

Vision 1624, 2525 and 2550 Router/Engraver Installation Guide

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Factory Settings

Red Dot Laser Pointer Offset

X _____ Inches ___ mm ___
Y _____ Inches ___ mm ___

Braille Inserter Offset

X _____ Inches ___ mm ___
Y _____ Inches ___ mm ___

This is **ONLY** the Installation Guide.
PLEASE review the complete User Manual
for your machine, which will be installed on
your computer after the software
installation is completed.

Vision Engravers and Routers Installation Guide

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1 Introduction

This guide contains information to prepare the new owner of a Vision 1624R, 2525 or 2550 router/engraver for the proper installation of their machine. It is the customer's responsibility to read through this guide and make sure the work area, electrical and computer requirements are met prior to the arrival of a representative from Vision for the scheduled installation/machine orientation date. If for any reason, there are questions about these requirements, please call your Vision representative as soon as possible. **IMPORTANT** – Once your training day is scheduled, if for any reason you have to cancel training or change the dates, you may be subject to fees associated with your change request. However, if the trainer arrives at your facility on the day of training and you have to cancel or reschedule training at that time, a fee of \$750 will be required before Vision will send the trainer back to your facility in addition to fees associated with your change request. No exceptions.

In the following sections, the complete machine and Vision software installation will be outlined. There are three connection configurations possible with the Vision router/engraver.

The first is a direct cable connection to your computer via the network port. There is a special "crossover" cable (the cable colored gray) supplied for this connection type. This configuration is for a stand alone computer that is NOT connected to a WIRED network or internet. A connection can be made to a computer that is connected to a wireless network in this manner.

The second configuration is for connection through a wired network using a standard Ethernet cable (DO NOT use the crossover cable when connecting to a network). In this configuration, the engraver or router will be recognized as a network device. Connection in this manner is the easier of the two connection types. If there are no network connections available, a network hub can be added to allow connection to your network.

The third configuration is for a connection from the computer to a hub (or router) and then to your machine. This is WITHOUT a computer network. Standard Ethernet cables are used in this configuration.

Please call your distributor or the service department at Vision for assistance if you are having problems with this procedure.

FOR MORE DETAILED INFORMATION, PLEASE REFER TO THE USER GUIDE FOR YOUR MACHINE INSTALLED WITH THE VISION SOFTWARE. USER GUIDES ARE ALSO AVAILABLE ONLINE AT <http://www.visionengravers.com/support/vision-engraver-manuals.html>

To begin installation, locate the White/Blue Dongle or Orange Dongle or USB Stick included with your machine in the Accessories Box

Important Note:

The Vision software is available in two versions; one with a dongle, and one that is "dongle-less" and is loaded on to a USB Memory stick.

If your machine was delivered with, or you currently have the white/blue or orange software dongle, DO NOT LOSE IT!

The Vision software will NOT run without the dongle plugged into the computer.



1.1 Computer Requirements

IT IS HIGHLY RECOMMENDED THAT THE COMPUTER USED TO OPERATE THE VISION ENGRAVER OR ROUTER BE CONNECTED TO THE INTERNET. THIS ALLOWS THE USER TO ALLOW VISION'S TECHNICAL SUPPORT TO ACCESS THE MACHINE AND TROUBLESHOOT IF NECESSARY.

Minimum System Requirements

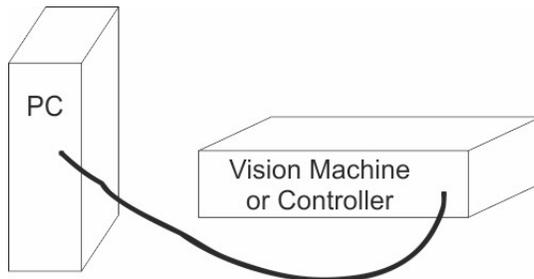
CPU:	Dual Core (2.0GHz or higher)
Hard Drive:	500 GB free space
RAM:	1GB + OS Requirements
Operating System:	Windows 10 - 32 Bit & 64 Bit Windows 8 & 8.1 - 32 Bit & 64 Bit Windows 7 - 32 Bit & 64 Bit Windows XP SP3 - 32 Bit (64 Bit not supported)
Ports:	USB port for security dongle Local or network Ethernet port to connect machine

Suggested System Requirements

CPU:	Core i3 (or faster)
Hard Drive:	1 TB (or more)
RAM:	4GB + OS Requirements
Operating System:	Windows 10 - 32 Bit & 64 Bit Windows 8 & 8.1 - 32 Bit & 64 Bit Windows 7 - 32 Bit & 64 Bit
Ports:	USB port for security dongle Local or network Ethernet port to connect machine

1.2 Direct Connection to Computer

Direct Connection to Computer Using Crossover Cable

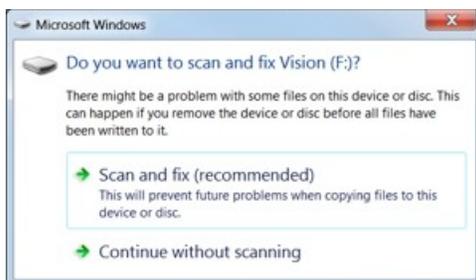


Once the machine or controller is connected directly to your computer's network port with the crossover cable (the gray colored cable), turn the machine or controller on. The power switch for the Vision Express is located on the power supply box for the machine. The power switch for the VE810 is located below the LCD screen on the front of the machine. The power switch for the Vision Series 4 Controller is located on the front left of the Controller. Once the machine or controller has initialized, plug the supplied Vision USB drive (or white/blue or orange USB Dongle) into an available USB port on your computer.

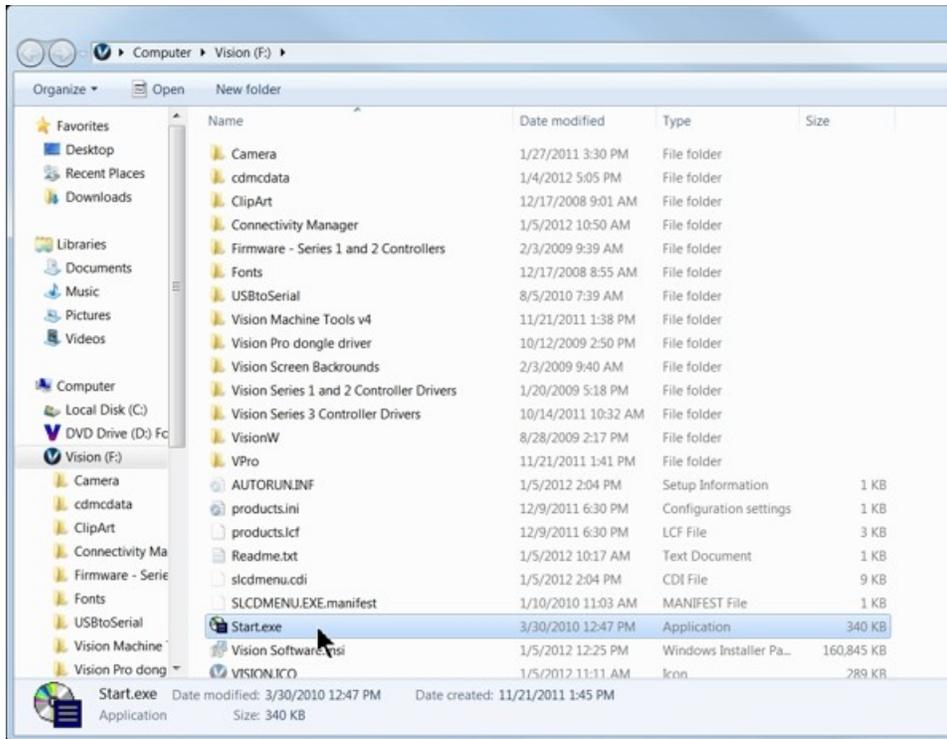
NOTE - This installation is performed on a Windows 7 PC. For Windows XP, Windows 8, Windows 8.1 or Windows 10, the screens are slightly different.

The computer will recognize the USB drive and the following screen will appear. Select Continue without scanning.

