
How to update the CNC Shark LCD Pendant and Controller Firmware



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April 2019

Owner manual updates

For the most recent version visit:

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NWA software and firmware updates

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www.nextwaveautomation.com/downloads-links



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Introduction

If you've not recently updated the firmware for your LCD Pendant or Controller (control box) now would be a good time to update both. New versions contain enhancements and fixes that will improve the operation of your CNC Shark and accessories. Some accessories operate best when used with newest firmware or may not operate at all with some older versions of firmware. The LCD Pendant and the Controller (control box) each require a firmware update. The instructions in this manual will guide you through the process. Follow these steps carefully and in order. The updating process takes 20-30 minutes or less. If you run into problems please contact our Customer Support team for assistance.

Customer Support - We're here to help.

Next Wave Automation Customer Support team can be reach at:

- On the web at: <https://www.nextwaveautomation.com/support>
- By email at: support@nextwaveautomation.com
- By phone at: (419)491-4520 during Mon-Fri 9AM-5PM Eastern time zone

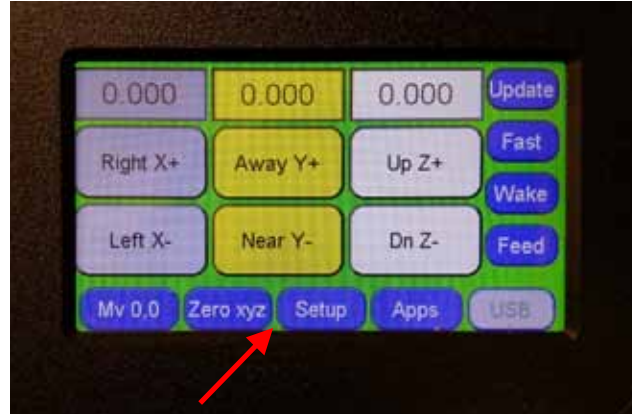
Section 1.0 – How to verify and set the Model number.



Step 1

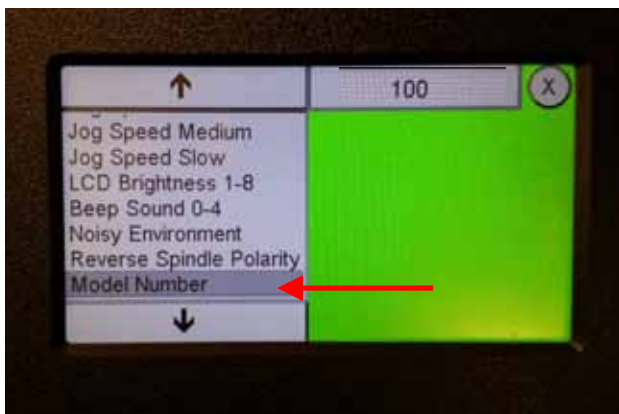
Does the opening window on the LCD Pendant show the CNC Shark logo?

- If no, continue to Step 2.
- If yes, skip to page 6



Step 2

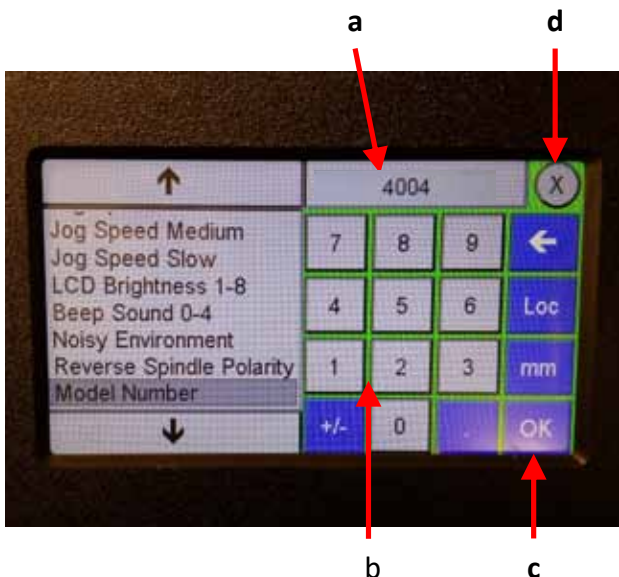
Open the **Setup** window



Setting the correct model number for your Shark activates functions and parameters that are specific to the Shark and its accessories.

Step 3

Select "**Model Number**". The current model number setting will show in the upper right.



Step 4

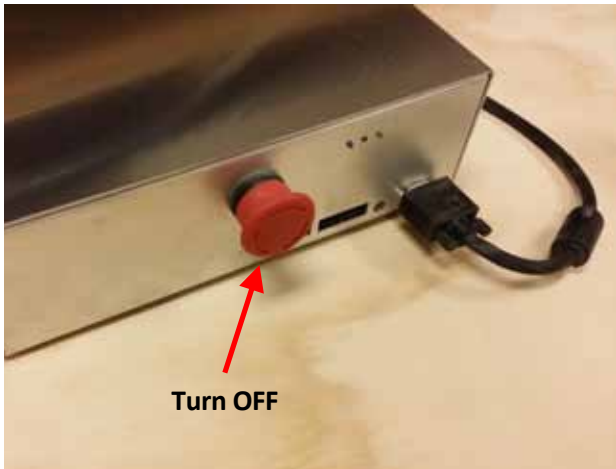
a. Press the number field at the top. This will activate the keyboard.

b. Using the keypad, enter the number 4004. This is the correct model number for the Shark.

c. Press the OK in the lower right to apply the change.

d. Press the X in the upper right to close this window.

1.0 - Setting the Model number (cont.)



Step 5
Turn OFF Control box. Wait 60 seconds.



Step 6
Turn ON Control box back on.



Step 7
The LCD Pendant should now show the CNC Shark logo.
The LCD Pendant is now set to the correct Model number for the Shark.

