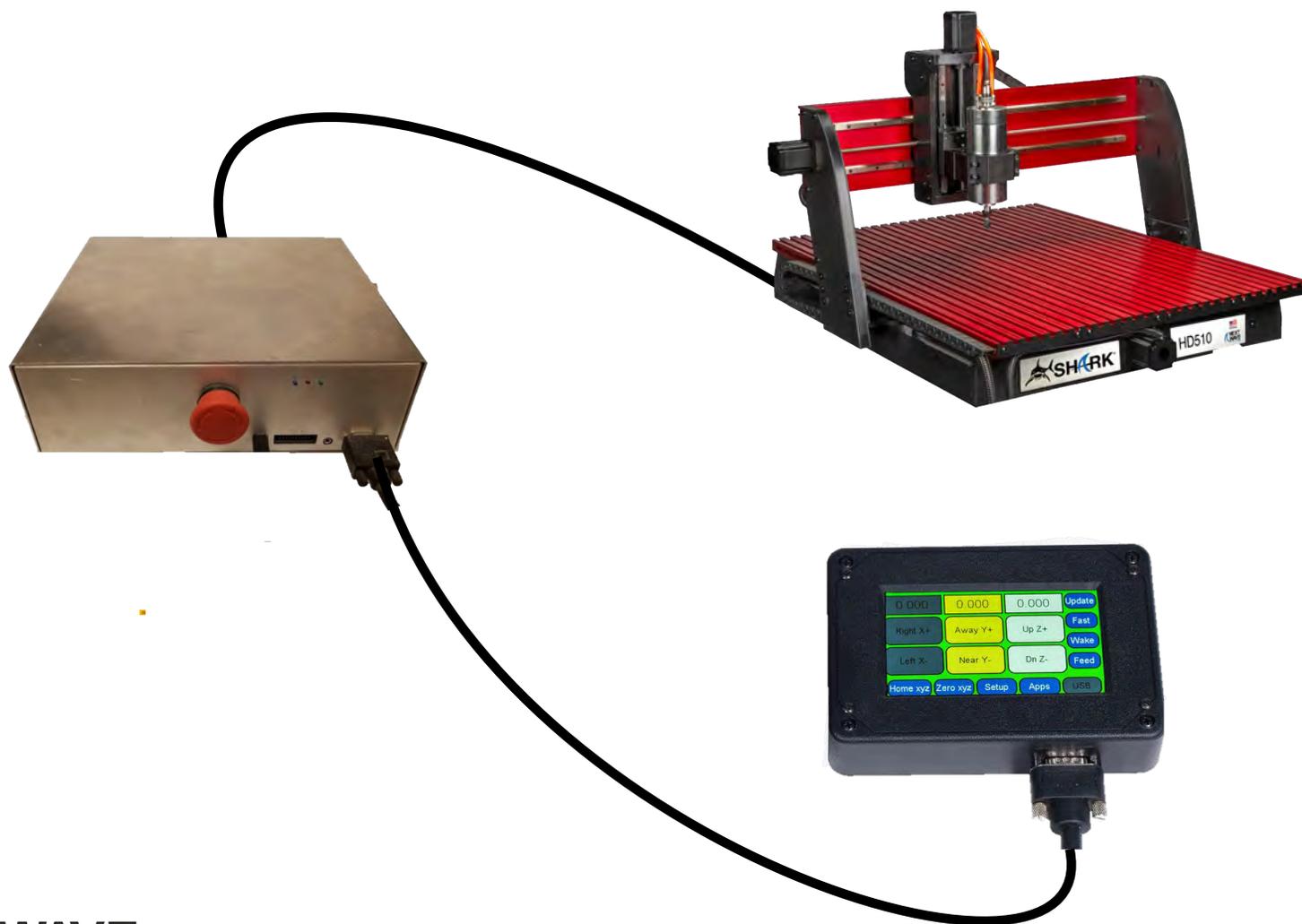
## Update Complete



You can now discount your computer

## Update Complete

The Firmware for your machine is now up to date and ready to use.



For the information on how to use the new Pendant features.  
Visit [www.NextWaveCNC.com/webinars](http://www.NextWaveCNC.com/webinars)



A red arrow originates from the bottom center of the text box and points vertically upwards to the "SUPPORT" link in the navigation bar.

If you have problems with your firmware update, please visit the Support Page

Or email Tech Support at:  
**[Support@NextWaveCNC.com](mailto:Support@NextWaveCNC.com)**

# Step-by-step guide to installing firmware updates WITHOUT internet in your shop - Option 1

## Option 1

**Step 1.** Disconnect the Control box from your CNC machine and bring it and the Pendant to a location that has internet.

**Step 2.** Plug in the control box and complete the update using the steps starting on page 14.

**Step 3.** When both firmware updates are complete, reconnect the control box and pendant to your CNC.



# Step-by-step guide to installing firmware updates WITHOUT internet in your shop - Option 2

## IMPORTANT NOTE:

You will need an internet connection to download the firmware files.

But you do not need an internet connection in your shop to install the actual firmware updates onto your Pendant and Controller.



**If you already have the Ready2Update app  
installed on your computer:  
Open it and skip to page 80.**



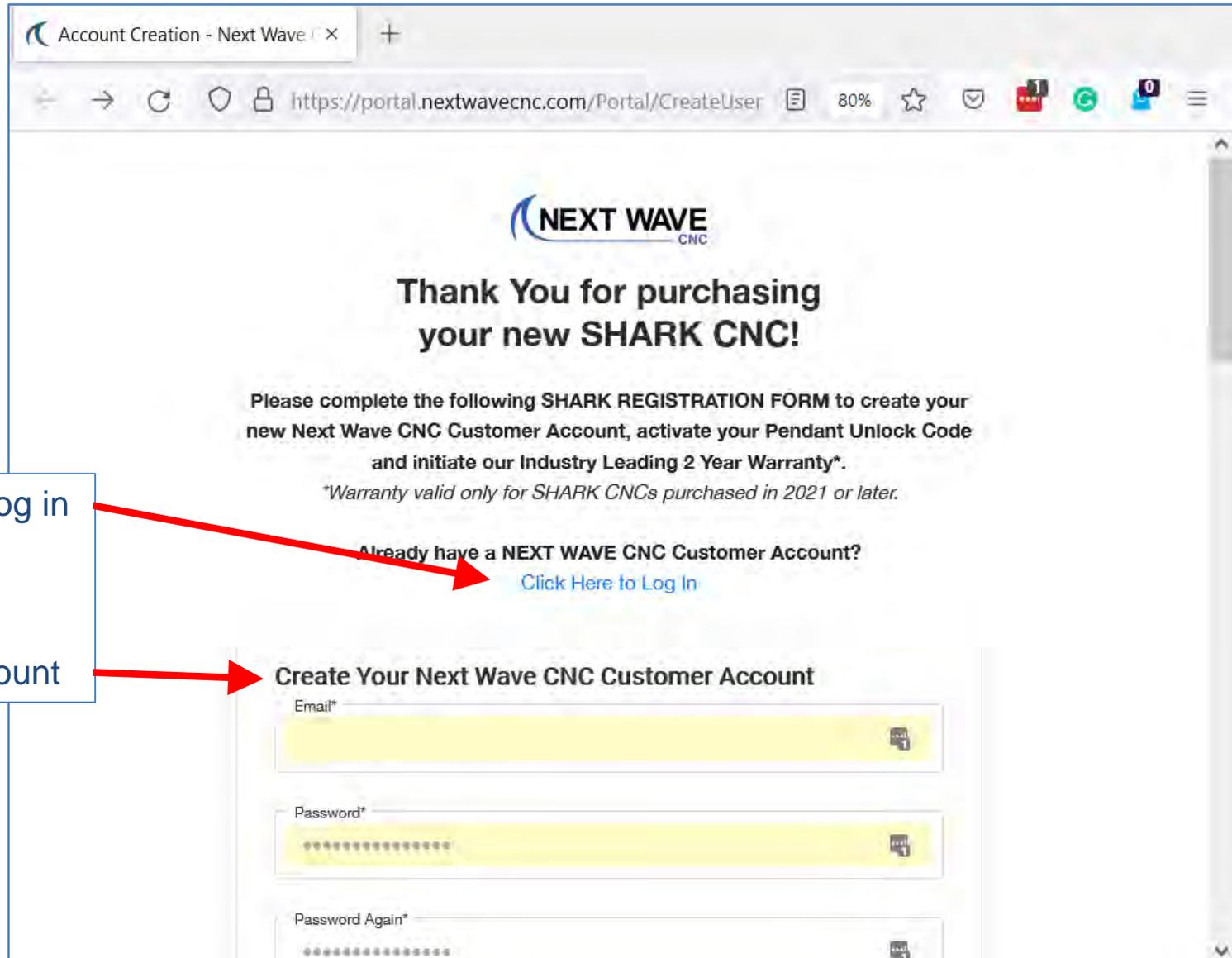
**If you are new to Ready2Update:  
Continue to the next page.**

# Download and install the Ready2Update – Firmware application

www.NextWaveCNC.com



# Installing Ready2Update – Firmware



Click Here to Log in

OR

Create an Account

## Installing Ready2Update – Firmware

Enter your email  
and password.

The screenshot shows a web browser window with the URL `https://portal.nextwavecnc.com/Portal/Login`. The page features the Next Wave CNC logo at the top, followed by the heading "Login to your Next Wave CNC Customer Account". Below the heading are two input fields: "Email\*" and "Password\*", both highlighted in yellow. A red box on the left contains the text "Enter your email and password." with two red arrows pointing to the input fields. Below the input fields are links for "Forget Password?" and "Don't have an account?". A blue "LOGIN" button is positioned to the right of the input fields, with a red arrow pointing to it from a box labeled "Login". At the bottom of the page, there is a copyright notice: "© 2021 - Next Wave CNC. All rights reserved."

# Installing Ready2Update – Firmware

Your registered machine(s) should appear in the list.

If your machine is not in this list, you should ADD it before proceeding with the firmware update.

**Next Wave CNC**

**Your Software** Add +

- Ready2Control [CLICK TO ACTIVATE](#)
- Ready2Update - Firmware  
License Type: Free  
[Download](#) Seats Used: 0 of 99
- Ready2Control - Basic  
License Type: Free  
[Download](#) Seats Used: 0 of 99

**Your Hardware** Add +

- Shark HD 510  
Unlock Code: 29792  
Firmware version: 6.0,1.0  
[Shark HD 500 Series Manual](#)

**Free Software**

- Ready2Raaster  
Easily convert images into files that can be used with a laser. Compatible with 2-Watt and 7-Watt laser attachments, as well as the Ready2Laser  
[Download](#)
- Ready2Update - Firmware  
Keep all of your machines running on the latest firmware. Compatible with Piranha, Shark HD, and Ready2Laser machines  
[Download](#)
- Ready2Control - Basic  
Control your machine with advanced G-Code previewing  
[Download](#)

[Video](#) How to update Firmware.

[PDF Instructions](#) How to update Firmware.

# Installing Ready2Update – Firmware

The screenshot displays the Next Wave CNC web interface. At the top left is the 'NEXT WAVE CNC' logo. The main content is divided into three sections:

- Your Software:** Contains three items:
  - Ready2Control:** A grey button with a 'CLICK TO ACTIVATE' link.
  - Ready2Update - Firmware:** Includes a 'Download' link and 'Seats Used: 0 of 99'.
  - Ready2Control - Basic:** Includes a 'Download' link and 'Seats Used: 0 of 99'.
- Your Hardware:** Contains one item:
  - Shark HD 510:** Shows 'Unlock Code: 29792', 'Firmware version: 6.0.1.0', and a link to the 'Shark HD 500 Series Manual'.
- Free Software:** Contains three items:
  - Ready2Raster:** Description: 'Easily convert images into files that can be used with a laser. Compatible with 2-Watt and 7-Watt laser attachments, as well as the Ready2Laser'. Includes a 'Download' link.
  - Ready2Update - Firmware:** Description: 'Keep all of your machines running on the latest firmware. Compatible with Piranha, Shark HD, and Ready2Laser machines'. Includes a 'Download' link. A red arrow points from a callout box to this link.
  - Ready2Control - Basic:** Description: 'Control your machine with advanced G-Code previewing'. Includes a 'Download' link.

At the bottom of the 'Free Software' section, there are two links: 'Video How to update Firmware.' and 'PDF Instructions How to update Firmware.'

Download Ready2Update – Firmware application

## Installing Ready2Update – Firmware

**NEXT WAVE CNC**

**Your Software** Add +

- Ready2Control [CLICK TO ACTIVATE](#)
- Ready2Update - Firmware**  
License Type: Free

**Your Hardware** Add +

- Shark HD 510  
Unlock Code: 29792  
Firmware version: 6.0.1.0  
[Shark HD 500 Series Manual](#)

You have chosen to open:

- Ready2Update - Firmware.exe**  
which is: exe File (5.8 MB)  
from: <https://portal.nextwaveautomation.com>

Would you like to save this file?