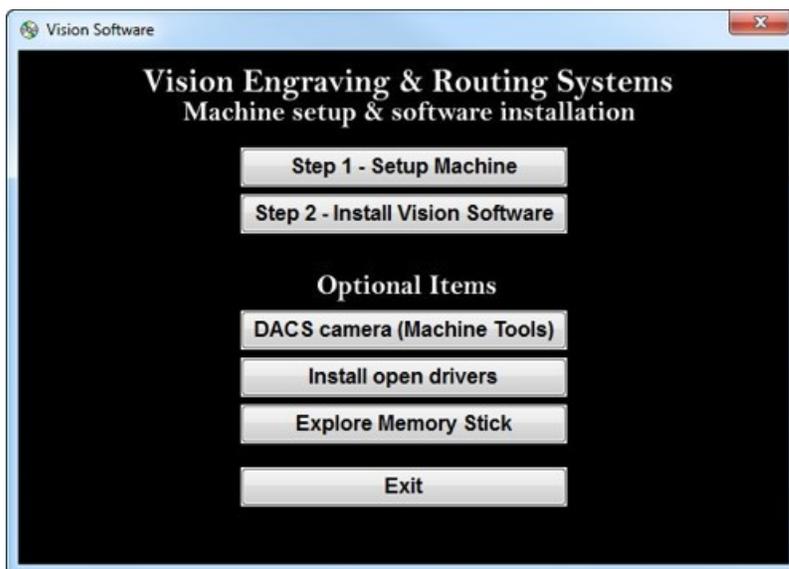
Select Open folder to view files.



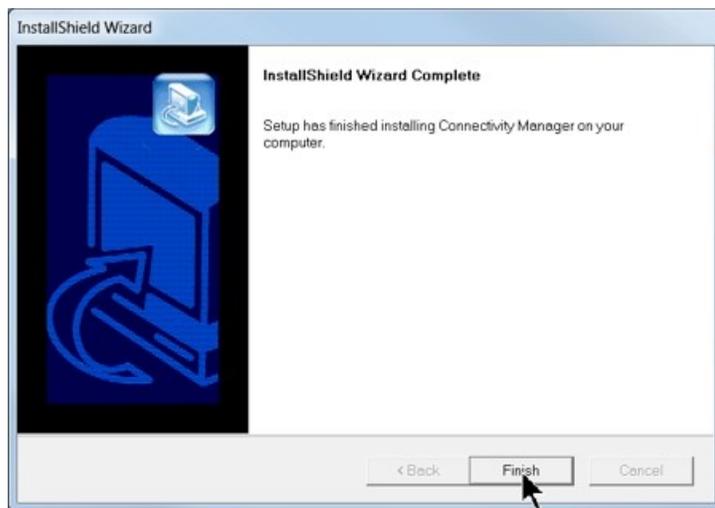
Locate the file named Start and double click on the file to start the installation. The screen below shows Start.exe, but your computer might not show the .exe portion.



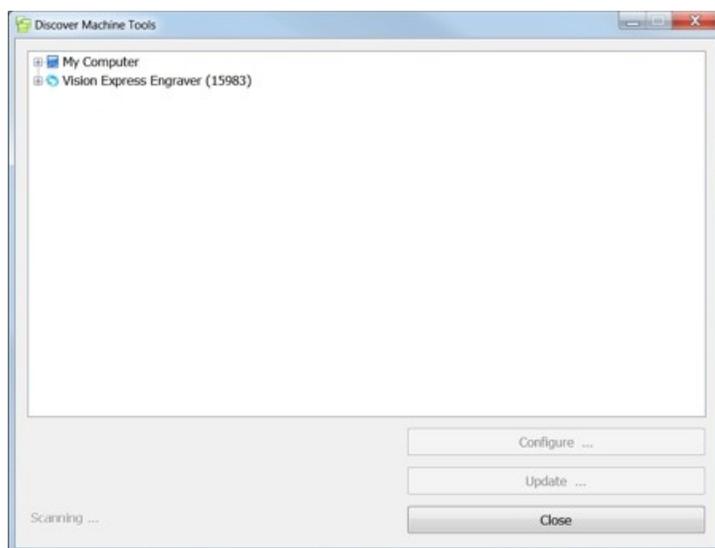
Select Step 1 - Setup Machine. This installs the Vision Connectivity Manager software.



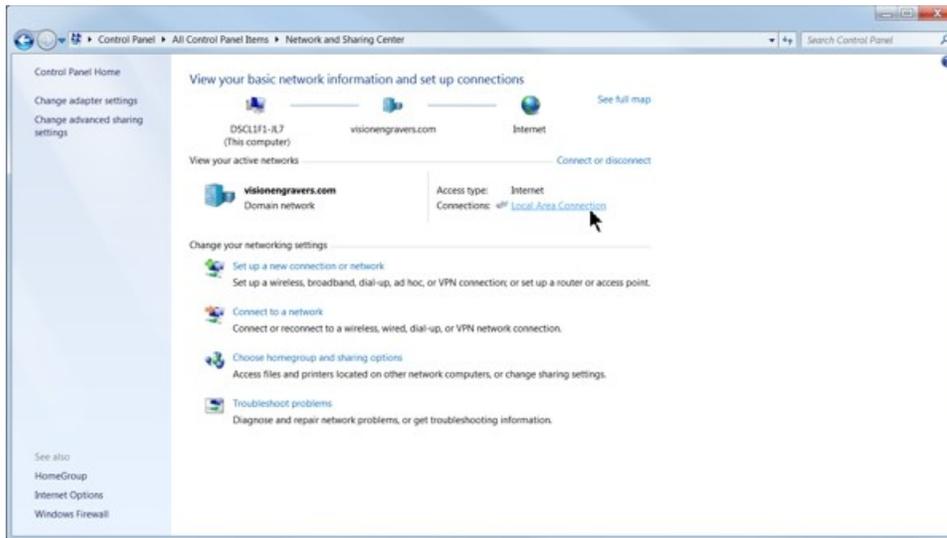
When the software is installed, select Finish.



The Connectivity Manager will search for available Vision devices.



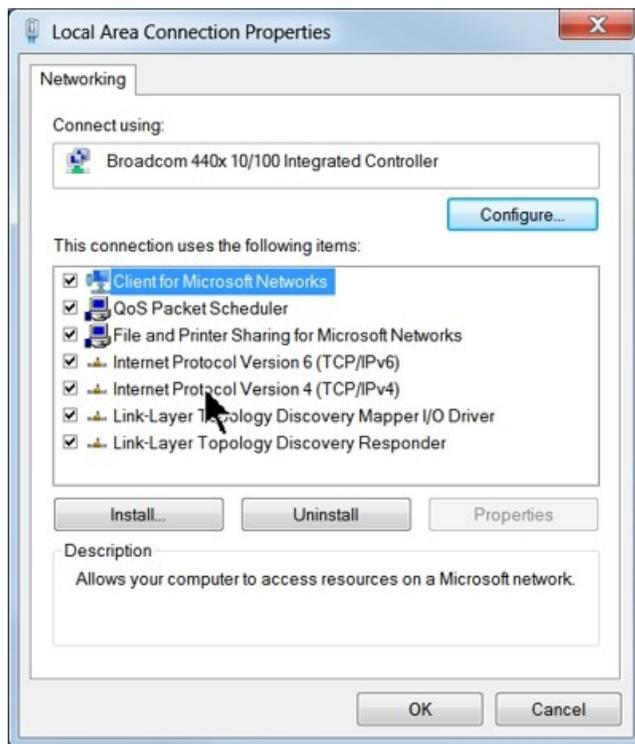
The computer's IP address will need to be set. NOTE - this should not cause any conflicts with your computer's wireless IP address, which is determined by the computer's wireless network card. To set the computer's IP address, open the Windows Control Panel. Depending on how you have this folder set, you will either see Network and Internet, or you will see the Network and Sharing Center immediately. If you see Network and Internet, select View Network Status and Tasks (which opens the Network and Sharing Center). If you see the Network and Sharing Center, open it. Then select Local Area Connection (as shown below).