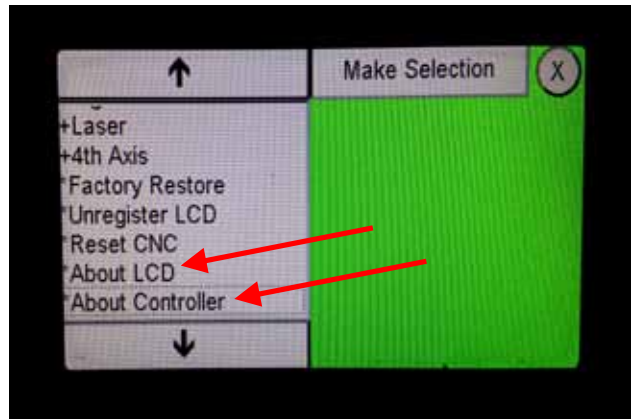
Continue to Section 2.0 on page 6

End of Section 1.0

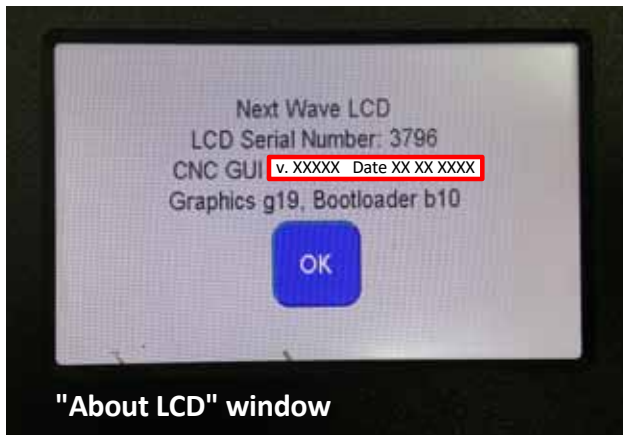
Section 2.0 – How to identify the firmware on your machine



Step 1 – Open the **Apps** window.

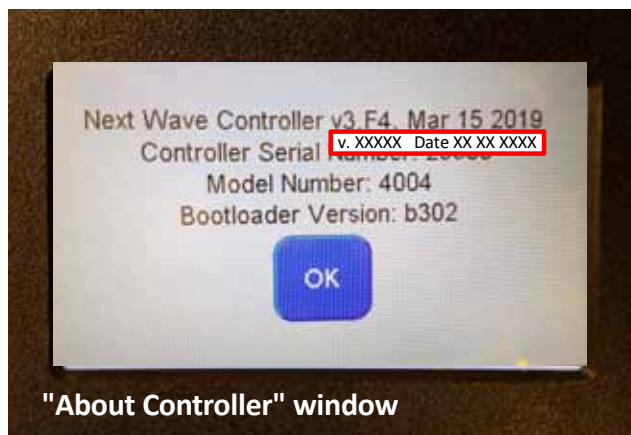


Step 2 - Scroll to the bottom of the list until you see **About LCD** and **About Controller**. Open each of these windows to view the firmware version information.



"About LCD" window

Record your current version _____



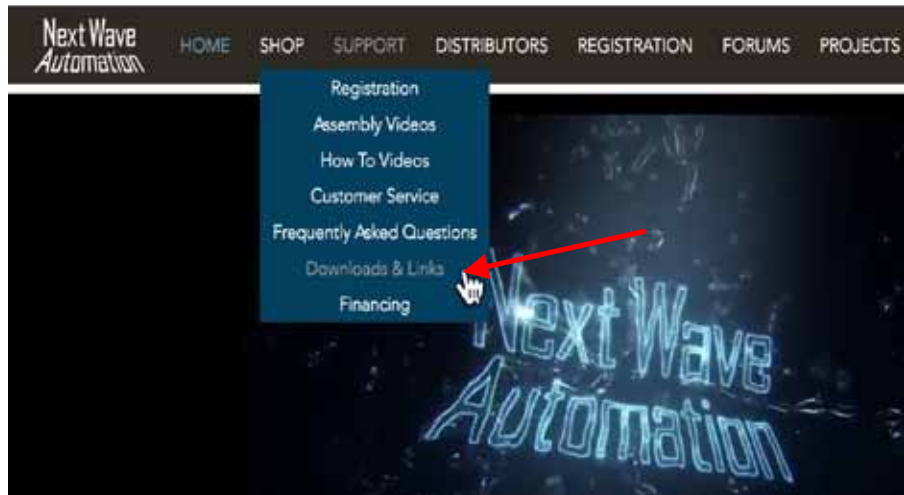
"About Controller" window

Record your current version _____

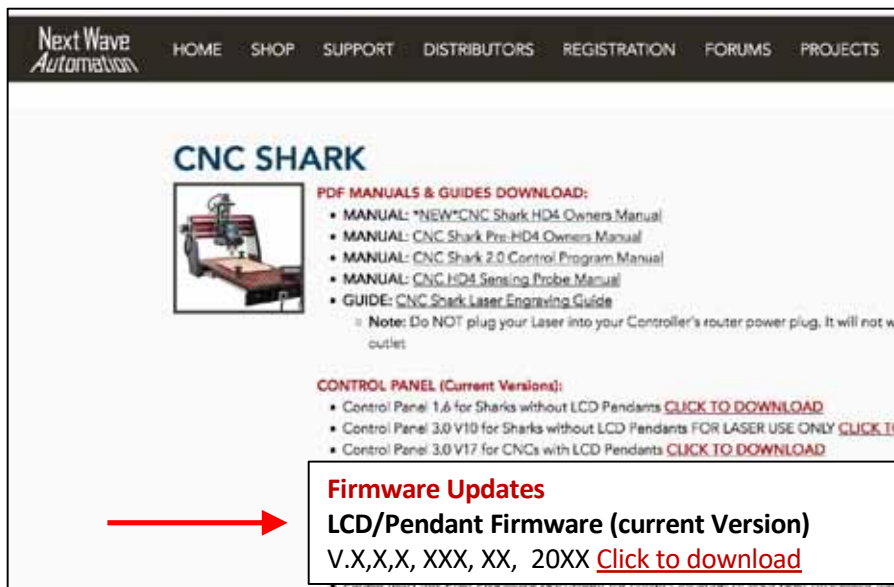
Step 3 – Record the LCD Pendant firmware and Controller firmware version numbers from the "About" windows. This information and these windows will be referenced later in the update process.

End of Section 2.0

Section 3.0 – How to update the LCD Pendant firmware



Step 1 – Go to <https://www.nextwaveautomation.com/downloads-links>



Step 2

Scroll down to the Shark section and **the LCD/Pendant firmware** update.

- If the version of the firmware listed on the web is the same as the one on your "About LCD" screen (page 6), then you do not need the update. Instead, skip to Section 4.1 or 4.2 and start the Controller update process.
- If the LCD/Pendant Firmware on the web is different from the one on your "About LCD" screen (page 6) then download the new version and proceed to Step 3 on the next page.

3.0 – LCD Pendant update (cont.)

NOTE: The "current" version of firmware on the web may differ from one shown below.