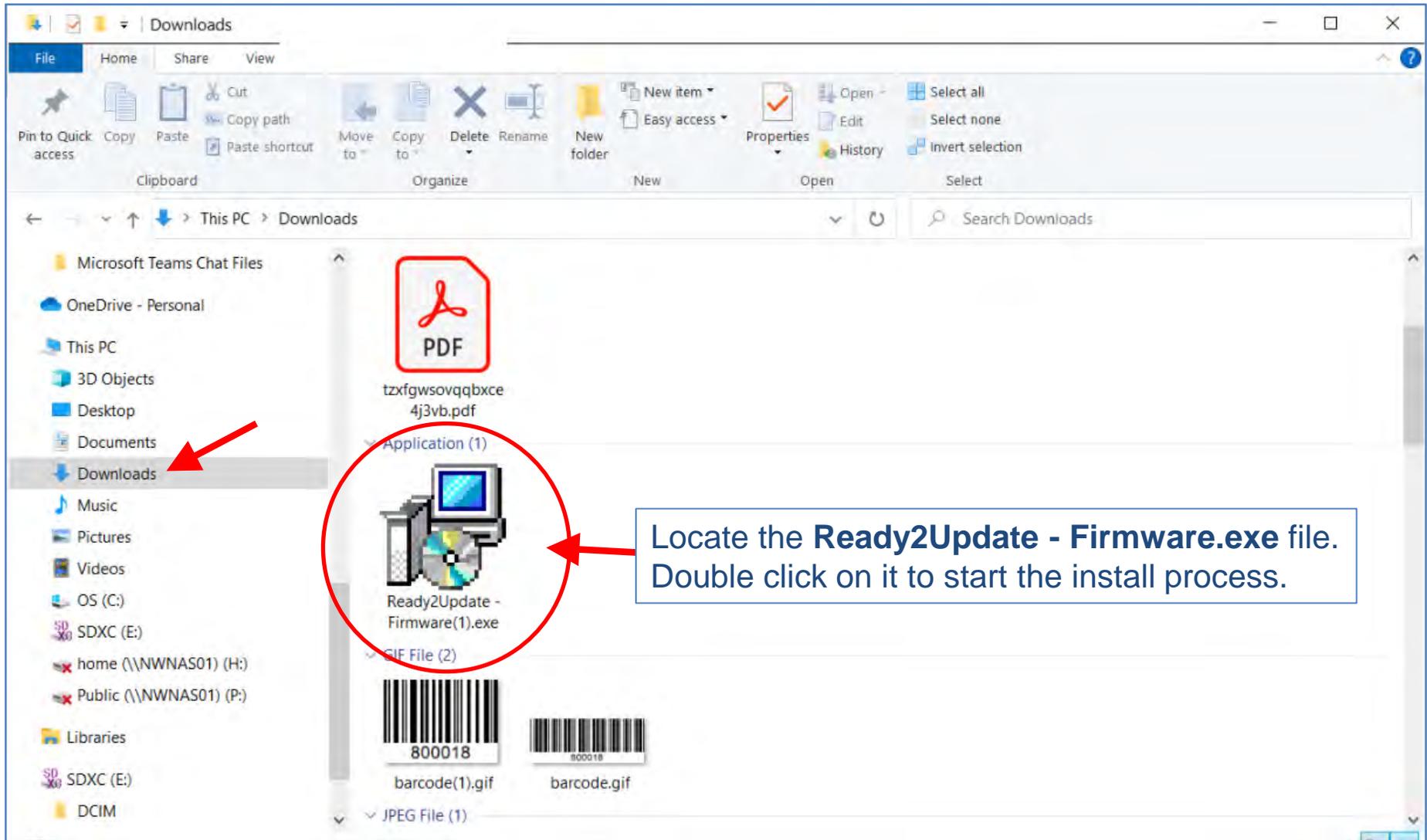
[Save File](#) [Cancel](#)

**Free Software**

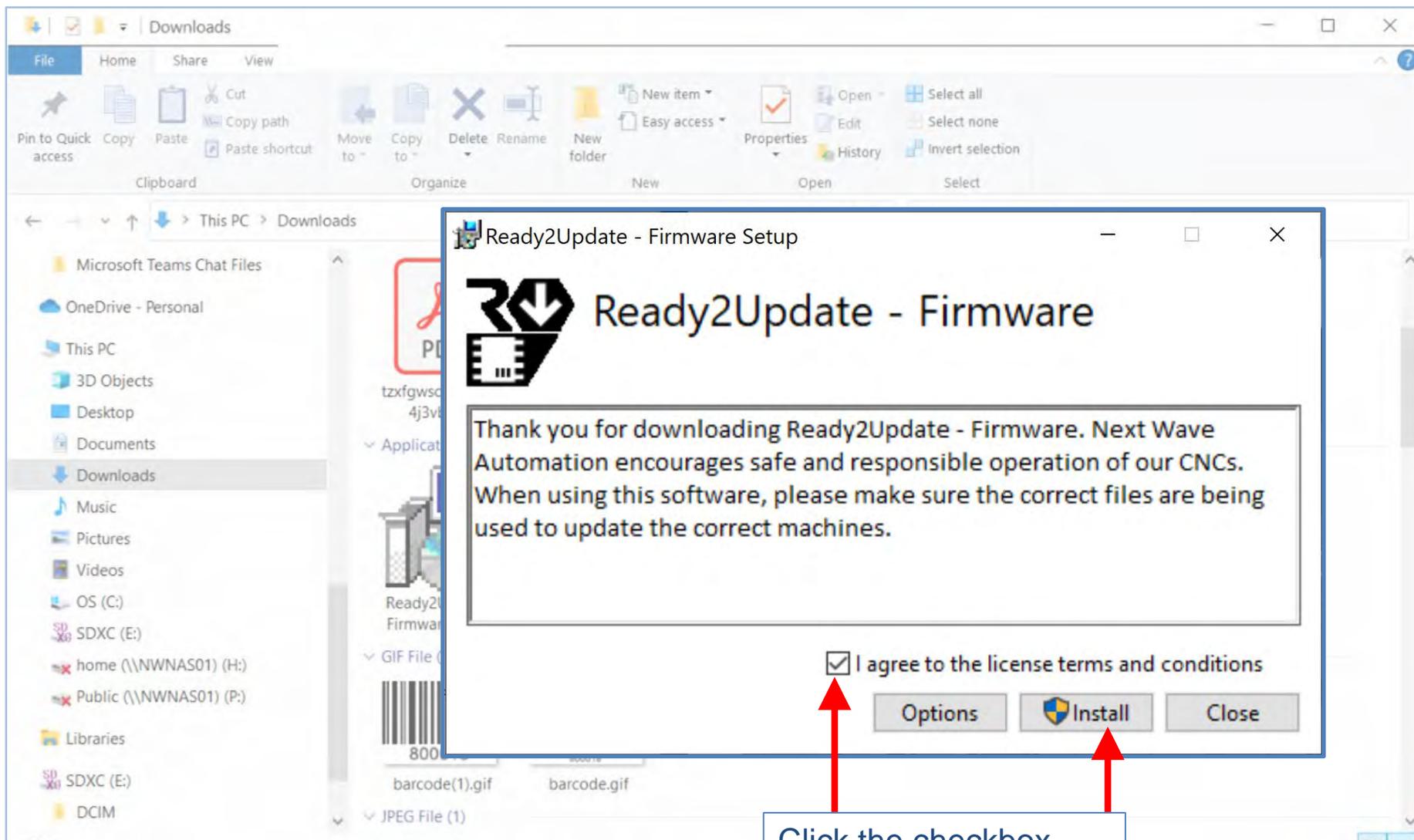
- Ready2Update - Firmware**  
Keep all of your machines running on the latest firmware. Compatible with Piranha, Shark HD, and Ready2Laser machines  
[Download](#)
- Ready2Control - Basic**  
Control your machine with advanced G-Code previewing  
[Download](#)

Save Ready2Update –  
Firmware to your computer.

## Installing Ready2Update – Firmware



## Installing Ready2Update – Firmware



Click the checkbox and the Install button.

## Installing Ready2Update – Firmware

You may encounter these security windows or something similar.



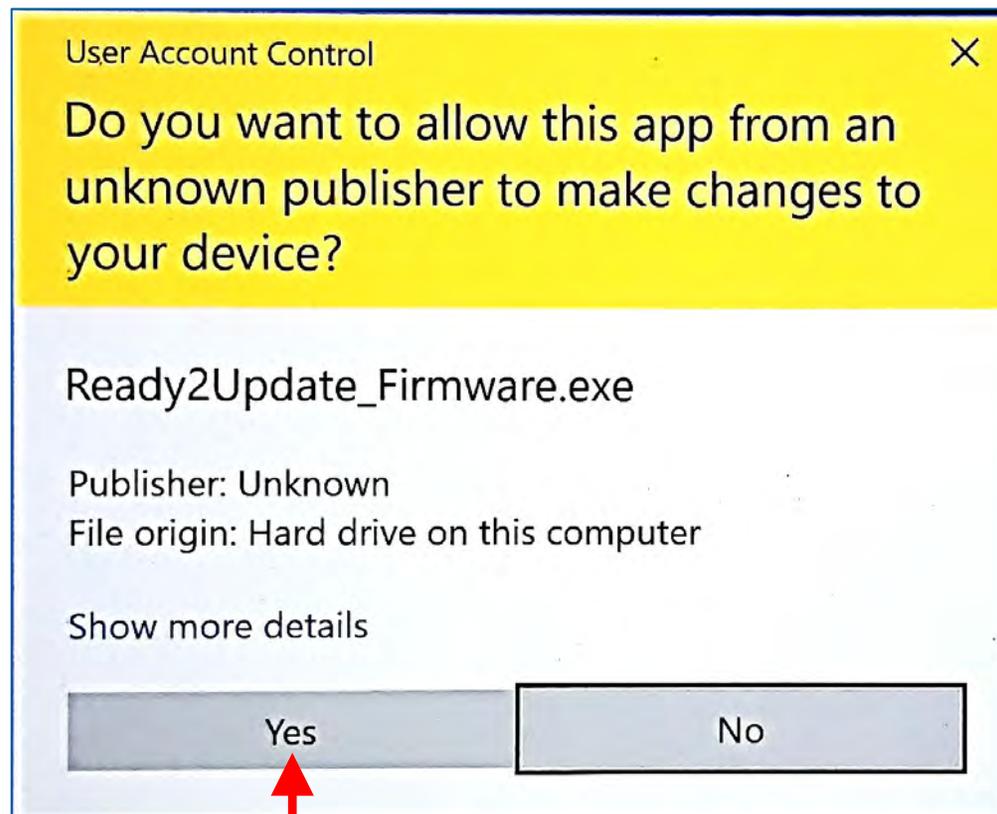
1. Click "More info"