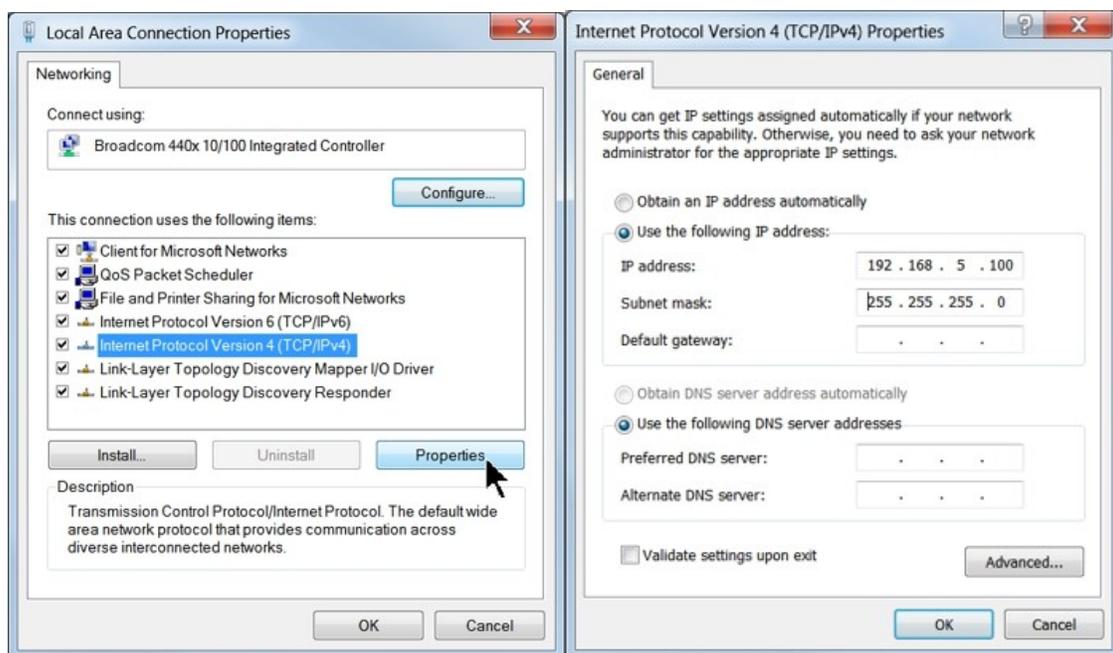
Select Properties.



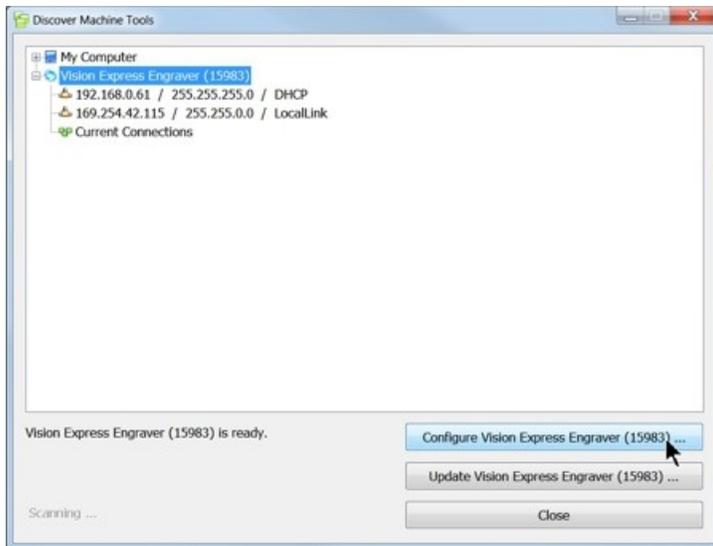
Then, select Internet Protocol Version 4 (TCP/IPv4).



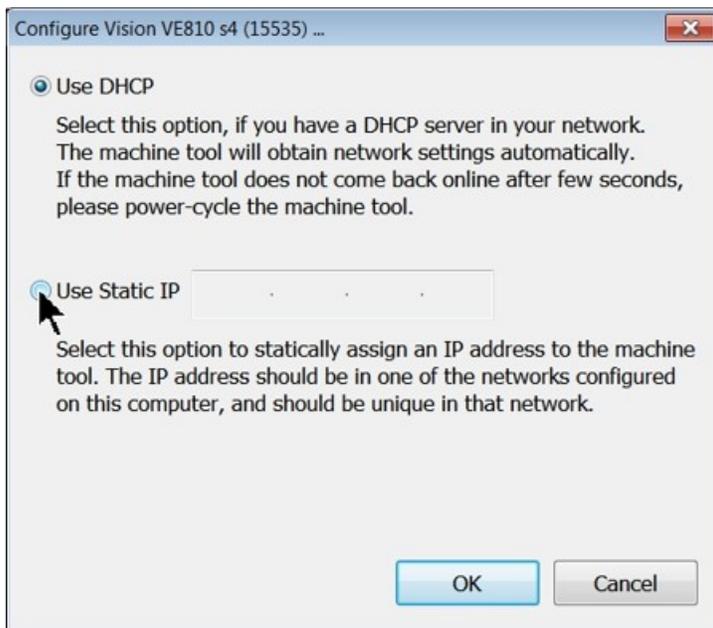
Then select Properties. Select Use the following IP address: and enter 192.168.5.100 and set the Subnet mask to 255.255.255.0 as shown. Then select OK and close any other network configuration windows.



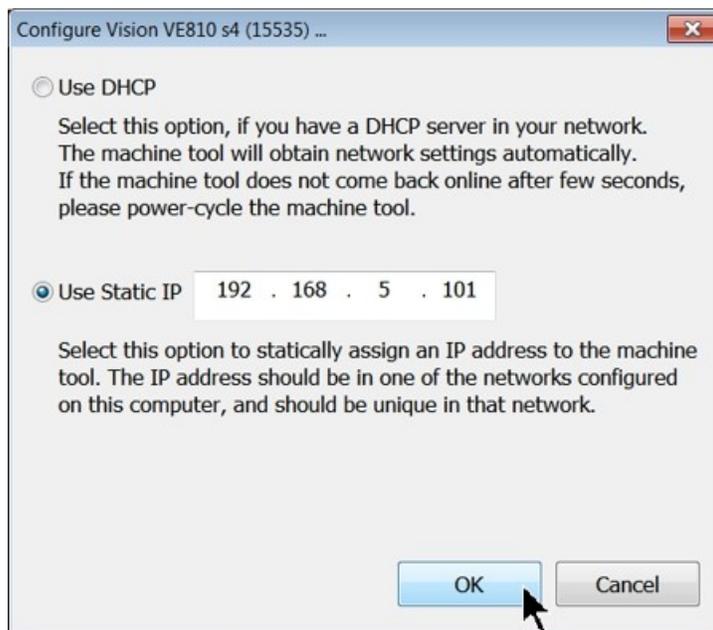
The IP address of the machine will need to be set to set up the connections properly. Select the + box next to the machine now listed in the Discover Machine Tools window to expand the information. Then select Configure (Your Machine) at the bottom of the screen.



Select Use Static IP.



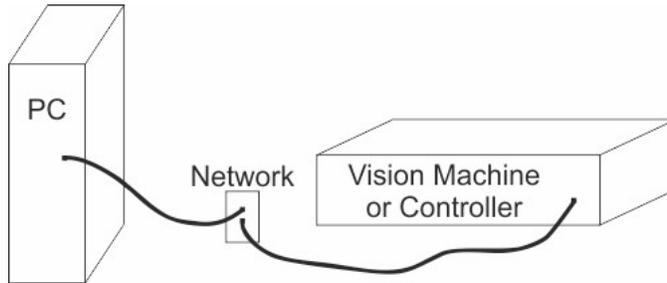
Set the IP address (as shown) to 192.168.5.101, then select OK. This sets the machine's IP address.



The configuration is complete at this point. Close the Discover Machine Tools window and return to the Main Installation Screen to proceed with the Vision software installation in the next section.

1.3 Network Connection

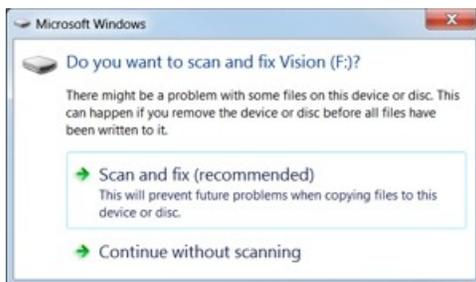
Connecting via Standard Network Cable to Network



Once the machine or controller is connected to your network, turn the machine or controller on. The power switch for the Vision Express is located on the power supply box for the machine. The power switch for the VE810 is located below the LCD screen on the front of the machine. The power switch for the Vision Series 4 Controller is located on the front left side of the controller. Once the machine or controller has initialized, plug the supplied Vision USB drive (or white/blue or orange USB Dongle) into an available USB port on your computer.

NOTE - This installation is performed on a Windows 7 PC. For Windows XP, Windows 8, Windows 8.1 or Windows 10, the screens are slightly different.