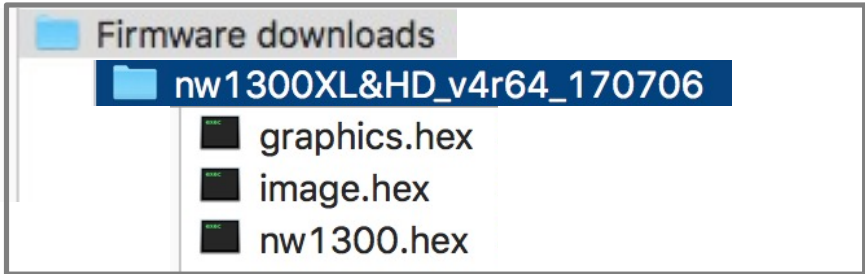


Version number (4r64)
Version date (170706 = July 06, 2017)

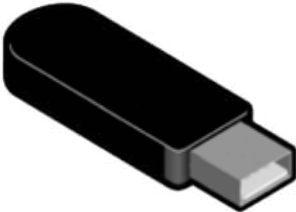
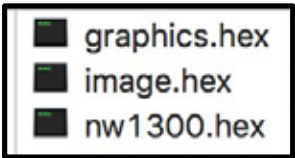
Step 3 – Save the file to a folder on your computer. It will download as a .zip file.



Step 4 - Double click on .zip file to expand the file folder

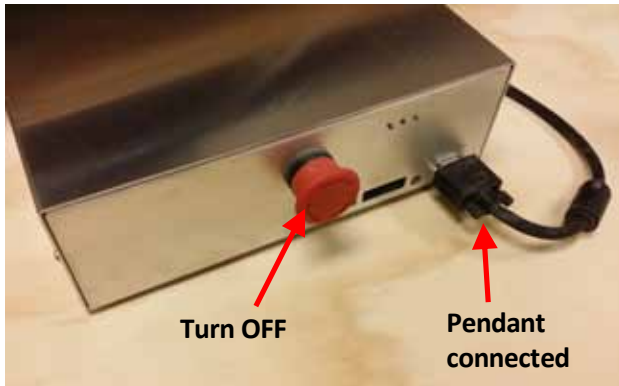


Step 5 – Open the folder.
You should see three .hex files.



Step 6 – Move or copy the three .hex files to a USB drive.
DO NOT put them in a folder. Keep them in the main file.

3.0 – LCD Pendant update (cont.)



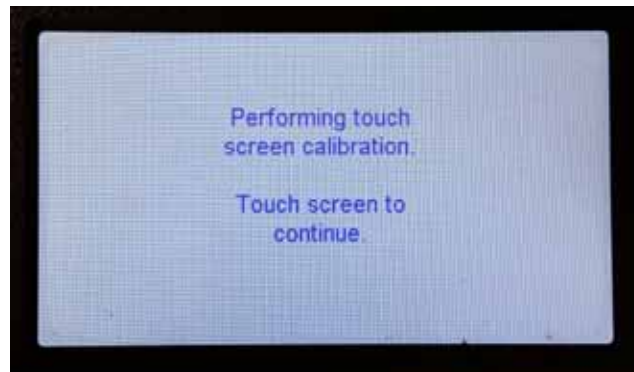
Step 7
Turn the power **OFF** to the Shark control box.



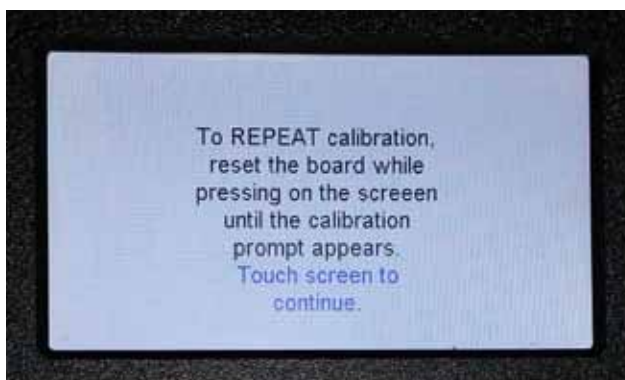
Step 8
Insert thumb drive into pendant.



Step 9
Turn the power **ON** to the Shark control box.



Step 10
After about 1-2 minutes this screen will appear. Follow the prompts to calibrate the screen.

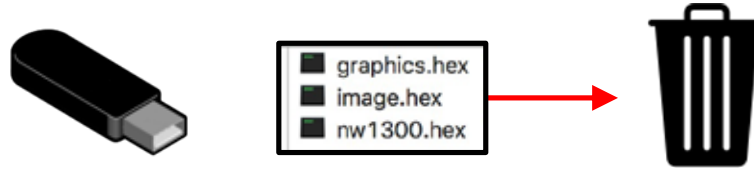


Step 11
Press this screen to continue.



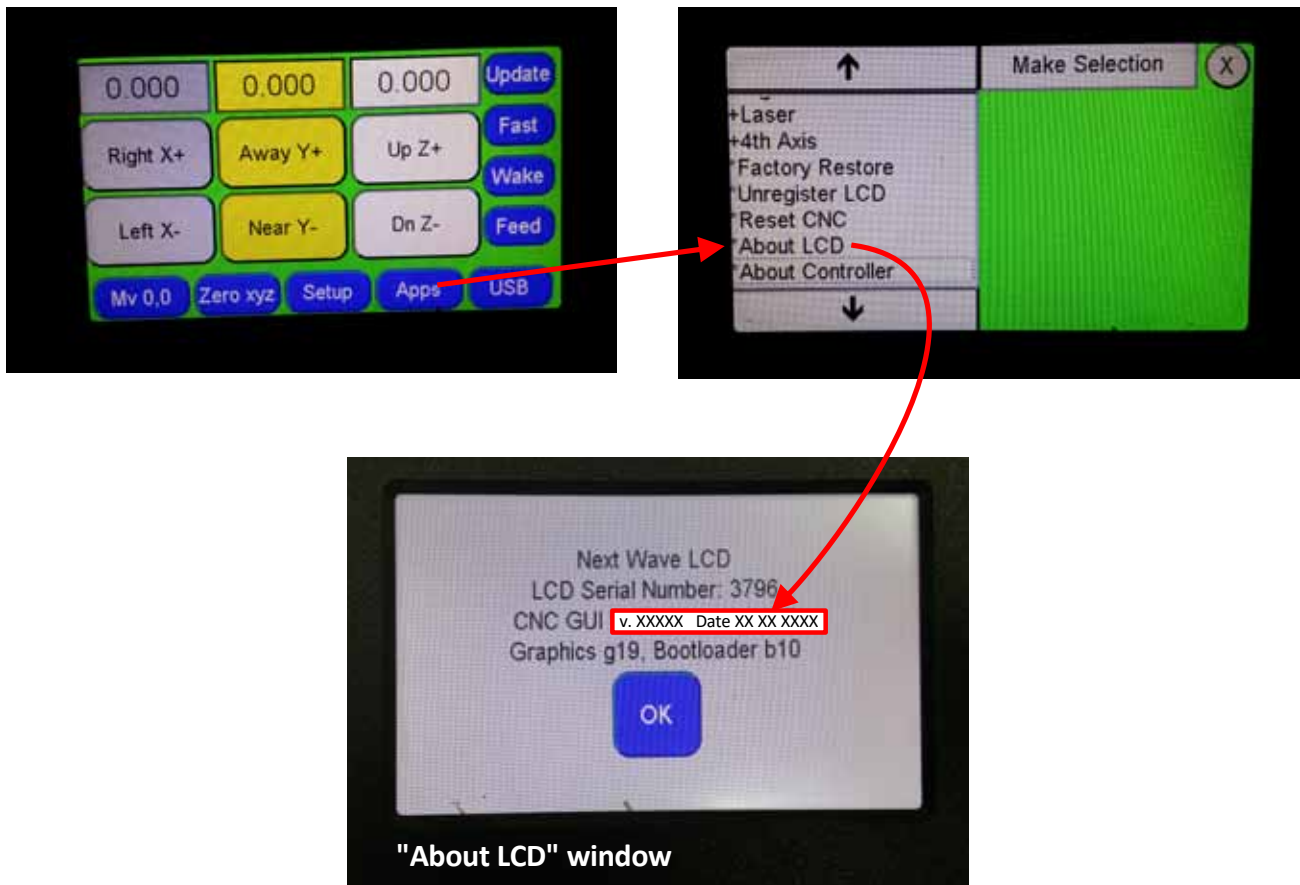
Step 12
When the logo screen appears, remove the thumb drive.