2. Click "Run anyway"

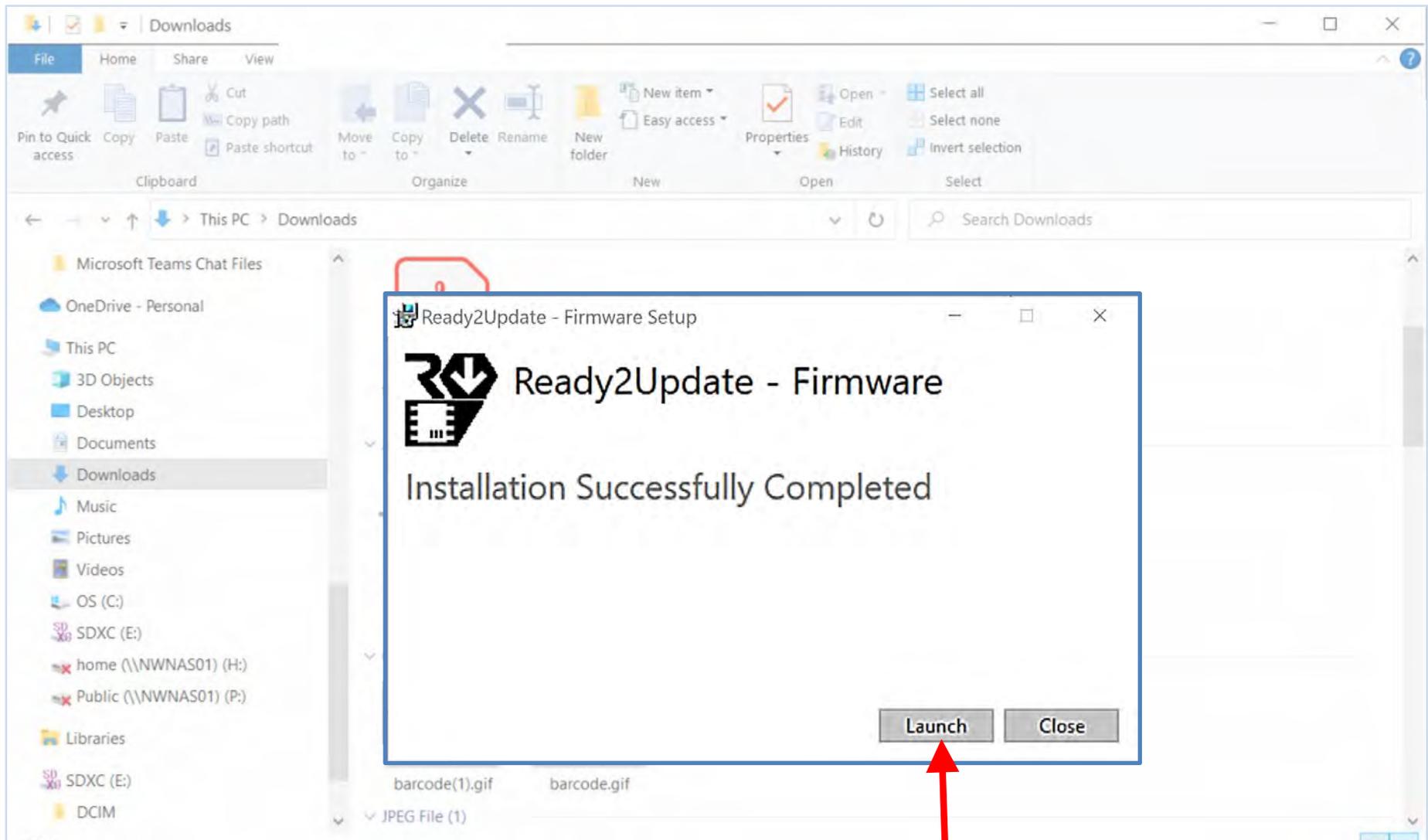
## Installing Ready2Update – Firmware

You may also encounter this security window or something similar.



Click "Yes"

## Installing Ready2Update – Firmware



Launch Ready2Update – Firmware.

## Installing Ready2Update – Firmware

Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines

No Machines Connected

Can't find machine

REFRESH

-- OR --

Next Wave CNC Customer Account Login

Email

Password

Keep me signed in

Login

Login to your  
Customer Account

## Installing Ready2Update – Firmware

Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines ?

No Machines Connected

Can't find machine ? [REFRESH](#)

-- OR --

My Machines ?

Shark HD 510 ↓

[Download Controller - v6.0.2.0](#)  
or [download.exe](#)

**NEW** [Download Pendant - 6.0.2.0](#)

Your registered machines are listed under “My Machines”

## Firmware update notices

Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines

No Machines Connected

Can't find machine

REFRESH

-- OR --

My Machines

Shark HD 510

Download Controller - v6.0.2.0  
or download\_exe

NEW Download Pendant - 6.0.2.0

Orange color means that an update is available for your Controller and/or Pendant

## Download Controller firmware

Ready2Update - Firmware

Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates

Connected Machines

No Machines Connected

Can't find machine

REFRESH

-- OR --

My Machines

Shark HD 510

Download Controller - 6.0.2.0

or download .exe

NEW Download Pendant - 6.0.2.0

Click on “or download .exe”

Save this file to a folder on your computer.

You will use this file when update the Controller firmware in your shop.

For for now, continue to the next page.

## Download Pendant firmware



Next Insert a USB drive into your computer



## Download Pendant firmware

The screenshot shows the 'Ready2Update - Firmware' application window. At the top, there is a blue header with the title and a user icon. Below the header, a yellow warning triangle icon is followed by the text: 'Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates'. The main content area is divided into two sections. The first section, titled 'Connected Machines', shows 'No Machines Connected' and a 'Can't find machine' link with a question mark. A green 'REFRESH' button is located at the bottom right of this section. Below this is a separator '-- OR --'. The second section, titled 'My Machines', shows a machine named 'Shark HD 510'. Underneath, there are two download buttons: 'Download Controller - v6.0.2.0' and 'Download Pendant - 6.0.2.0'. The 'Download Pendant' button has a yellow 'NEW' badge and is highlighted with a red arrow pointing from a text box on the left. A 'or download.exe' link is visible to the right of the first button.

Click on "Download Pendant" button to download firmware to your USB drive.

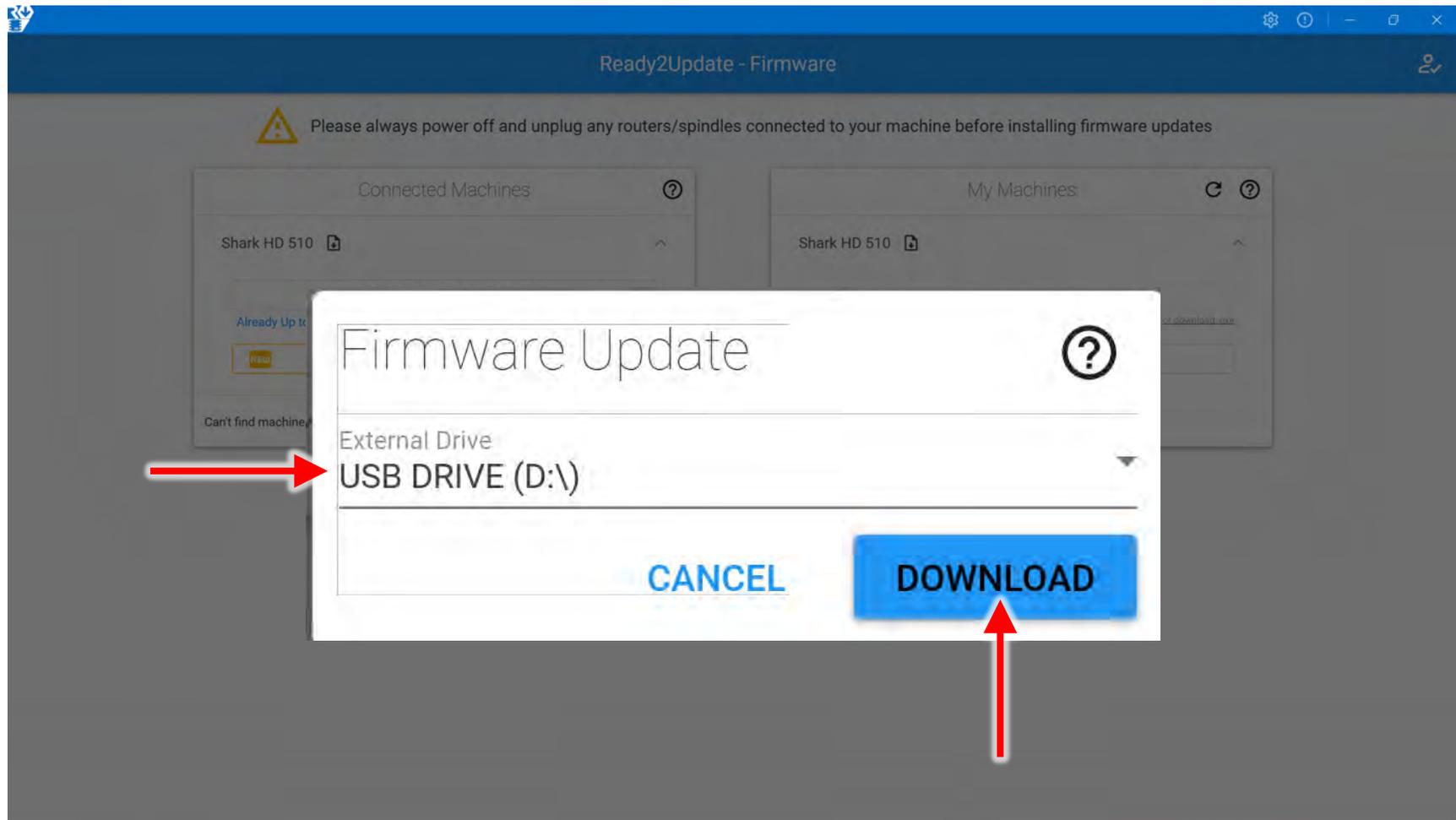
## Download Pendant firmware



Wait . . . it may take a minute for it to find the USB drive.

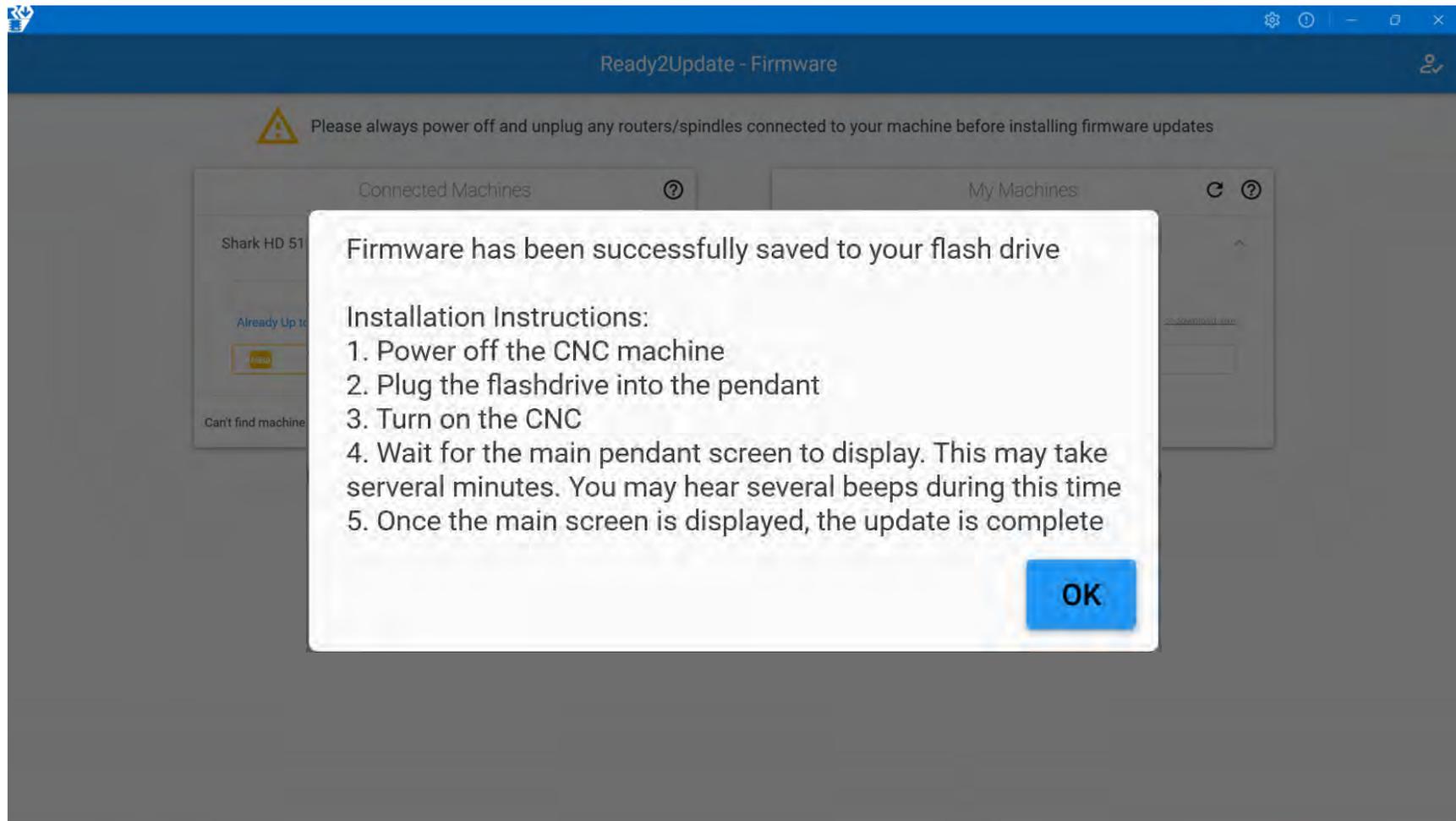
A screenshot of the 'Ready2Update - Firmware' application window. The window has a blue title bar with the text 'Ready2Update - Firmware' and a user icon. Below the title bar, there is a yellow warning triangle icon followed by the text: 'Please always power off and unplug any routers/spindles connected to your machine before installing firmware updates'. The main content area is divided into two sections. The first section is titled 'Connected Machines' and contains the text 'No Machines Connected'. Below this, there is a 'Can't find machine' link and a green 'REFRESH' button. The second section is titled 'My Machines' and contains a list of machines. The first machine listed is 'Shark HD 510'. Below the machine name, there are two download buttons: 'Download Controller - v6.0.2.0' and 'Download Pendant - 6.0.2.0'. The 'Download Pendant' button has a 'NEW' badge. A red arrow points from the text box on the left to the 'Download Pendant' button.