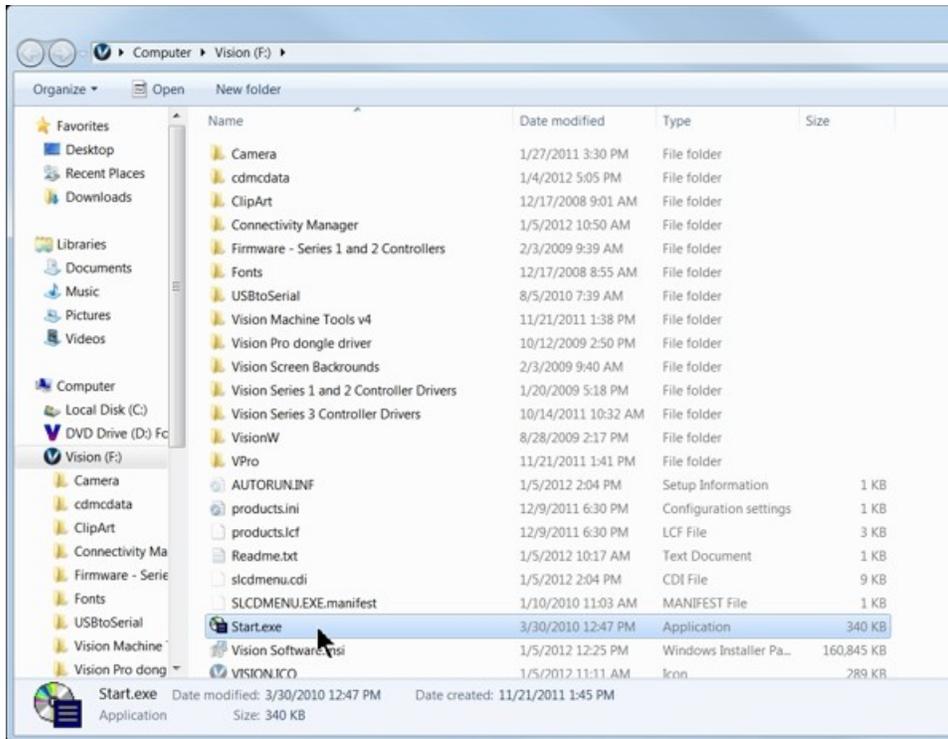
The computer will recognize the USB drive and the following screen will appear. Select Continue without scanning.



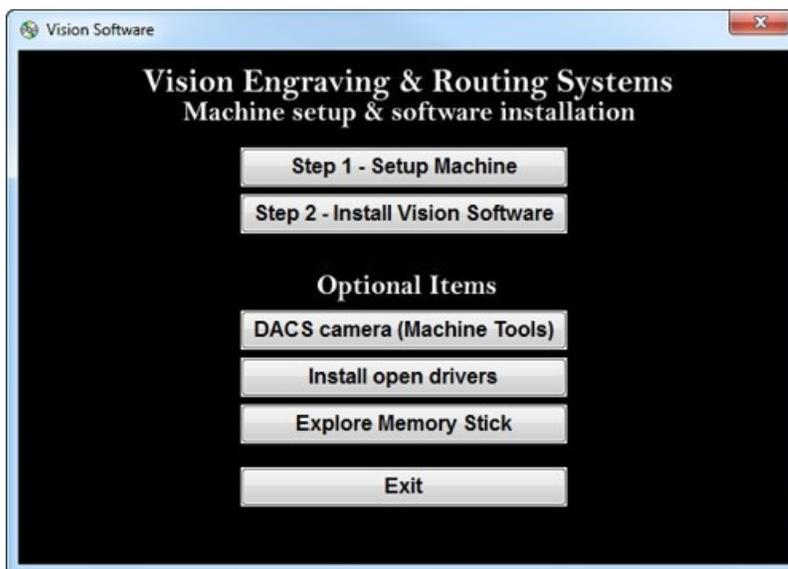
Select Open folder to view files.



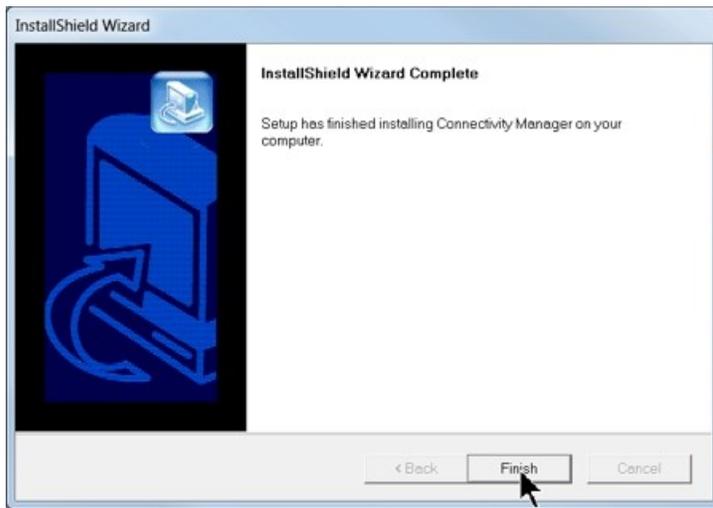
Locate the file named Start and double click on the file to start the installation. The screen below shows Start.exe, but your computer might not show the .exe portion.



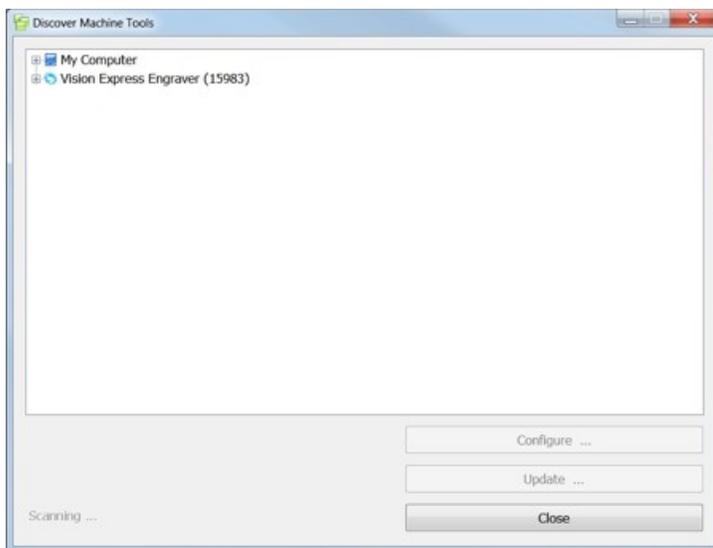
Select Step 1 - Setup Machine. This installs the Vision Connectivity Manager software.



When the software is installed, select Finish.



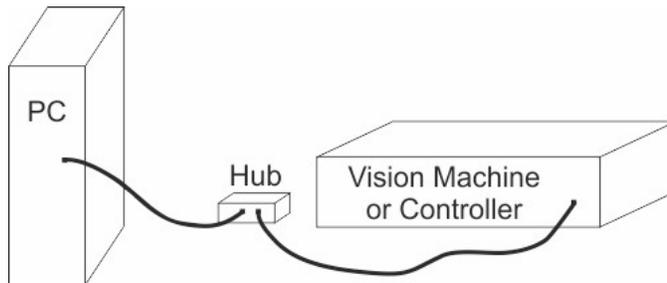
The Connectivity Manager will search for available Vision devices.



The configuration is complete at this point. Close the Machine Tools Discovery window and return to the Main Installation Screen to proceed with the Vision software installation in the next section.

1.4 Using a Router or Hub - ONLY

Connection from PC to Hub or Router to Machine or Controller



Once the machine is connected to a hub or router, and the hub or router is connected to your computer's network port, turn the machine or controller on. The power switch for the Vision Express is located on the power supply box for the machine. The power switch for the VE810 is located below the LCD screen on the front of the machine. The power switch for the Vision Series 4 Controller is located on the front left of the Controller. Once the machine or controller has initialized, plug the supplied Vision USB drive (or white/blue or orange USB Dongle) into an available USB port on your computer.