3.0 – LCD Pendant update (cont.)



Step 12 (IMPORTANT)

Take USB drive back to your computer and delete the .hex files from the USB drive. Removing the files from the USB drive will prevent unplanned firmware updates the next time you plug the USB drive into your Pendant.



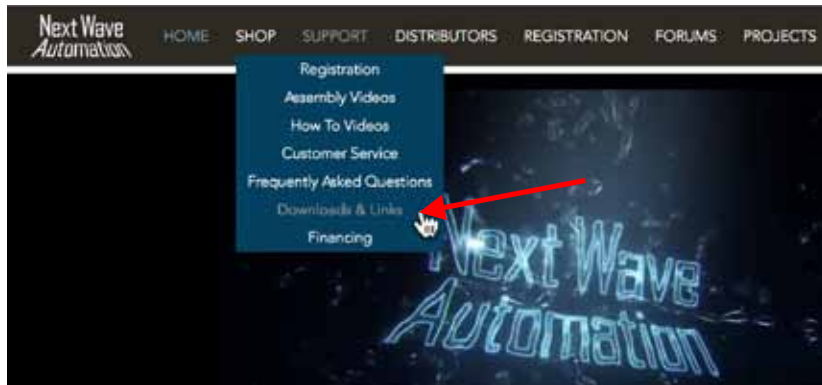
Step 13

Verify that LCD Pendant has updated to the firmware version that you downloaded. Compare the "About LCD" window information with the version of the firmware file that you downloaded.

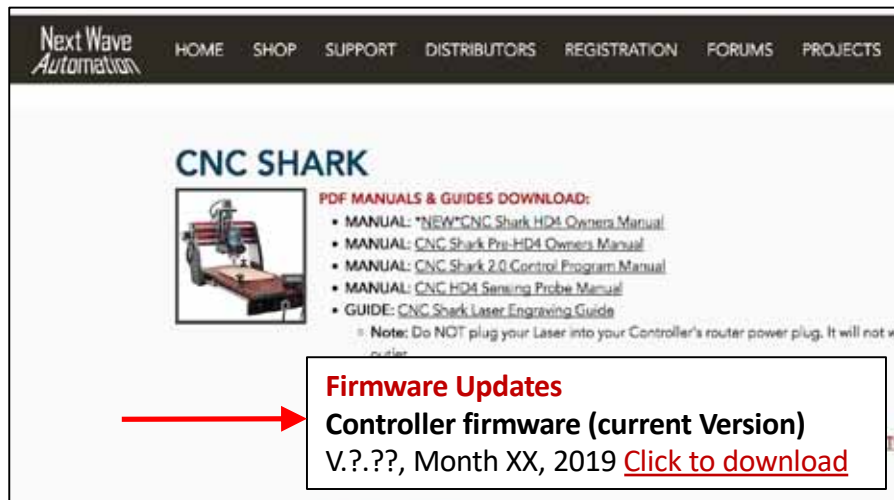
Your LCD Pendant firmware is now current.

End of Section 3.0

Section 4.1 – How to update the Controller firmware using a touch plate



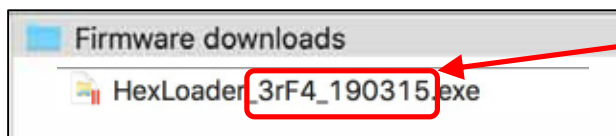
Step 1 – Go to <https://www.nextwaveautomation.com/downloads-links>



Step 2

Scroll down to the Shark section and the **Controller firmware update**.

- If the version of the firmware listed on the web is the same as the one on your "About Controller" screen (page 6), then you do not need the update at this time.
- If the LCD/Pendant Firmware on the web is different from the one on your "About Controller" screen (page 6) then download the new version and proceed to Step 3.

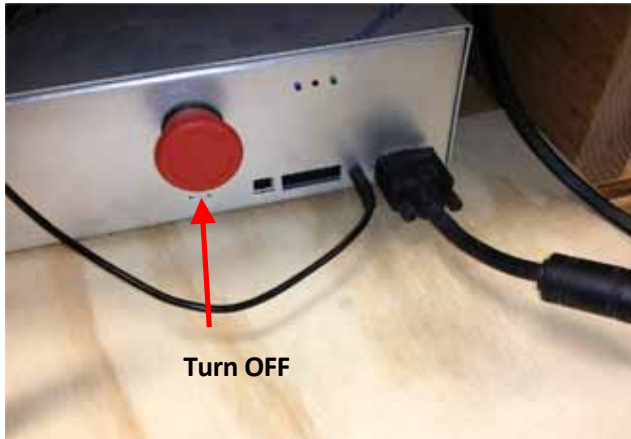


Version number (3rF4)
Version date (190315 = March 15, 2019)

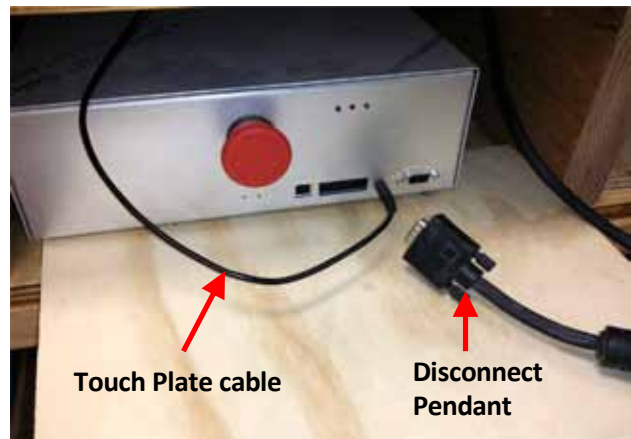
Step 3 – Save the file to a folder on your computer.
It will download as a .exe file.