## Download Pendant firmware



## Download Pendant firmware

This Pop-up window provides the basic steps of update the firmware on your Pendant. These steps are also covered in the following pages of these instructions.



## Download Pendant firmware



Remove USB drive



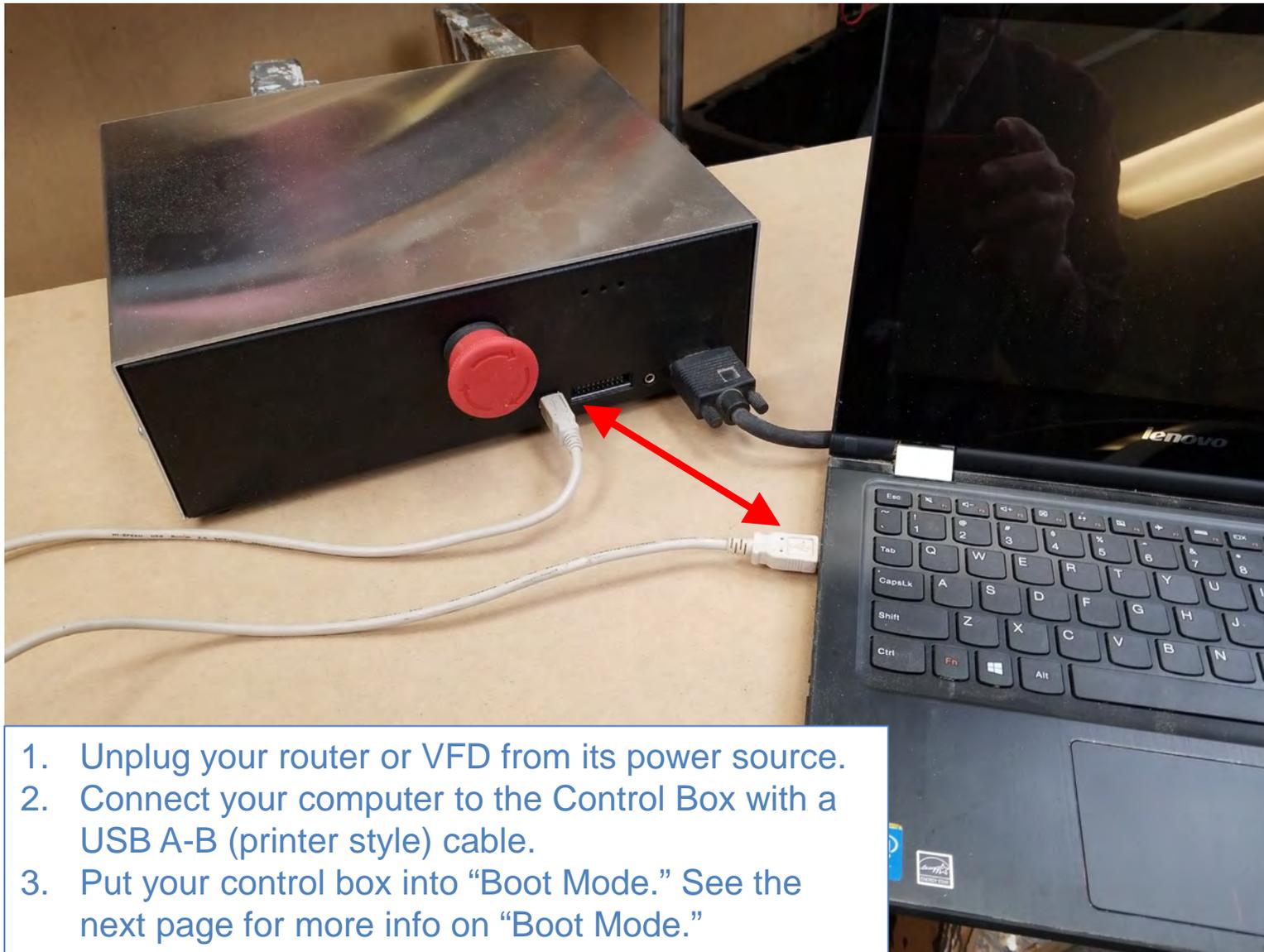


## Take your computer and the USB drive to your shop.

Also, you can exit the Ready2Update app, since you do not need it for the remaining steps.



# Controller Update Process



1. Unplug your router or VFD from its power source.
2. Connect your computer to the Control Box with a USB A-B (printer style) cable.
3. Put your control box into "Boot Mode." See the next page for more info on "Boot Mode."

### What is Boot Mode?

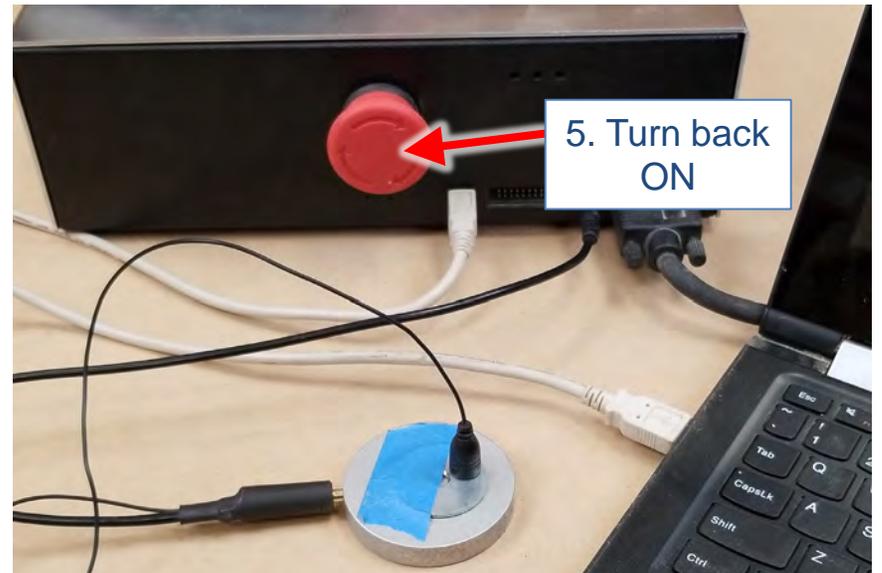
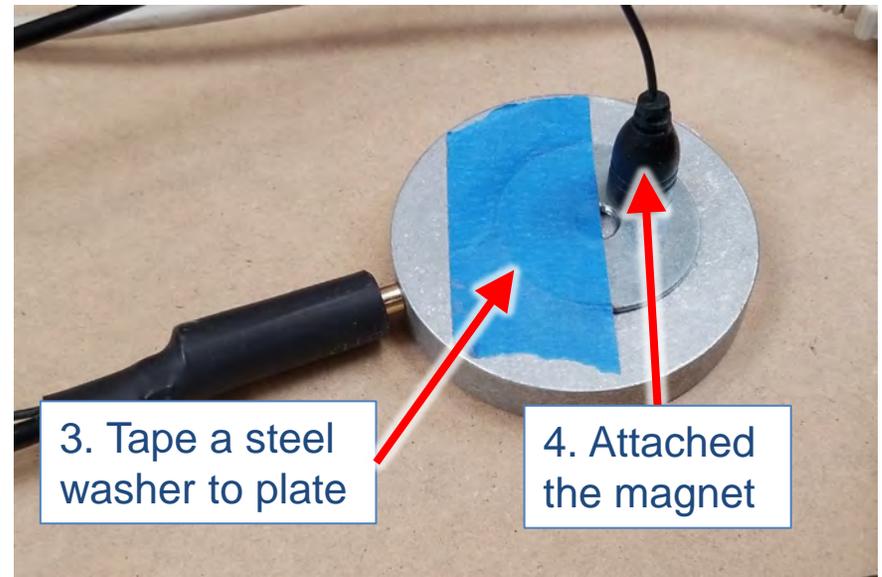
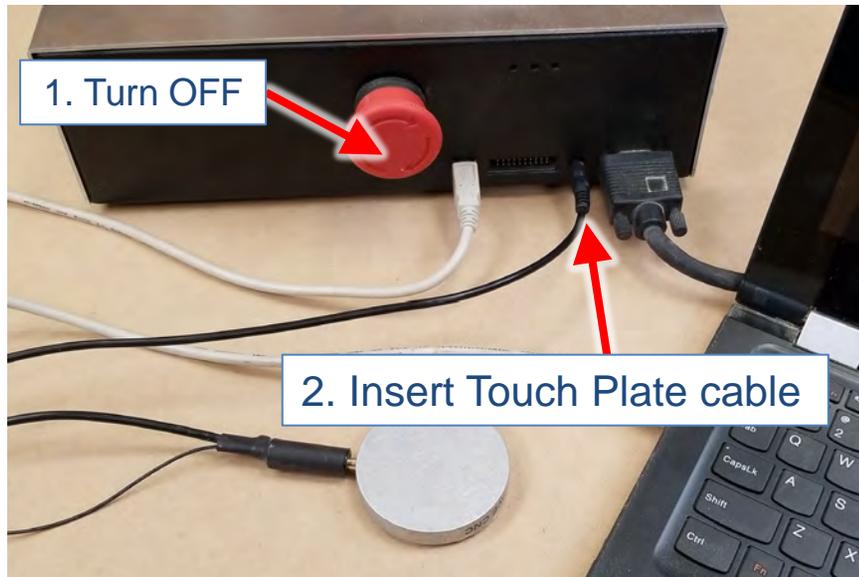
"Boot Mode" is the state in which a Next Wave Automation controller is ready to receive firmware updates. While in Boot Mode, the controller cannot be detected by this software and will not appear in the list above. Only put your controller in Boot Mode when this software prompts you to do so.

To enter Boot Mode, power off your controller while it is still connected to your computer via USB. The auxiliary port on the controller needs to have its circuit closed. This can be done by plugging in a touchplate accessory and holding the magnet to the aluminum touchplate. If no touchplate is owned, inserting a 1/8" bit into the port will also work. While the circuit is closed, turn on the controller. The controller is now in Boot Mode.

**Pages 93 and 94 show two ways to put your machine into Boot Mode.**

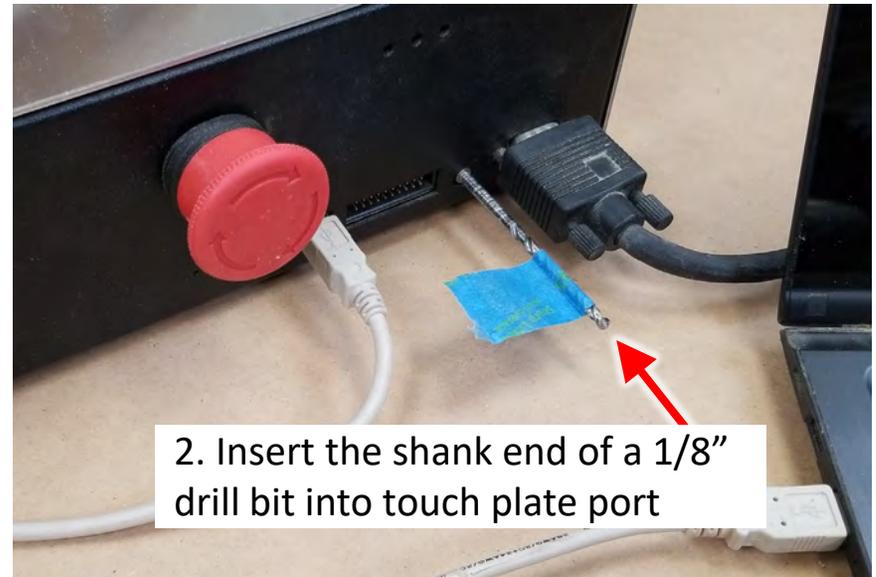
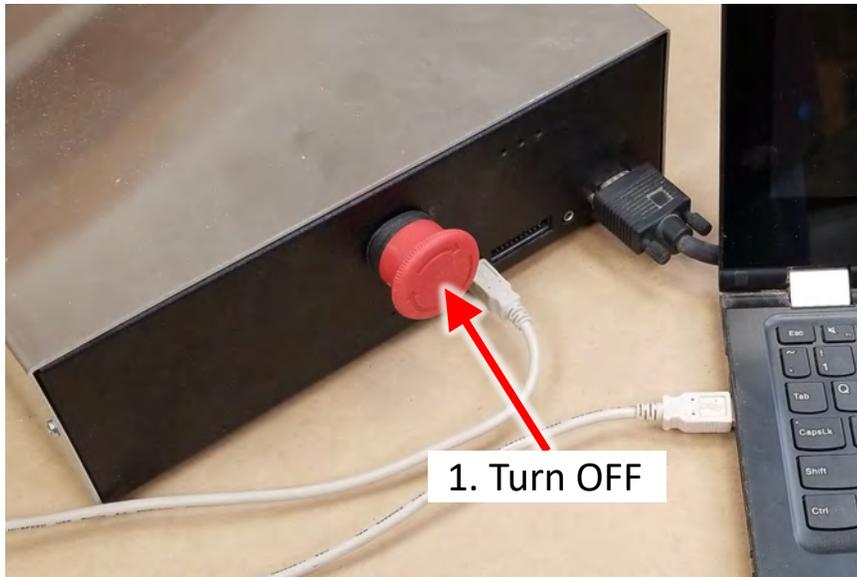
## Controller Update Process