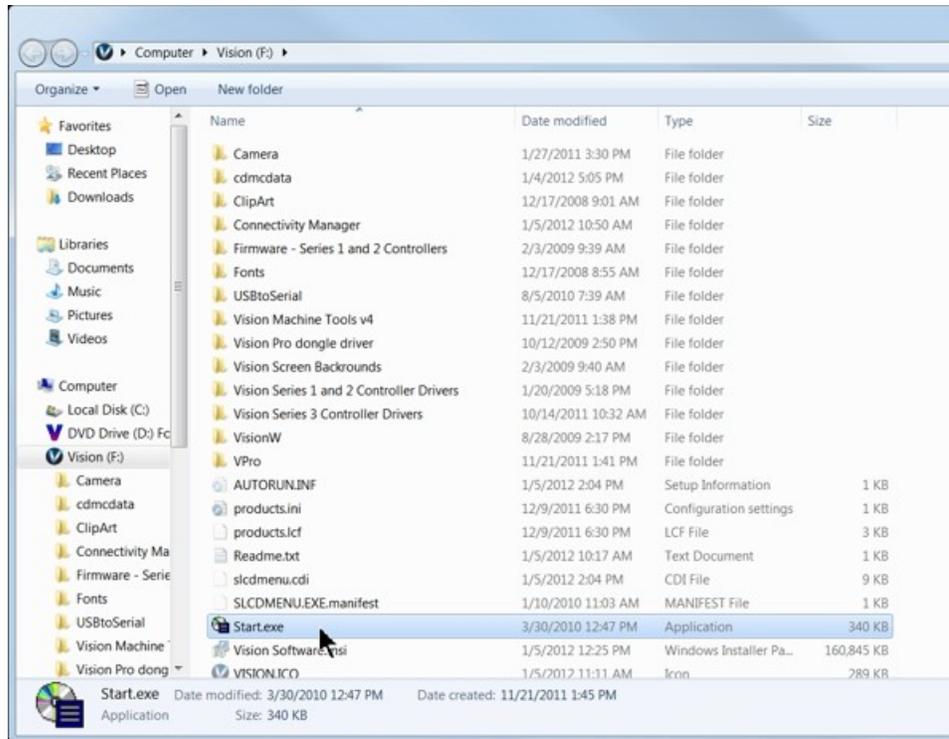
NOTE - This installation is performed on a Windows 7 PC. For Windows XP, Windows 8, Windows 8.1 or Windows 10, the screens are slightly different.

The computer will recognize the USB drive and the following screen will appear. Select Continue without scanning.

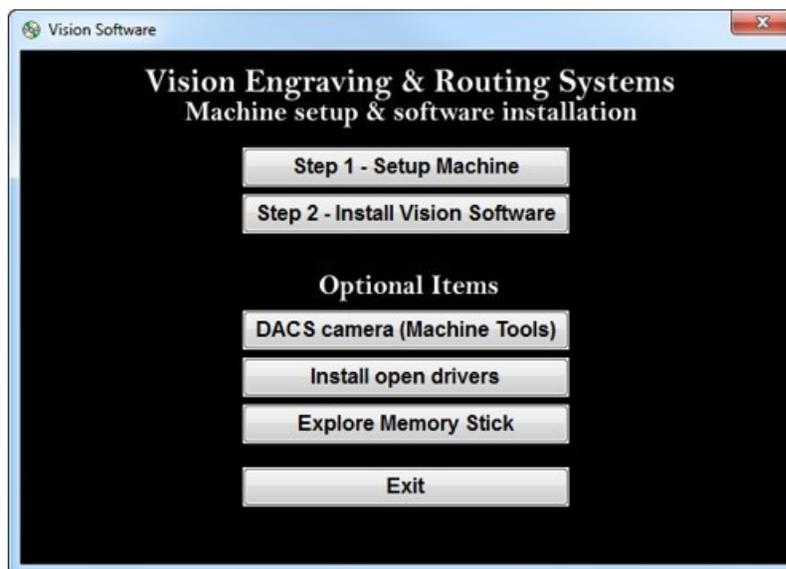
Select Open folder to view files.



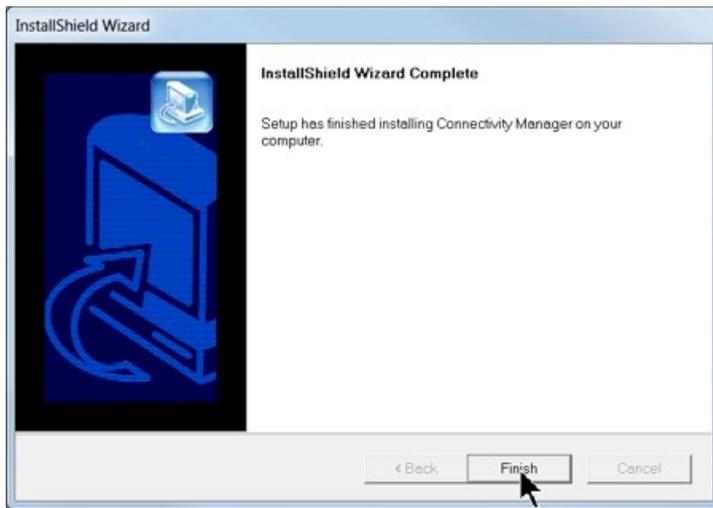
Locate the file named Start and double click on the file to start the installation. The screen below shows Start.exe, but your computer might not show the .exe portion.



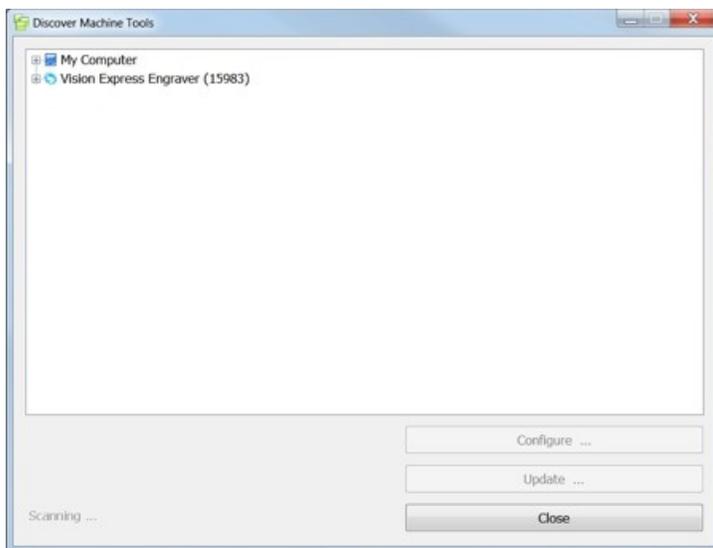
Select Step 1 - Setup Machine. This installs the Vision Connectivity Manager software.



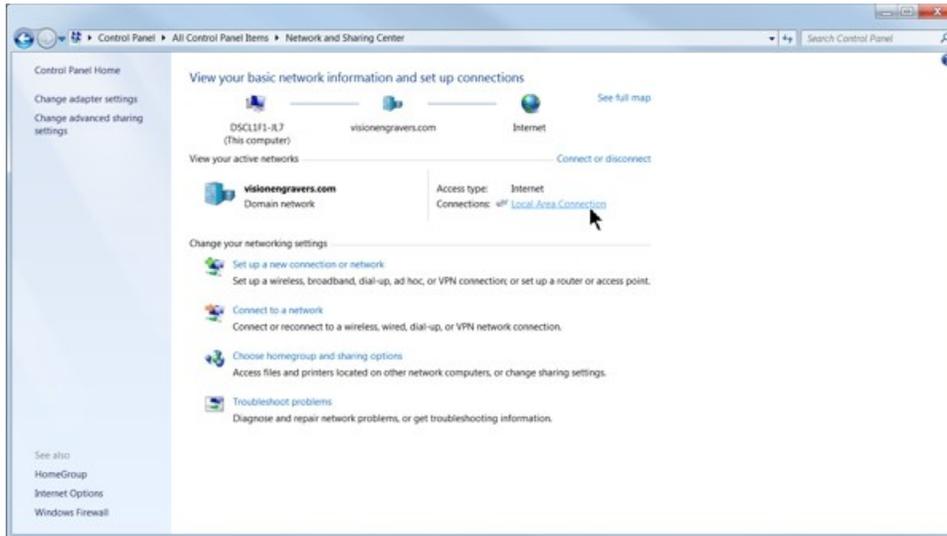
When the software is installed, select Finish.



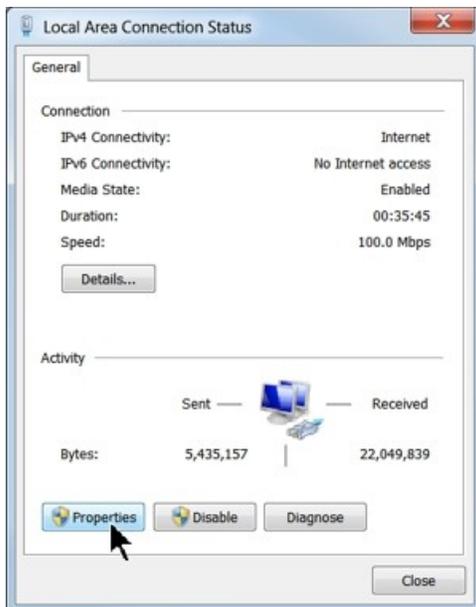
The Connectivity Manager will search for available Vision devices.