NOTE: The "current" version of
firmware on the web may
differ from one shown below.

Section 4.1 Update with a touch plate (cont.)



Step 4 – Turn **OFF** power to the control box.



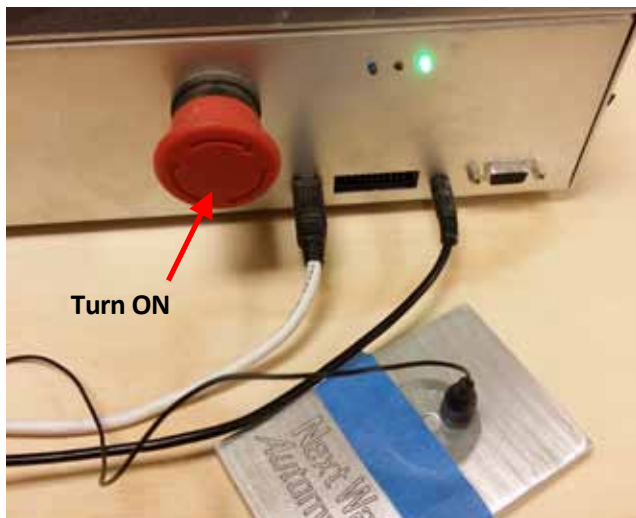
Step 5 – Disconnect Pendant cable



Step 6 – Connect your computer to the control box with a USB A/B (printer style) cable.



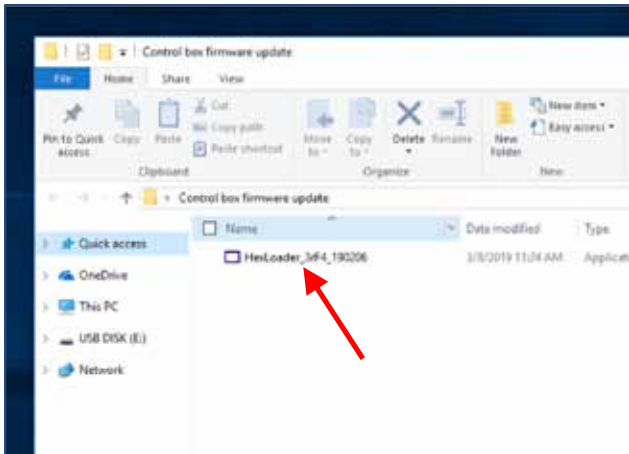
Step 7 – Tape a steel washer to your touch plate and attached the magnet to the washer. This connection is required when updating the firmware.



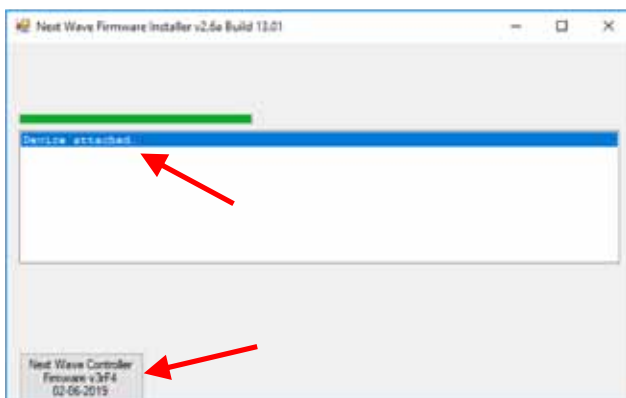
Step 8 – Turn **ON** the power to the control box. The green will flash a few times and then glow steady or go off completely. Either is OK.

- If the green light doesn't flash when the controller is turned on, check the washer and magnet connections, and try again. If it still doesn't work, contact our Customer Support team for help (page 2).

Section 4.1 Update with a touch plate (cont.)

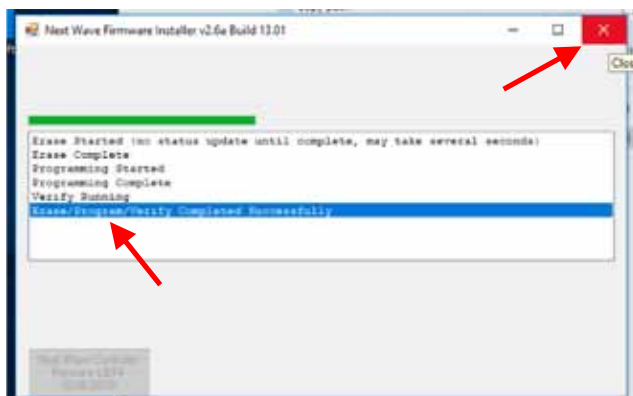


Step 9 – Navigate to the .hex file on your computer. Click on the file to open the update window.



Step 10

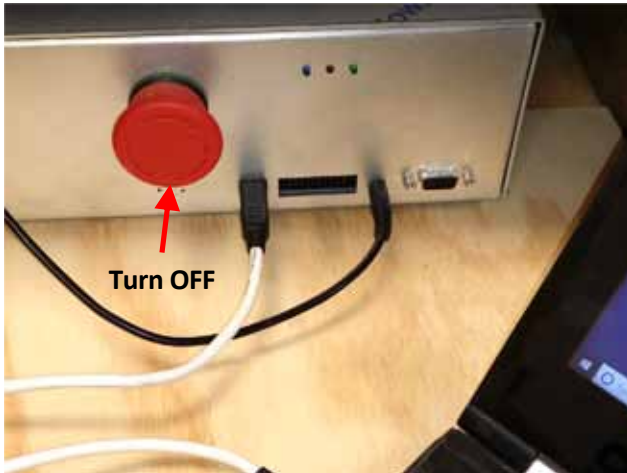
- This window should now appear. It should say "Device attached" If it **doesn't** say "Device Attached" close window, turn off power to the control box and repeat steps 8 and 9. If it still fails, contact Customer Support (see page 2).
- Click on button in lower left to start the update.