### TOUCH PLATE technique How to put controller into boot mode.

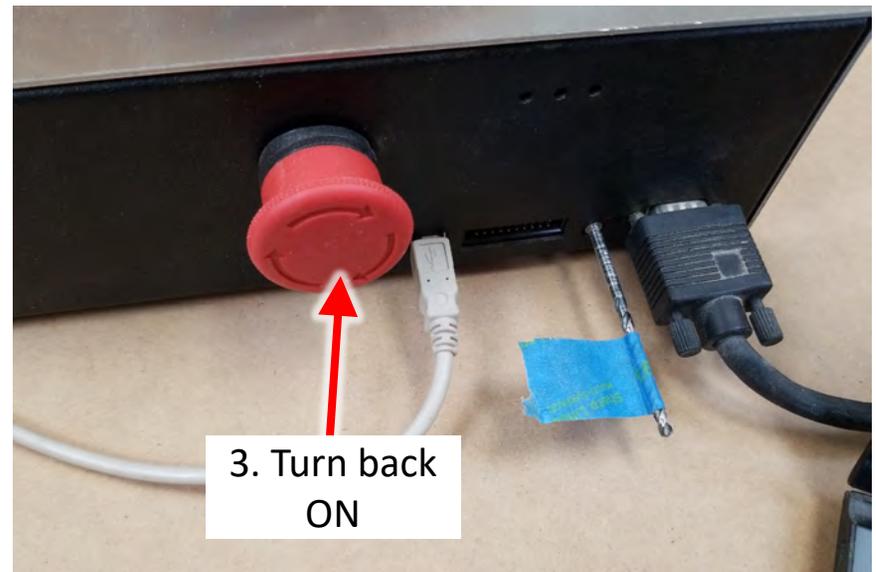


## DRILL BIT technique

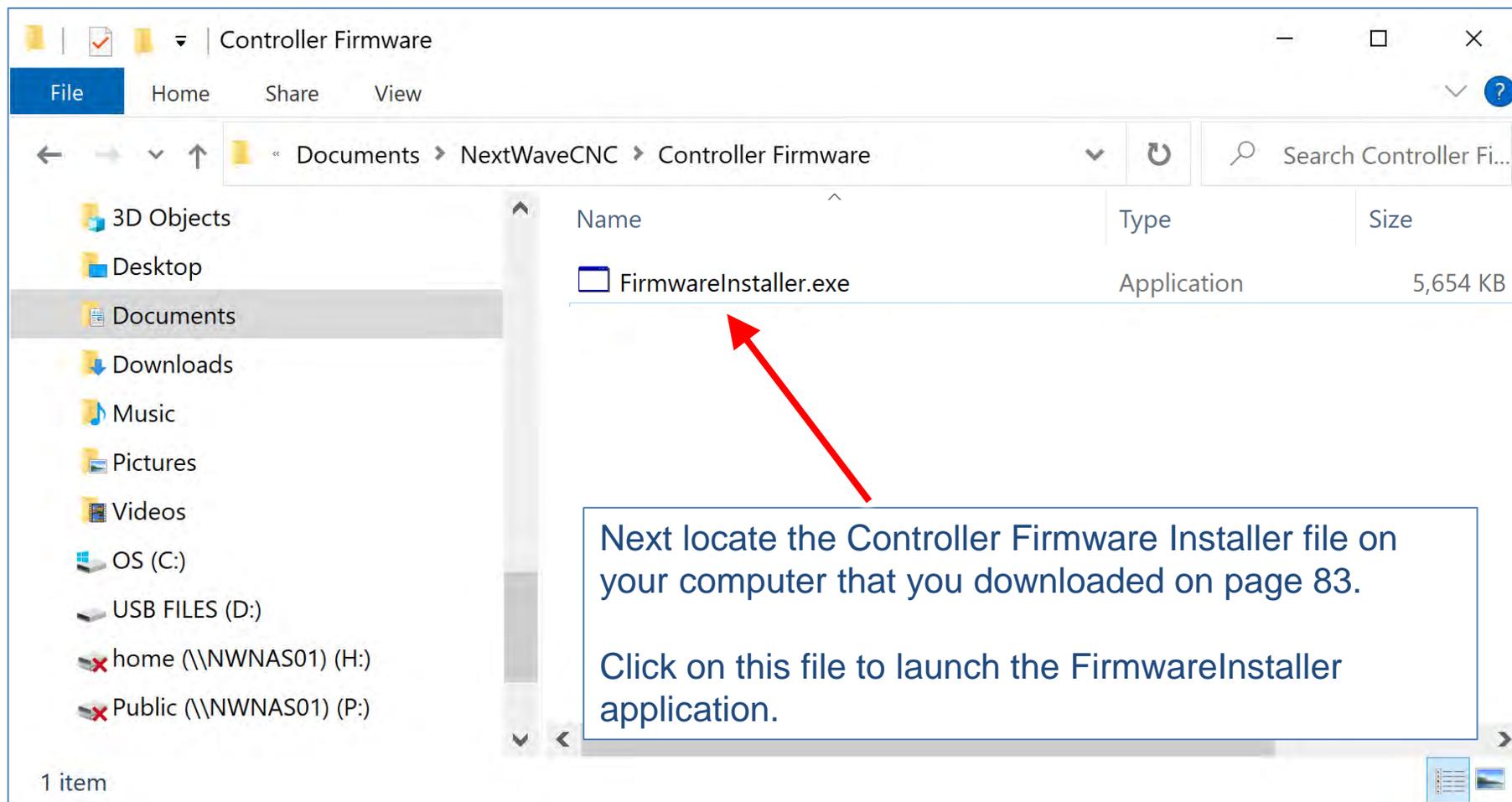
How to put controller into boot mode.



1/8" dia. drill bit.  
Tape added for  
easier handling.



## Run the Controller update.



The screenshot shows a Windows File Explorer window titled "Controller Firmware". The address bar indicates the path: "Documents > NextWaveCNC > Controller Firmware". The left sidebar shows the "Documents" folder selected. The main pane displays a table with the following columns: "Name", "Type", and "Size".

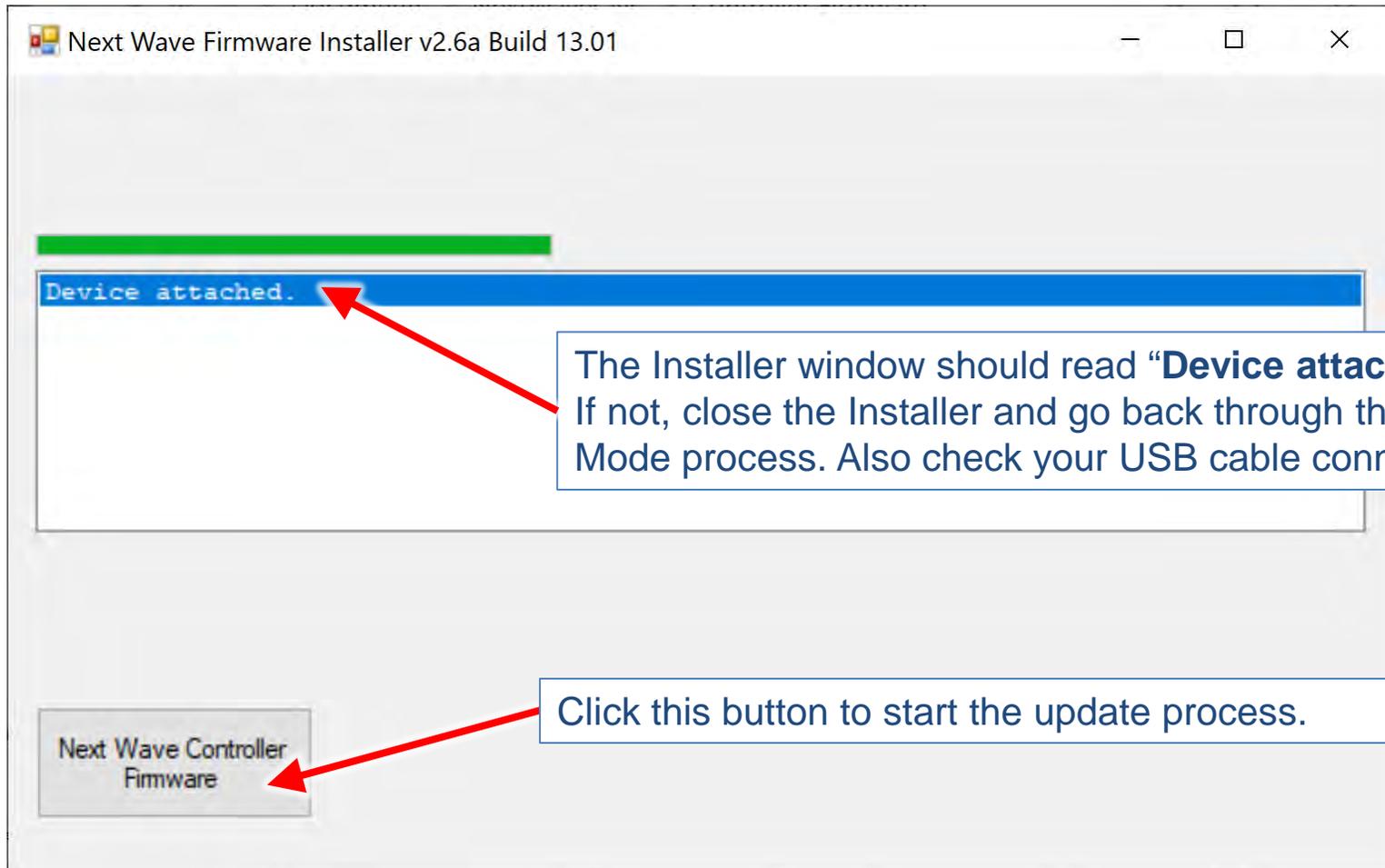
Name	Type	Size
FirmwareInstaller.exe	Application	5,654 KB