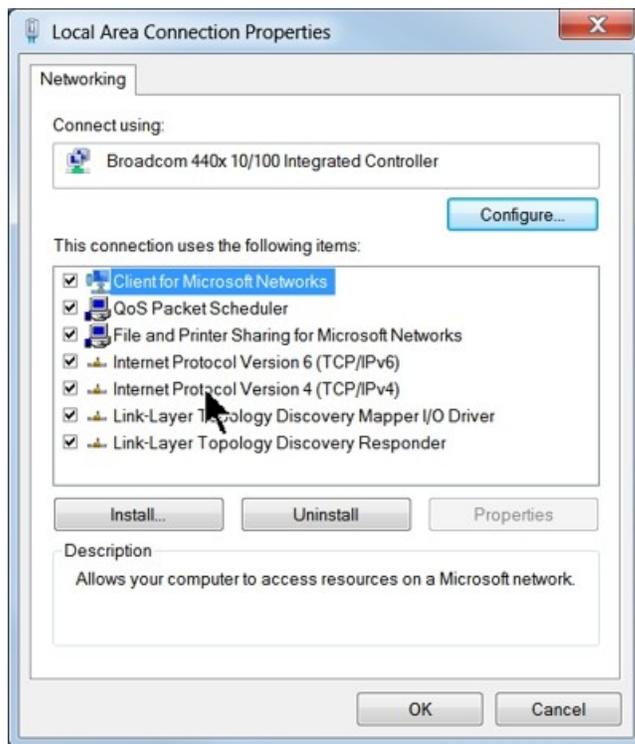
The computer's IP address will need to be set. To set the computer's IP address, open the Windows Control Panel. Depending on how you have this folder set, you will either see Network and Internet, or you will see the Network and Sharing Center immediately. If you see Network and Internet, select View Network Status and Tasks (which opens the Network and Sharing Center). If you see the Network and Sharing Center, open it. Then select Local Area Connection (as shown below).



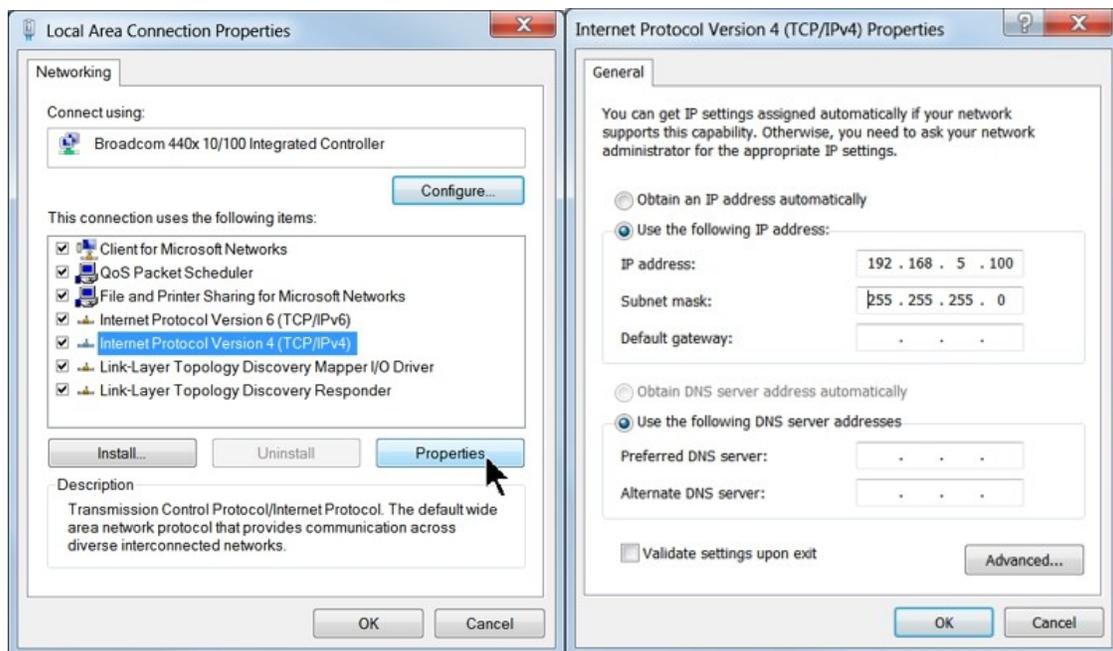
Select Properties.



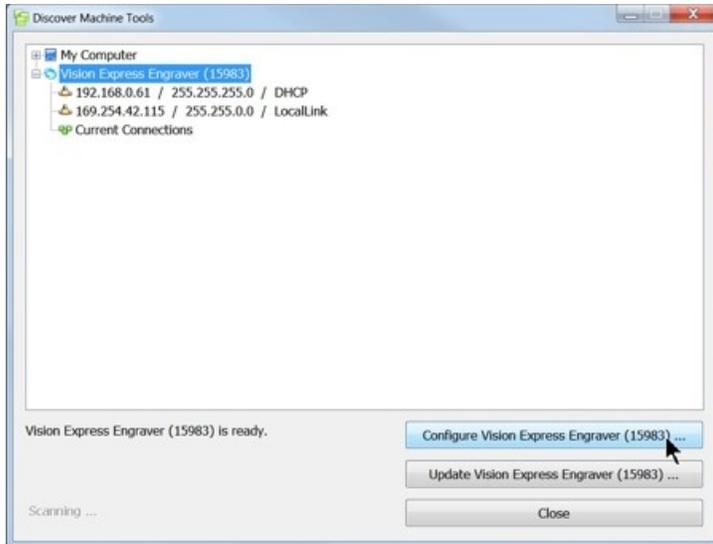
Then, select Internet Protocol Version 4 (TCP/IPv4).



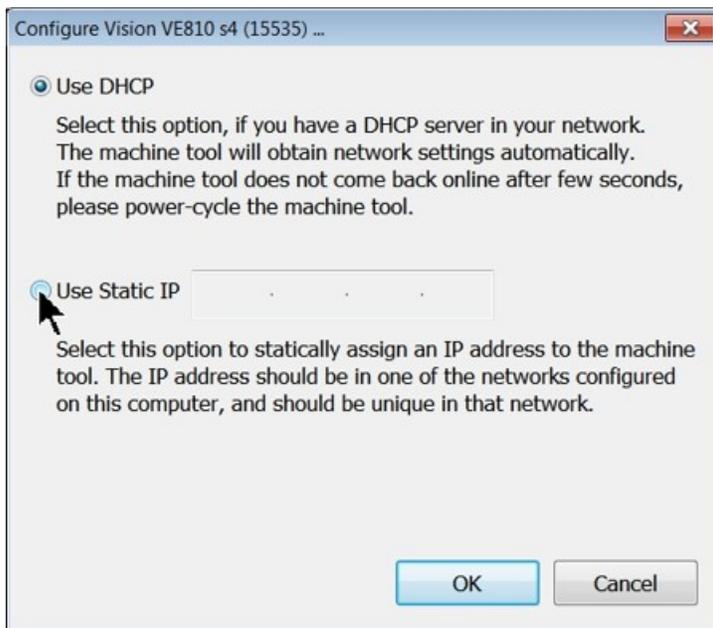
Then select Properties. Select Use the following IP address: and enter 192.168.5.100 and set the Subnet mask to 255.255.255.0 as shown. Then select OK and close any other network configuration windows.



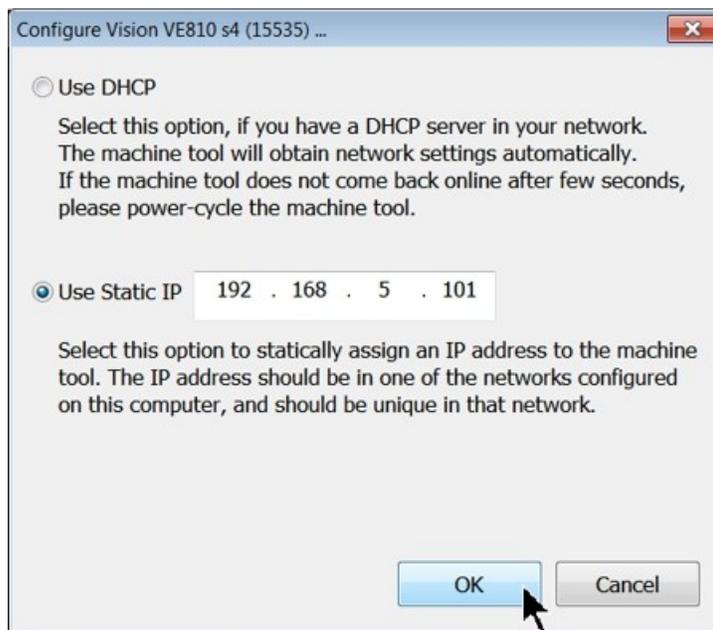
The IP address of the machine will need to be set to set up the connections properly. Select the + box next to the machine now listed in the Discover Machine Tools window to expand the information. Then select Configure (Your Machine) at the bottom of the screen.