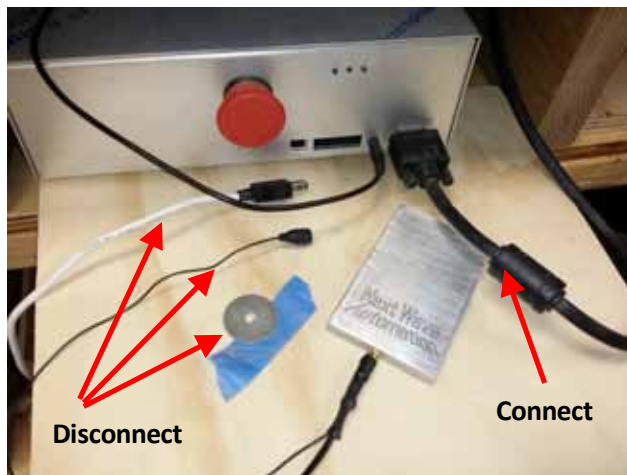
Step 11

- When the file is done running. You should see this message on the screen. The update should should only take a minute or two.
 - Click on the red X to close the window
- If the update does not completely run, please retry it from the start. If this still doesn't work, please contact our Customer Support team (page 2).

Section 4.1 Update with a touch plate (cont.)



Step 12 – Turn off power to Control box



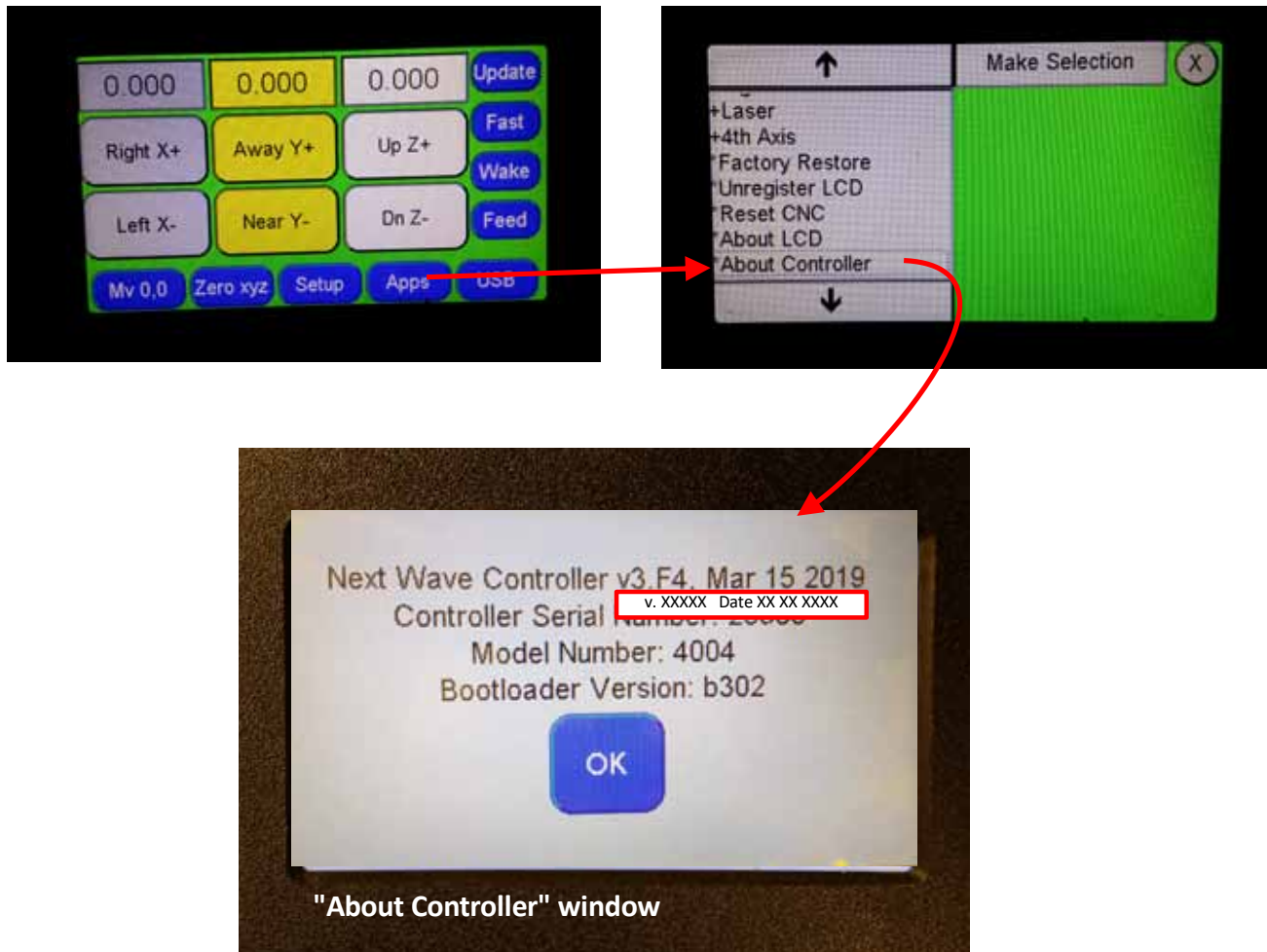
Step 13

- Disconnect USB cable and remove magnet and washer from touch plate.
- Connect the LCD Pendant Cable



Step 14 – Turn ON Power to the Control Box.

Section 4.1 Update with a touch plate (cont.)



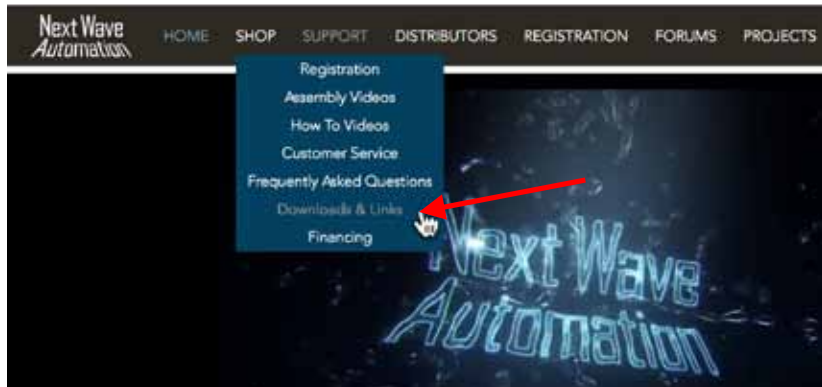
Step 15

Verify that the controller has updated to new firmware version. Go to the About Controller window. The version number should now match the version that you downloaded from the website.