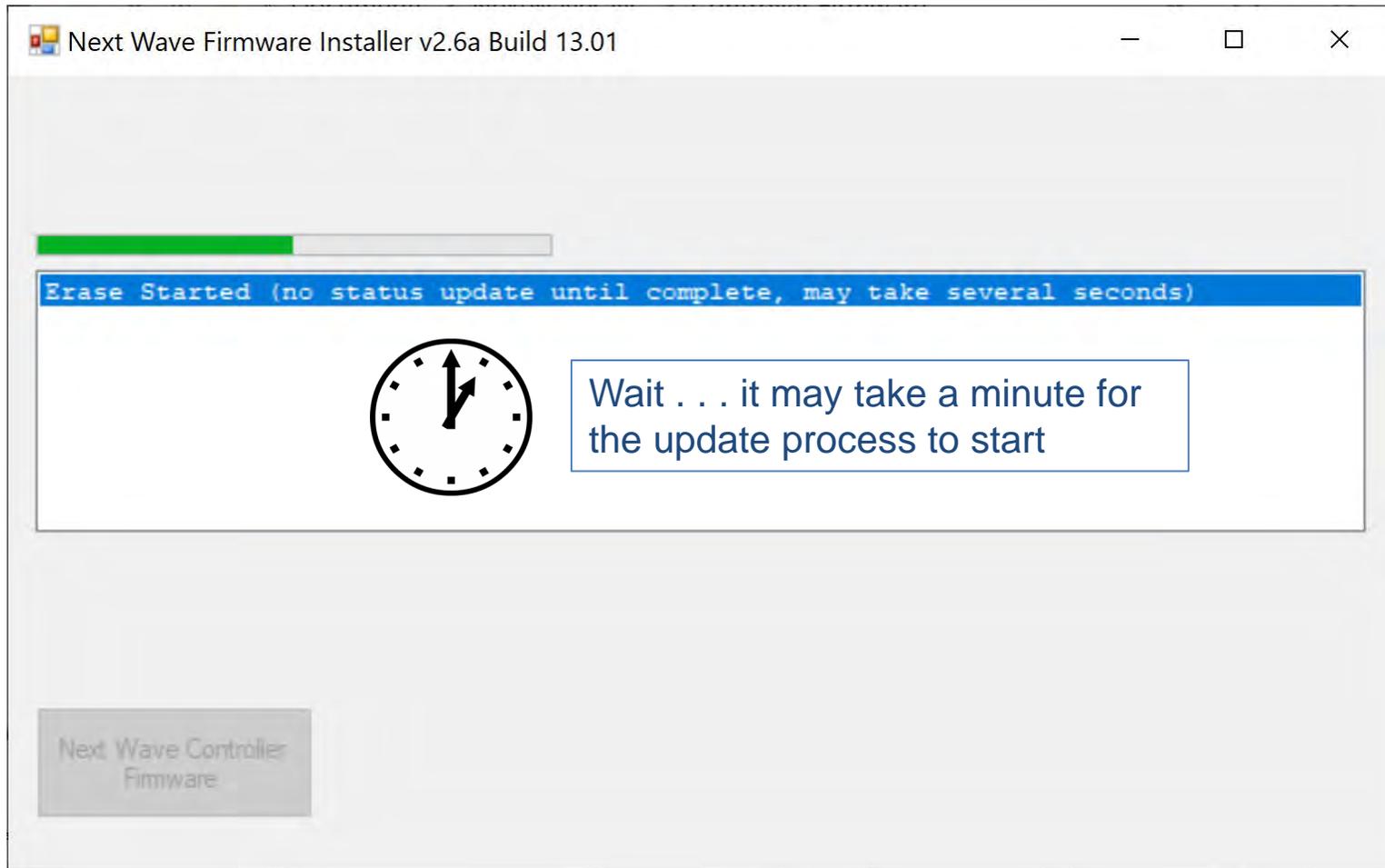
A red arrow points to the "FirmwareInstaller.exe" file. A text box with a blue border contains the following text:

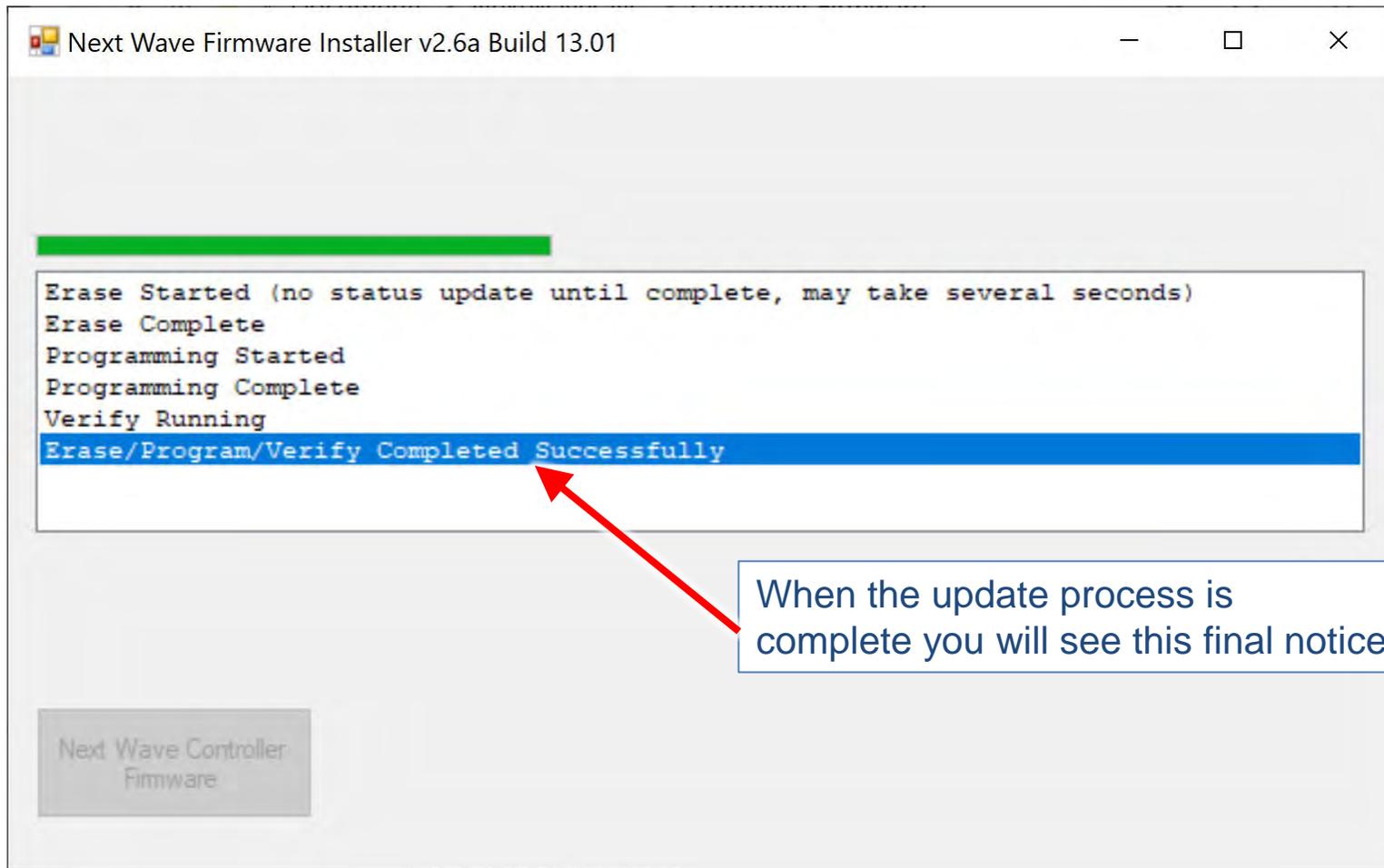
Next locate the Controller Firmware Installer file on your computer that you downloaded on page 83.

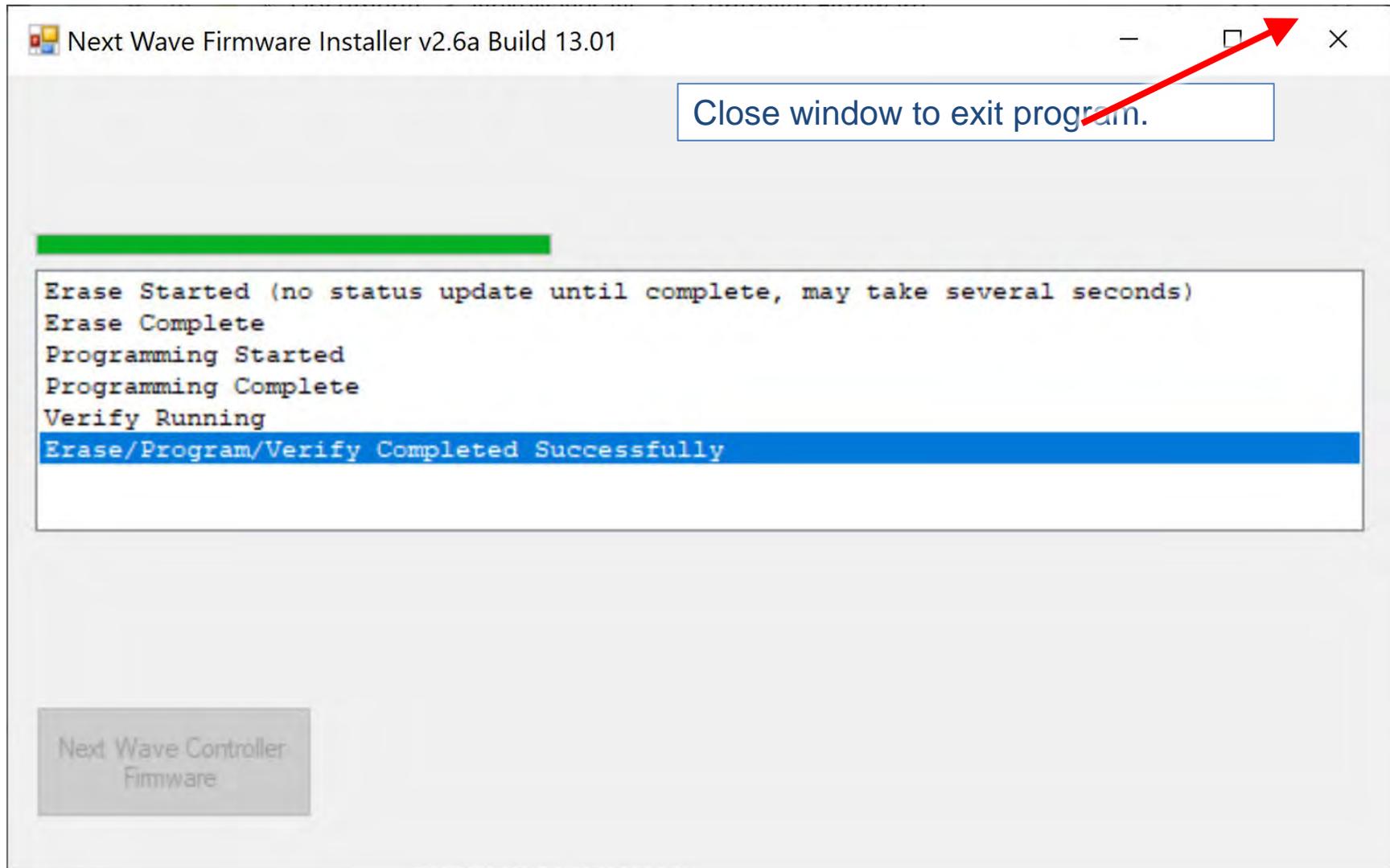
Click on this file to launch the FirmwareInstaller application.

## Controller Update Process





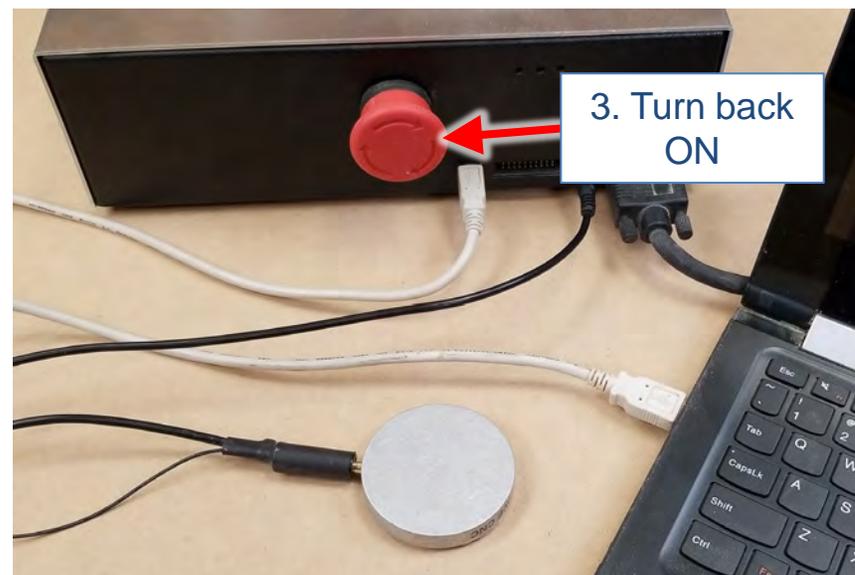
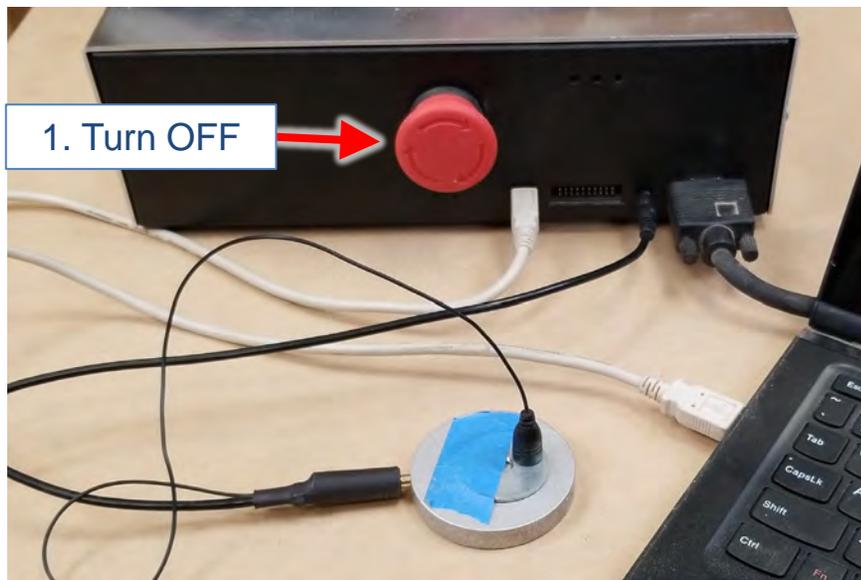