Select Use Static IP.



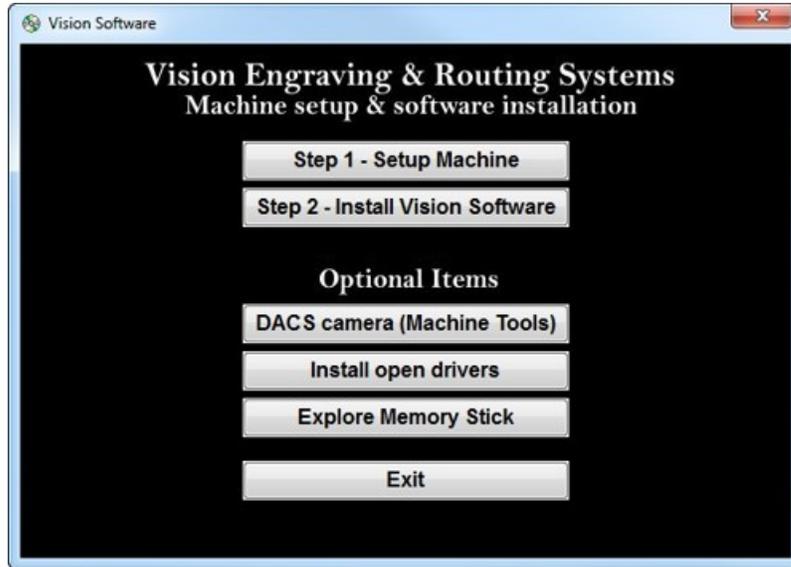
Set the IP address (as shown) to 192.168.5.101, then select OK. This sets the machine's IP address.



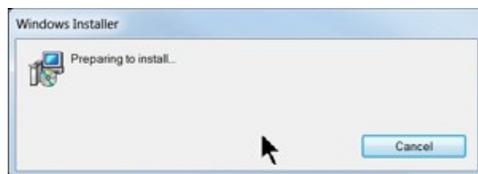
The configuration is complete at this point. The new IP address should appear in a few seconds in the Discover Machine Tools window. Close the Discover Machine Tools window and return to the Main Installation Screen to proceed with the Vision software installation in the next section.

1.5 Vision Software Installation

From the Main Installation Screen, Select Step 2 - Install Vision Software.



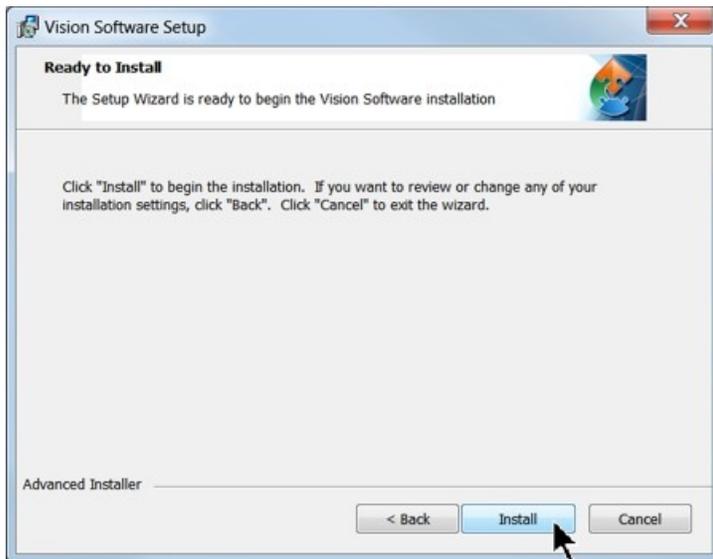
The Windows Installer will prepare the installation.



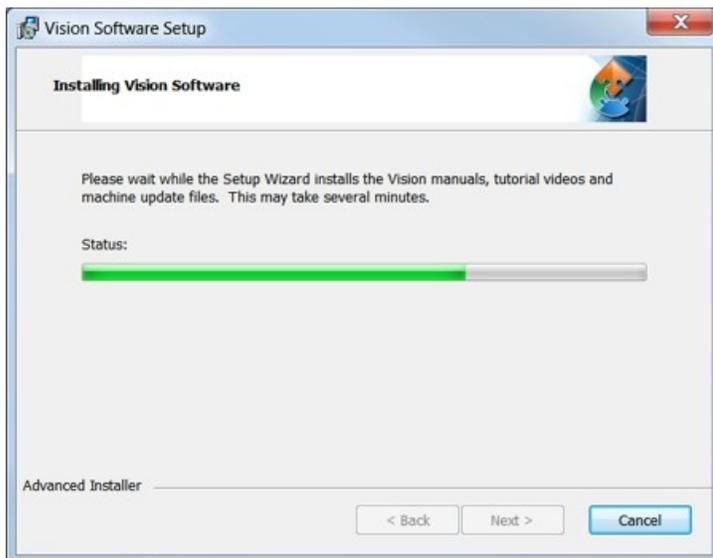
Select Next.



Select Install.



The installation will proceed.



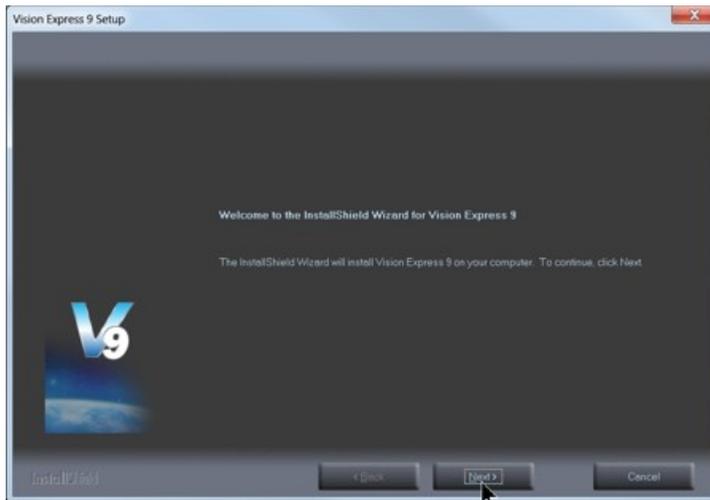
Select the appropriate language and select OK.



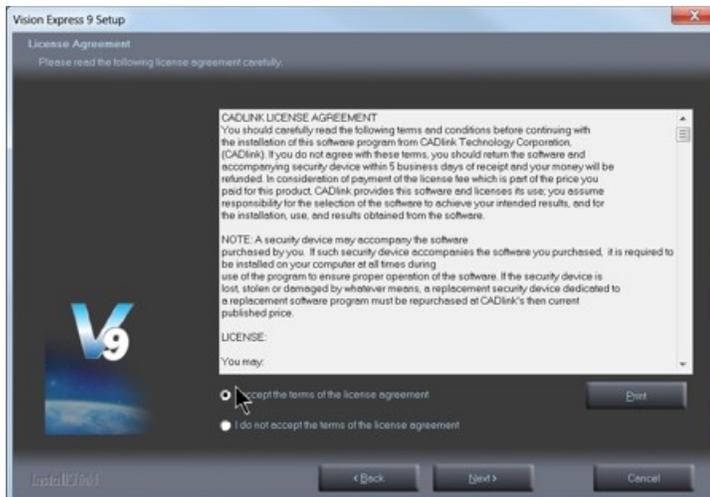
Installation will proceed.



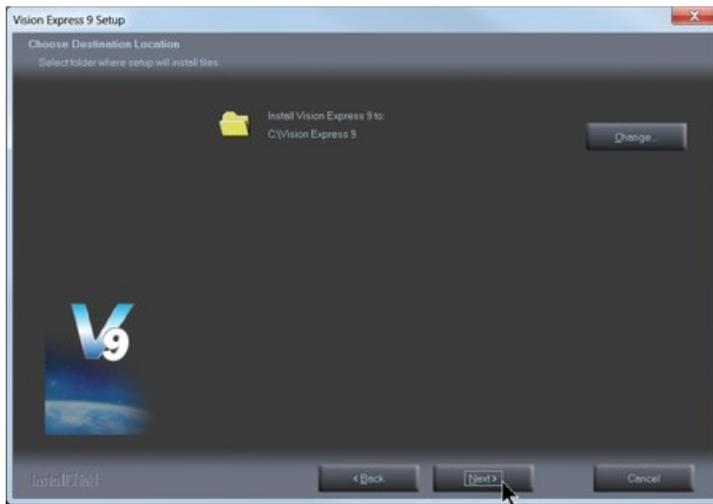
Select Next to begin the installer.