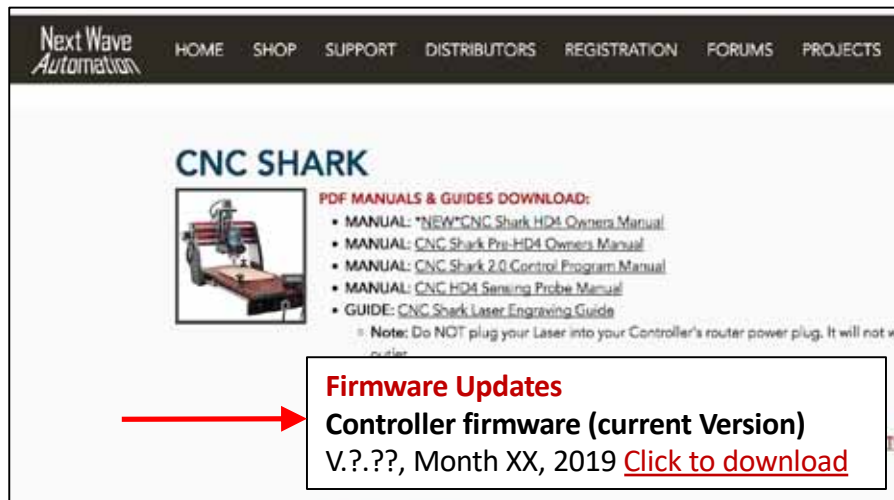
Your Controller firmware is now current.

End of Section 4.1

Section 4.2 - How to update the Controller firmware without a touch plate



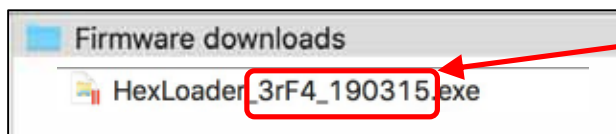
Step 1 – Go to <https://www.nextwaveautomation.com/downloads-links>



Step 2

Scroll down to the Shark section and the **Controller firmware update**.

- If the version of the firmware listed on the web is the same as the one on your "About Controller" screen (page 6), then you do not need the update at this time.
- If the LCD/Pendant Firmware on the web is different from the one on your "About Controller" screen (page 6) then download the new version and proceed to Step 3.

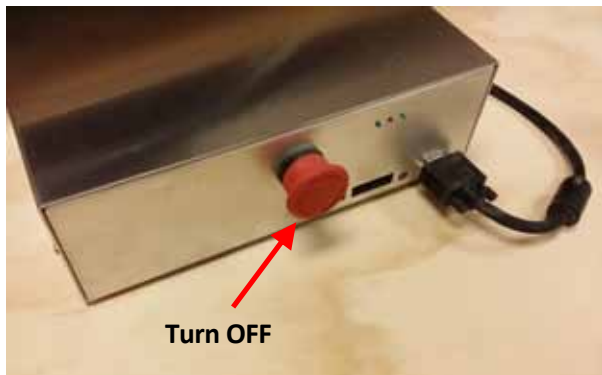


Version number (3rF4)
Version date (190315 = March 15, 2019)

Step 3 – Save the file to a folder on your computer.
It will download as a .exe file.

NOTE: The "current" version of
firmware on the web may
differ from one shown below.

Section 4.2 Update without a touch plate (cont.)



Step 4 – Turn **OFF** power to the control box.



Step 5 – Disconnect Pendant cable



Step 6 – Connect your computer to the control box with a USB A/B (printer style) cable.



Step 7 – Put a piece of tape on the cutting end of a 1/8-in. dia. drill bit.



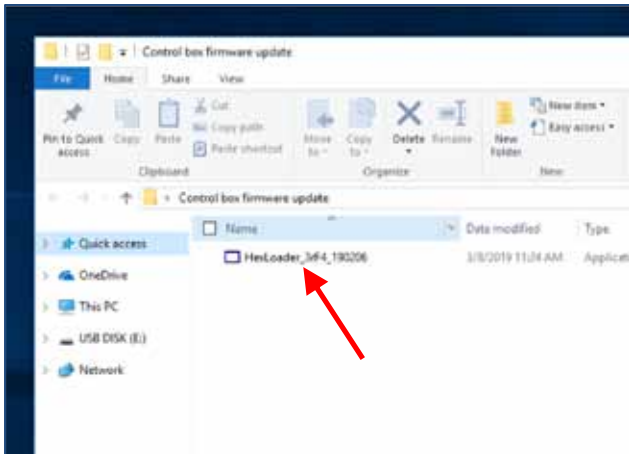
Step 8 – Insert the smooth end of the drill bit into the touch plate port.



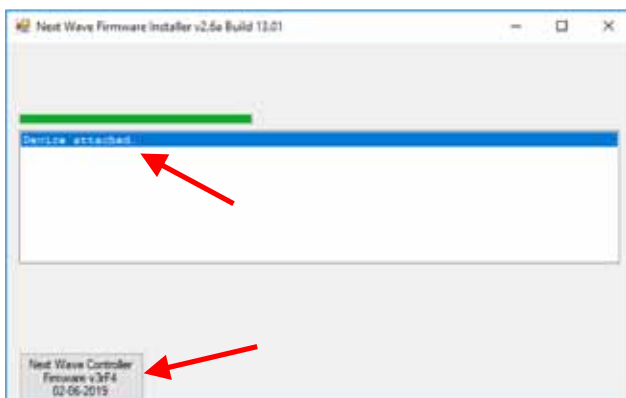
Step 9 – Turn **ON** the power to the control box. The green will flash a few times and then glow steady or go off completely. Either is OK.

- If the green light doesn't flash when the controller is turned on, check the washer and magnet connections, and try again. If it still doesn't work, contact our Customer Support team for help (page 2).

Section 4.2 Update without a touch plate (cont.)

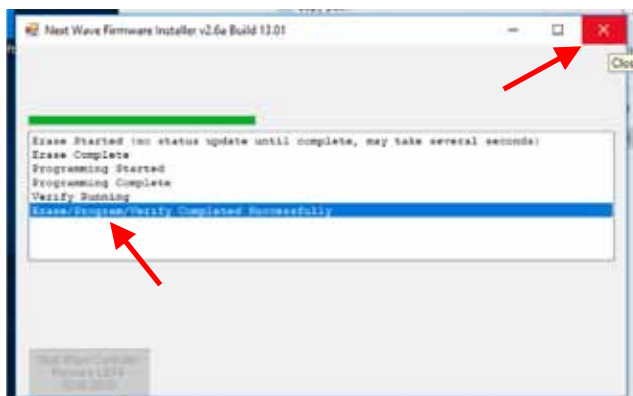


Step 10 – Navigate to the .hex file on your computer. Click on the file to open the update window.