## Controller Update Process

### TOUCH PLATE technique

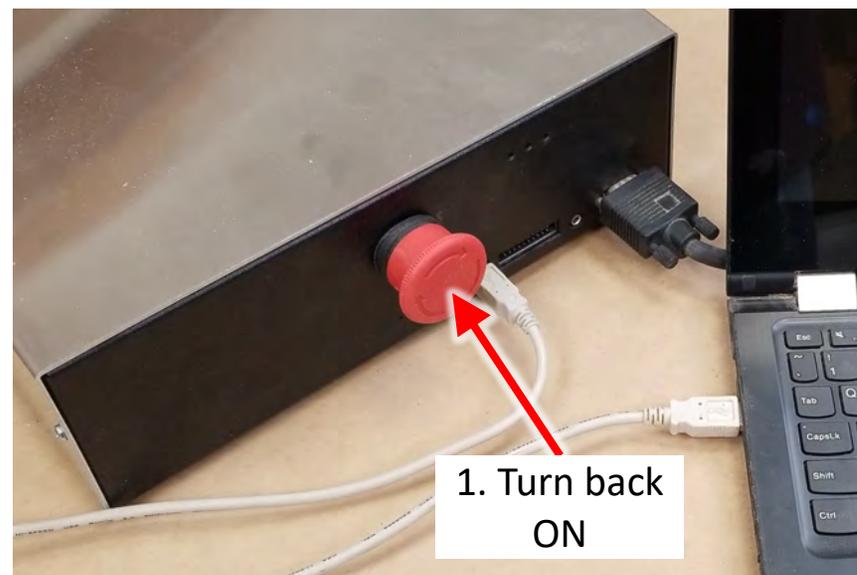
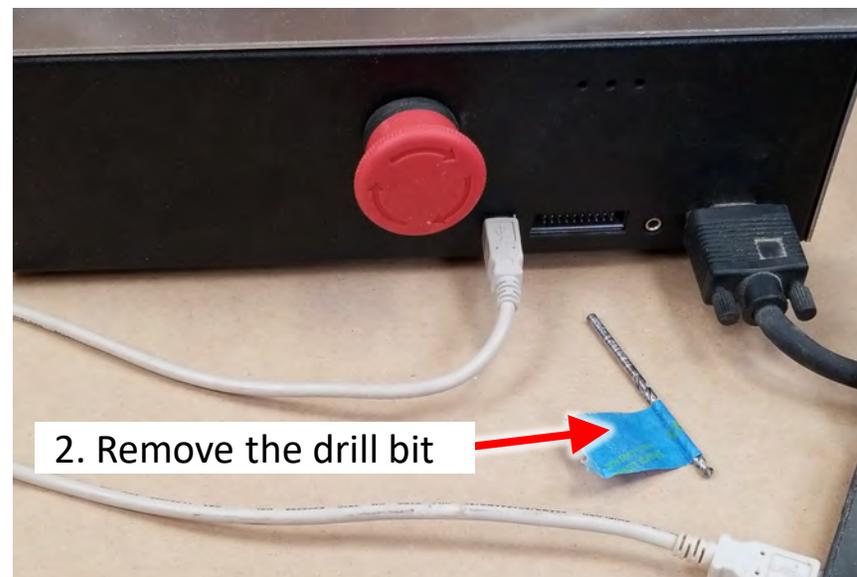
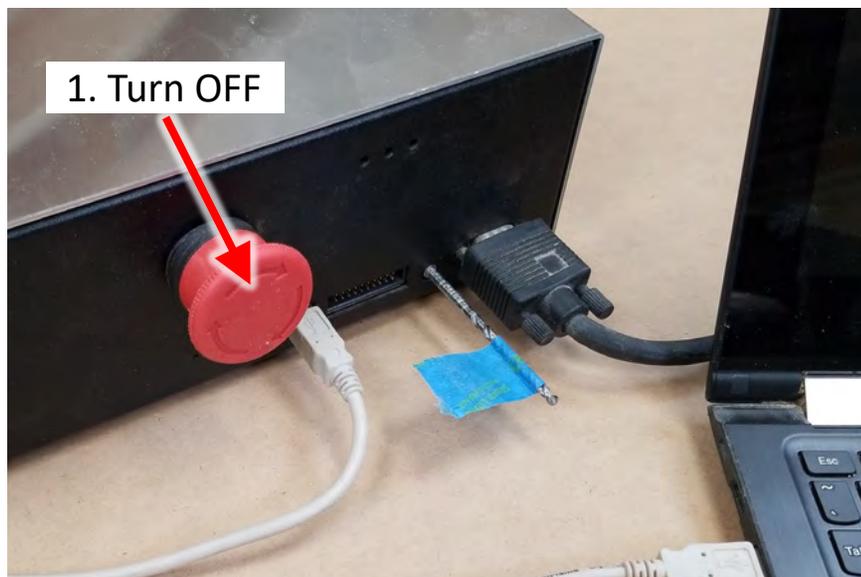
How to restart the controller – **NOT** in boot mode.



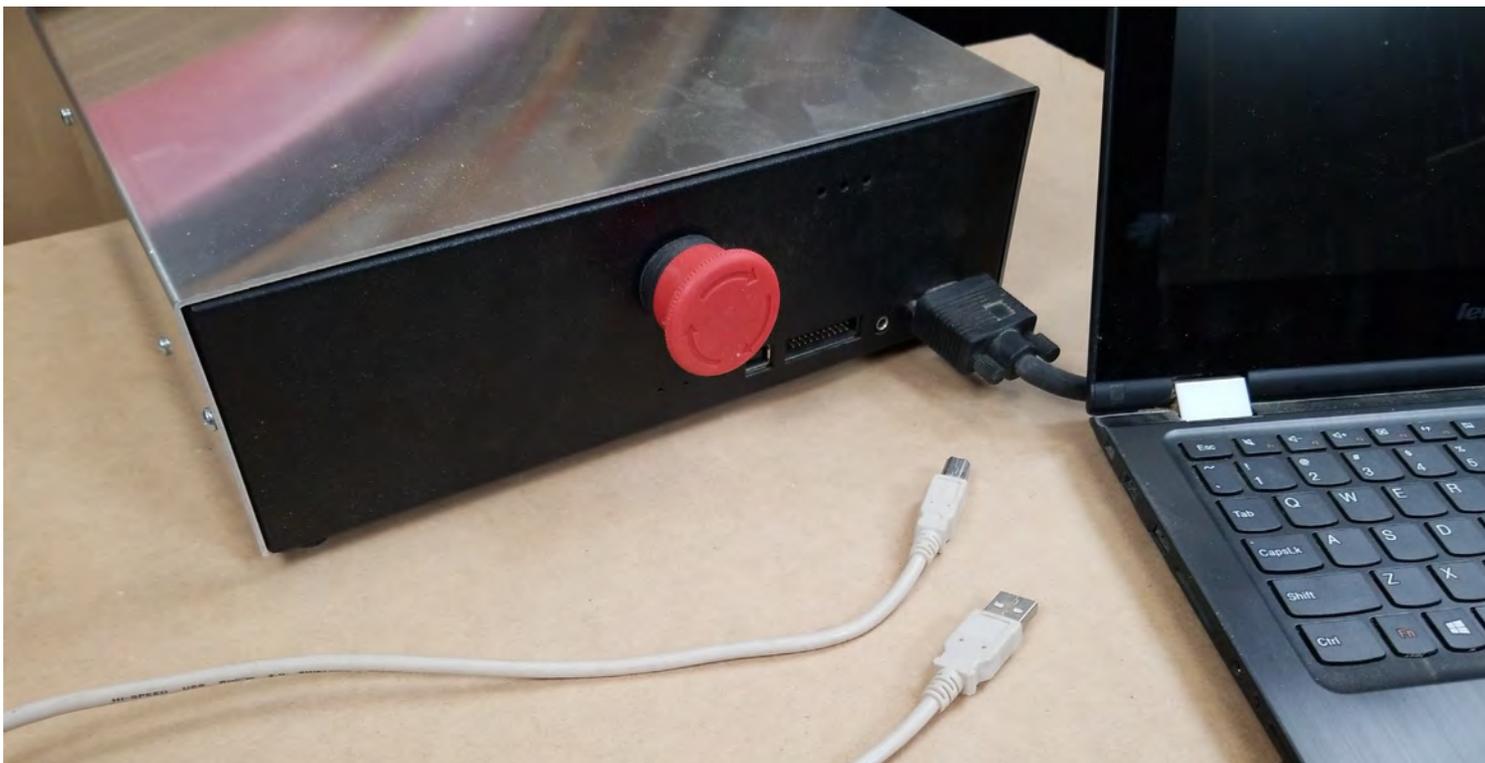
## Controller Update Process

### DRILL BIT technique

How to restart the controller – **NOT in boot mode.**



## Update Complete



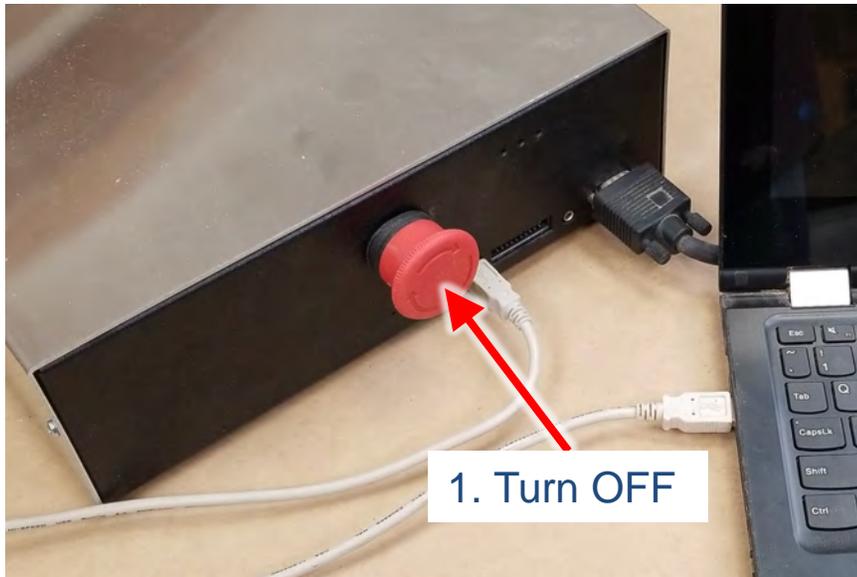
The controller firmware update process is now complete.  
You can discount the USB cable.

Proceed to the next page to start the Pendant firmware update process.

# Pendant Update Process



## Pendant Update Process



### NOTE:

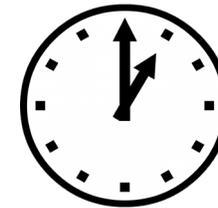
You do not need to have our computer connected to the Control Box during the Pendant firmware update process. It's OK if it is, but it's not a requirement.



## Pendant Update Process



The Pendant screen stays blank during the update process.



**The update may take a few minutes and you may hear a couple of beeps during the update process.**

## Pendant Update Process



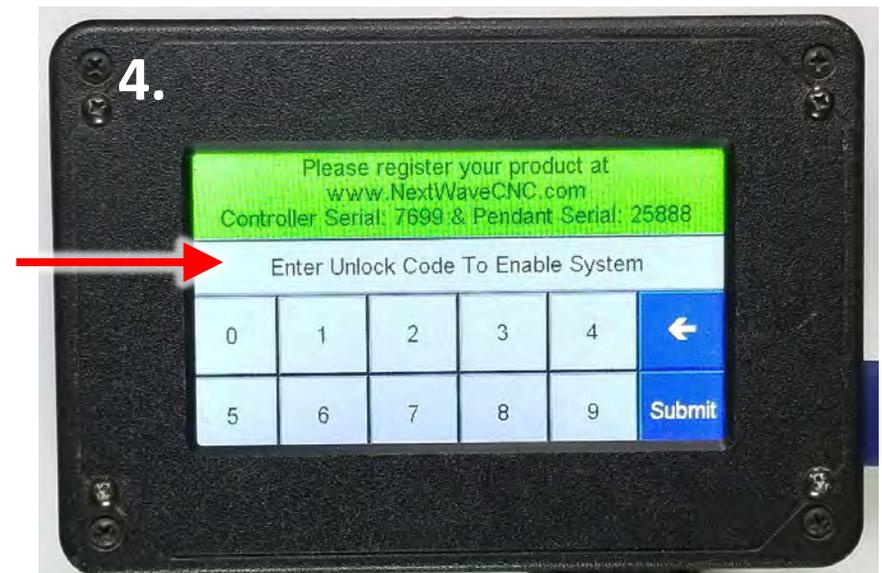
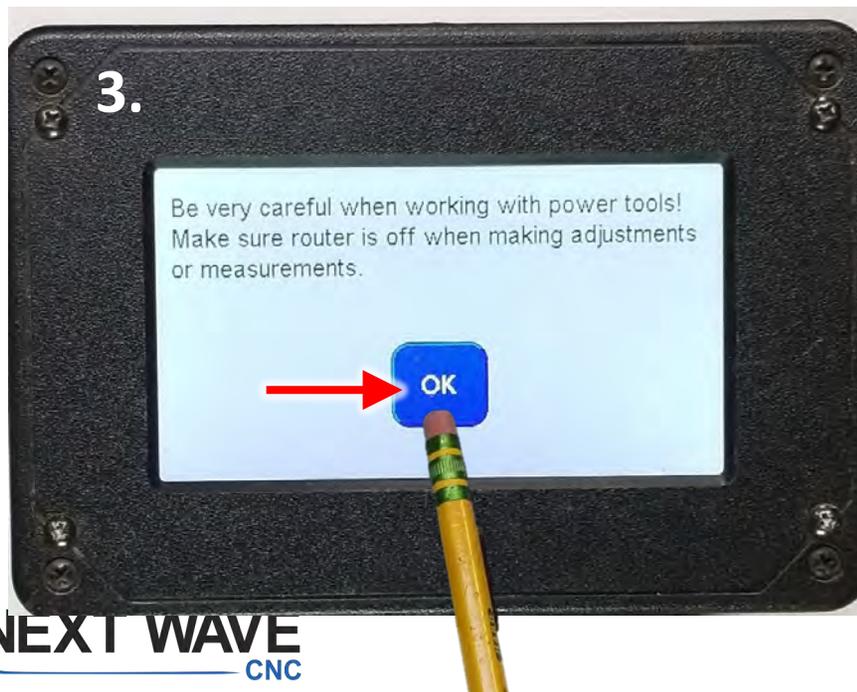
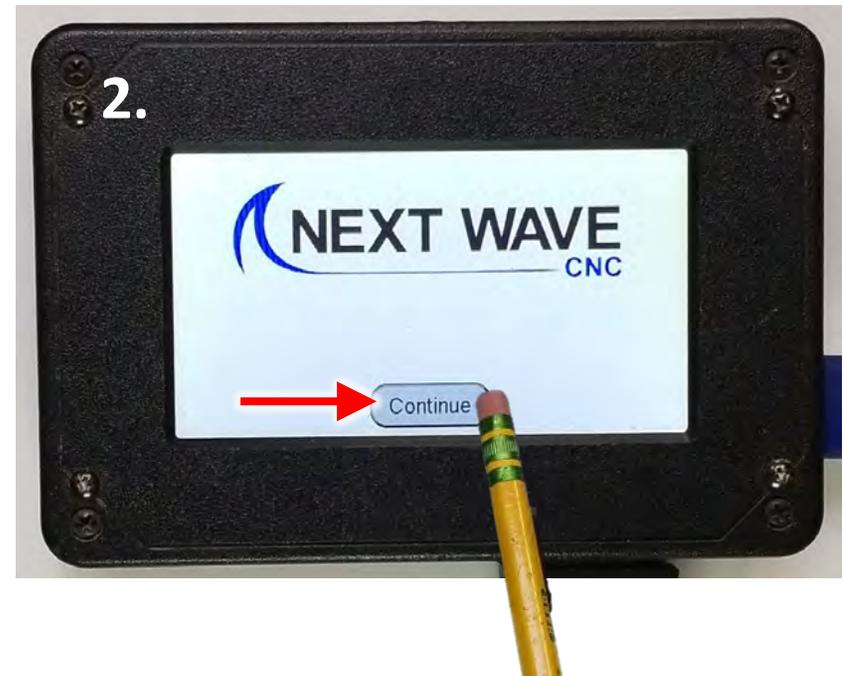
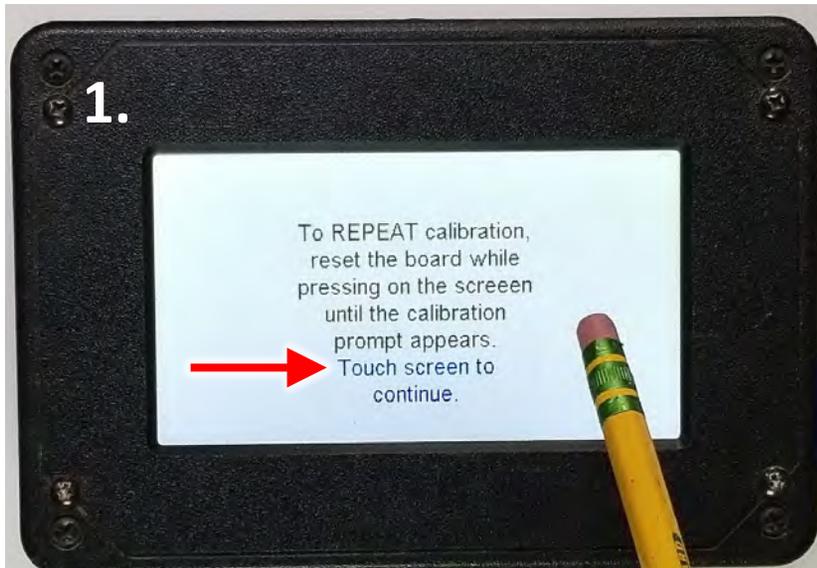
This screen appears next.  
Touch the screen to continue.

# Pendant Update Process

Touch the spots to calibrate the screen.



## Pendant Update Process



## Pendant Update Process

The main screen now appears with the new buttons.



Visit [www.NextWaveCNC.com/webinars](http://www.NextWaveCNC.com/webinars)  
For the latest info on how to use the new Pendant features.

## Pendant Update Process

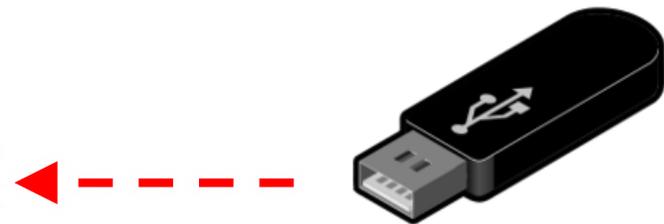


Remove USB drive

## Pendant Update Process



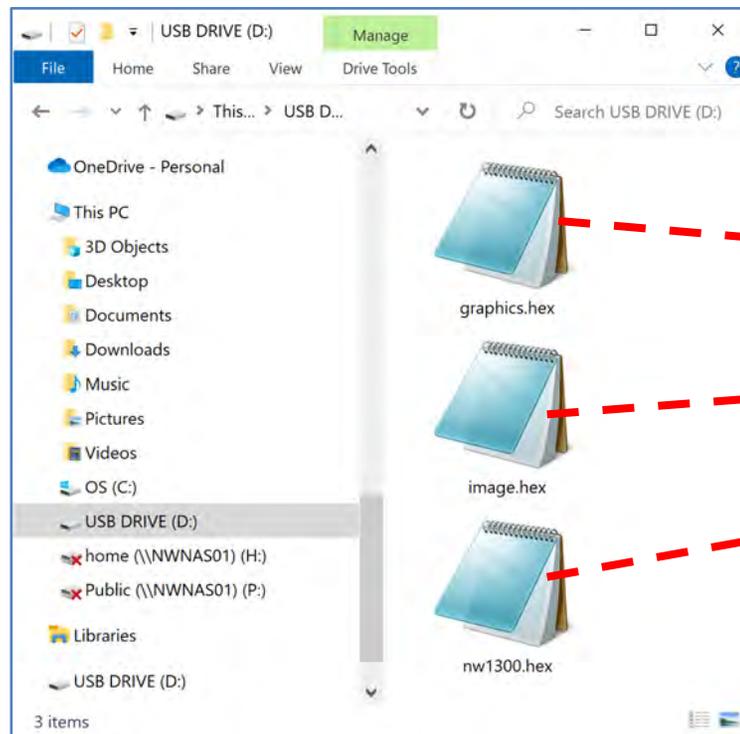
Insert the USB drive into your computer



## Pendant Update Process

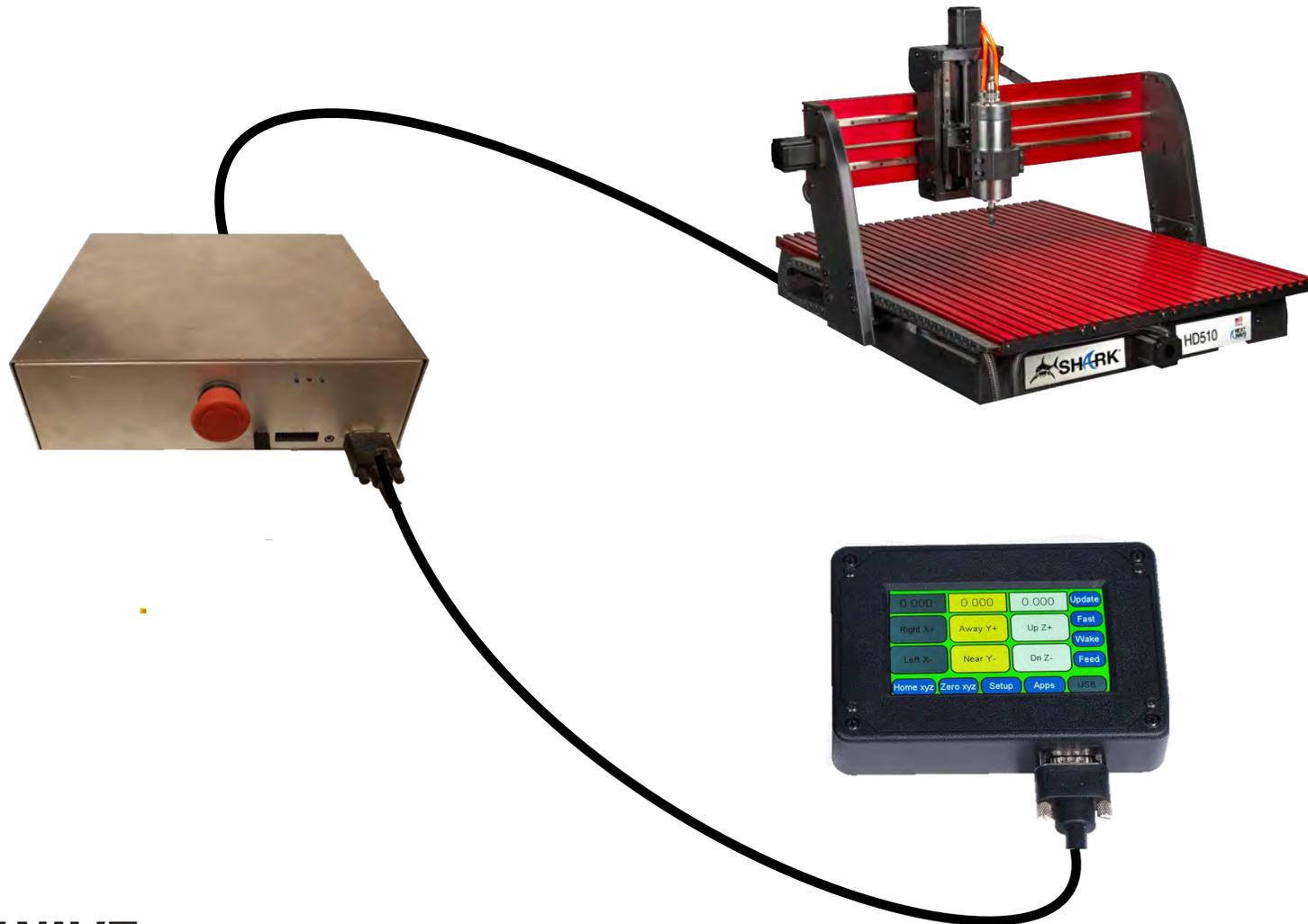
Delete the Pendant firmware files.

This prevents you from accidentally running the firmware update again the next time you use this USB drive.



## Update Complete

The Firmware in your Control Box and Pendant are now up to date and ready to use.



For the information on how to use the new Pendant features.  
Visit [www.NextWaveCNC.com/webinars](http://www.NextWaveCNC.com/webinars)



A red arrow originates from the bottom center of the text box and points vertically upwards to the "SUPPORT" link in the navigation bar.

If you have problems with your firmware update, please visit the Support Page

Or email Tech Support at:  
**[Support@NextWaveCNC.com](mailto:Support@NextWaveCNC.com)**