Step 11

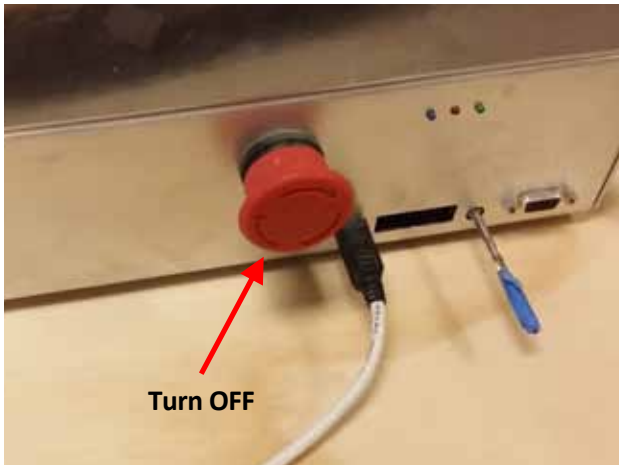
- This window should now appear. It should say "Device attached" If it **doesn't** say "Device Attached" close window, turn off power to the control box and repeat steps 9 and 10. If it still fails, contact Customer Support (see page 2).
- Click on button in lower left to start the update.



Step 12

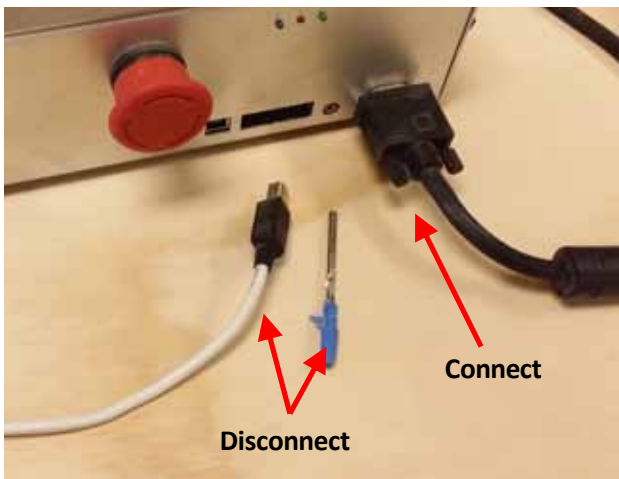
- When the file is done running. You should see this message on the screen. The update should should only take a minute or two.
 - Click on the red X to close the window
- If the update does not completely run, please retry it from the start. If this still doesn't work, please contact our Customer Support team (page 2).

Section 4.2 Update without a touch plate (cont.)



Step 13

Turn OFF the power to Control box



Step 14

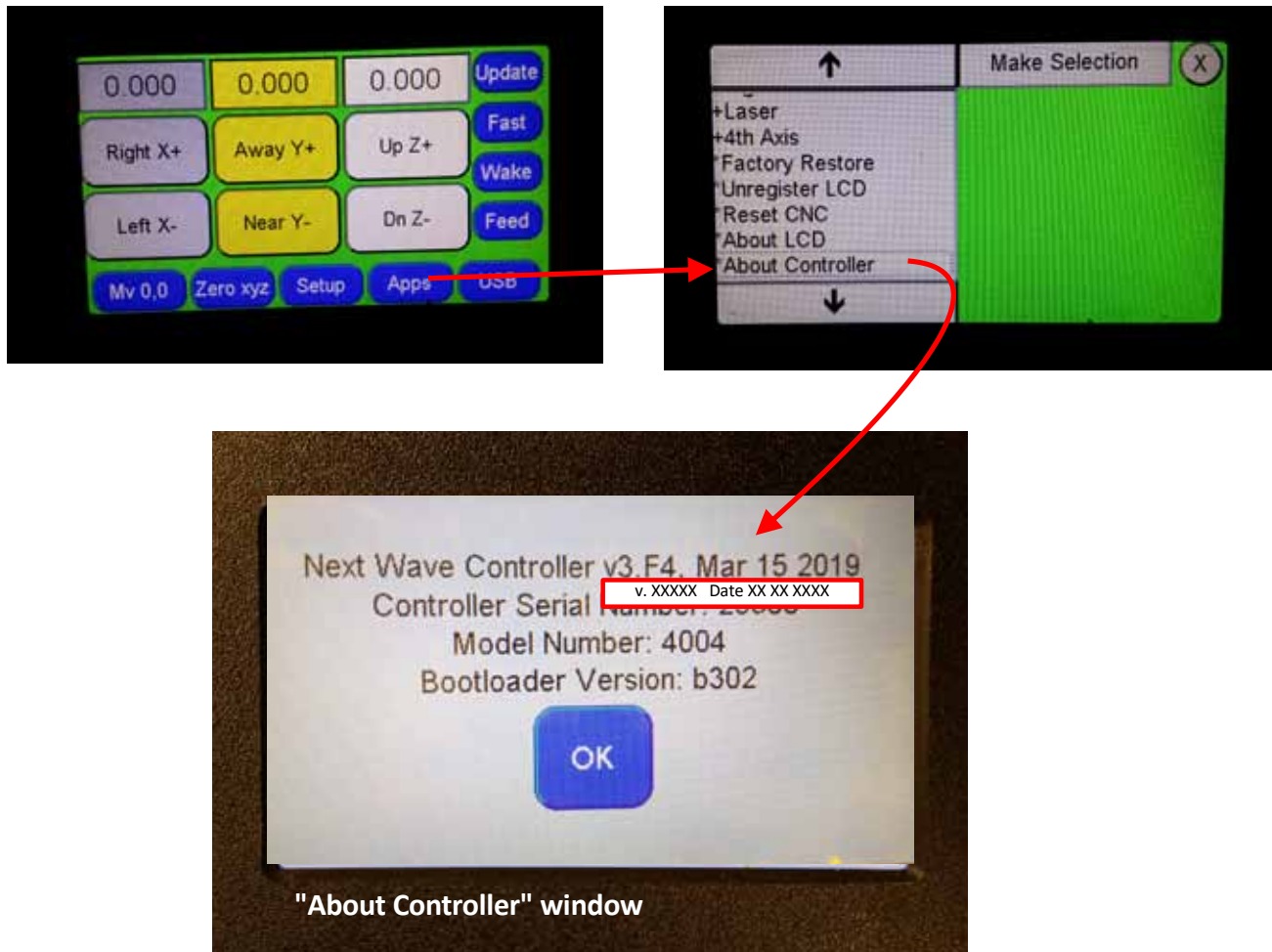
- Disconnect USB cable and remove drill bit from the touch plate port.
- Connect the LCD Pendant Cable



Step 15

Turn ON the Power to the Control Box.

Section 4.2 Update without a touch plate (cont.)



Step 16

Verify that the controller has updated to new firmware version. Go to the About Controller window. The version number should now match the version that you downloaded from the website.

Your Controller firmware is now current.

We're here to help.

If your controller did not update correctly, try the process a second time and then contact Customer Support for help.

Next Wave Automation Customer Support can be reach at:

On the web at: <https://www.nextwaveautomation.com/support>

By email at: support@nextwaveautomation.com

By phone at: (419)491-4520 during Mon-Fri 9AM-5PM Eastern time zone

End of Section 4.2