Select Accept the license agreement, then select Next.



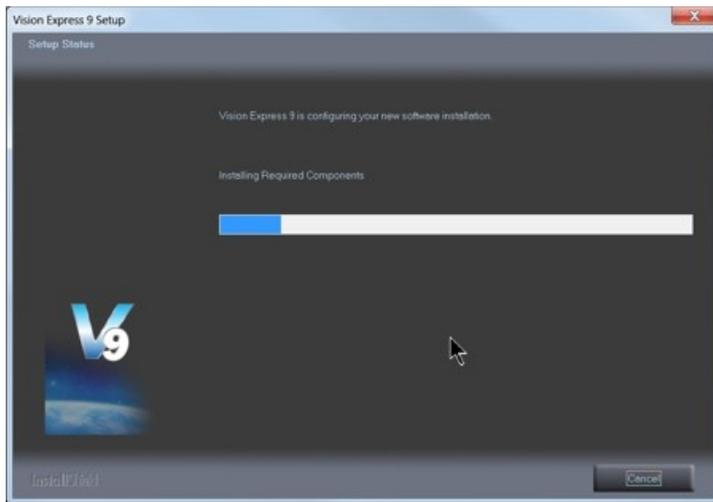
Select Next (or change the destination folder - not recommended).



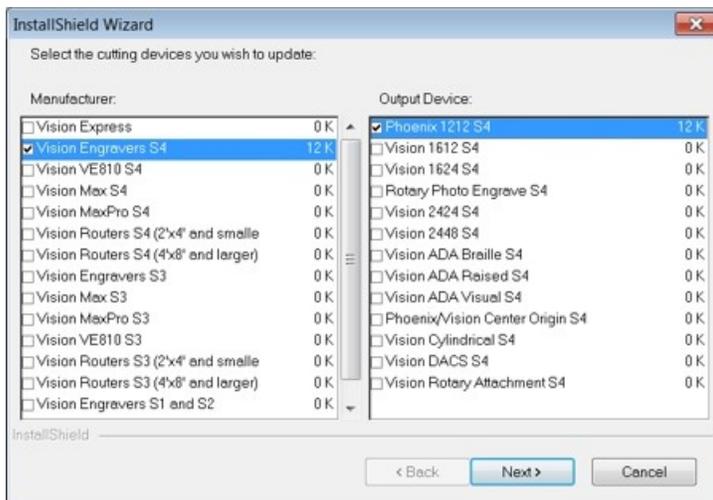
Select Next to create the folder.



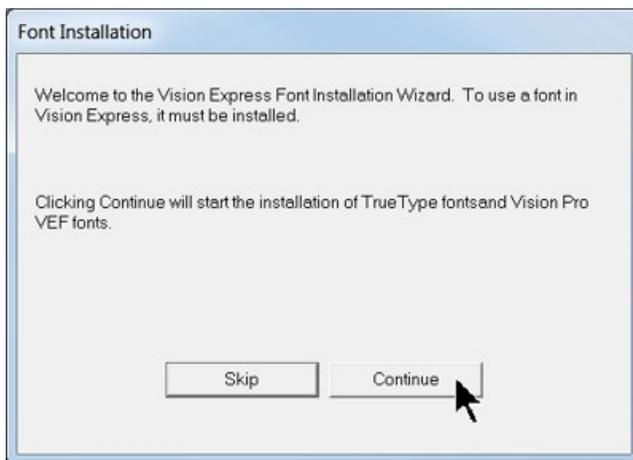
The installation will continue.



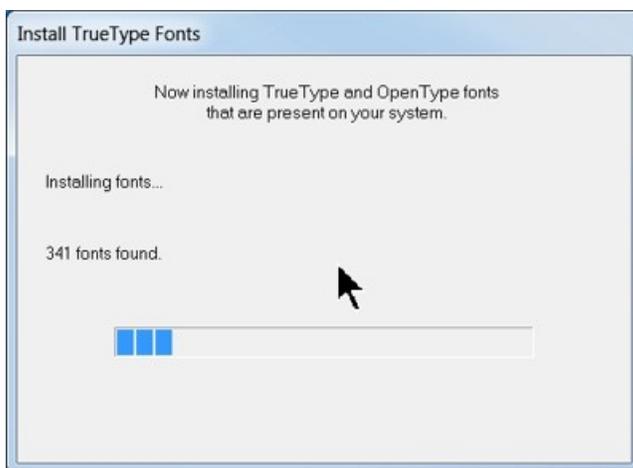
Select your machine from the Manufacturer list on the left side of this window by clicking in the box to the left of the machine (or machine series) you own. The right side of the window will list a selection of Output Devices. Only put a check mark in the box(es) to the left of the Output Device(s) you own. Then select Next. If you purchase another engraving system from Vision, it can be added to the machine list at a later date from within the Vision software.



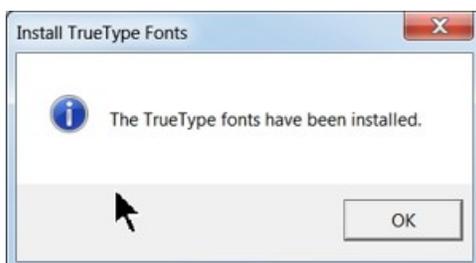
Select Continue to install True Type fonts and Vision Engraving Fonts on your computer.



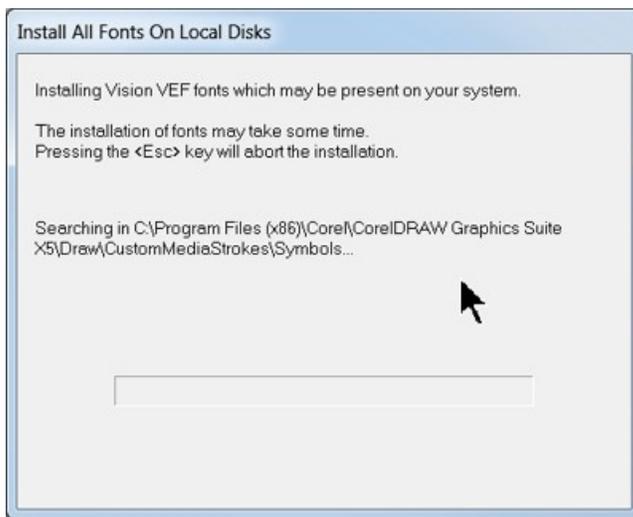
The software will look for True Type fonts on your computer and allow the Vision software to use them.



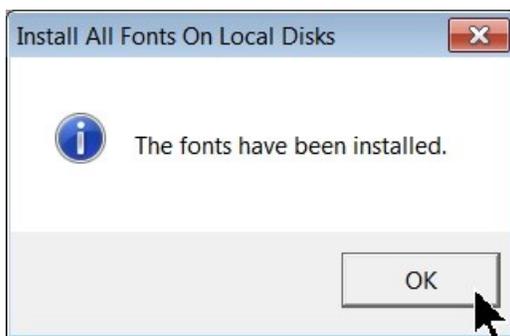
Once the True Type fonts are installed, select OK.



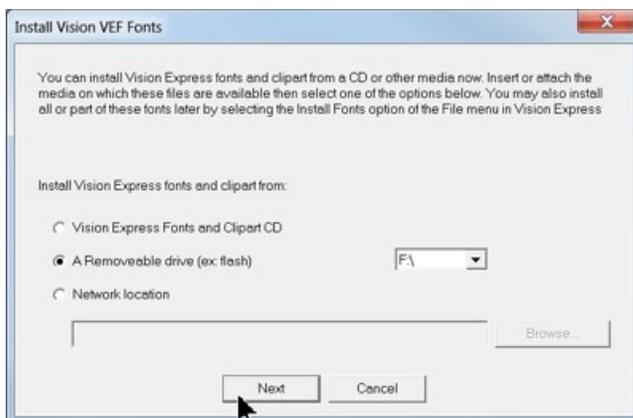
In this step, the software will install any Engraving fonts on your computer.



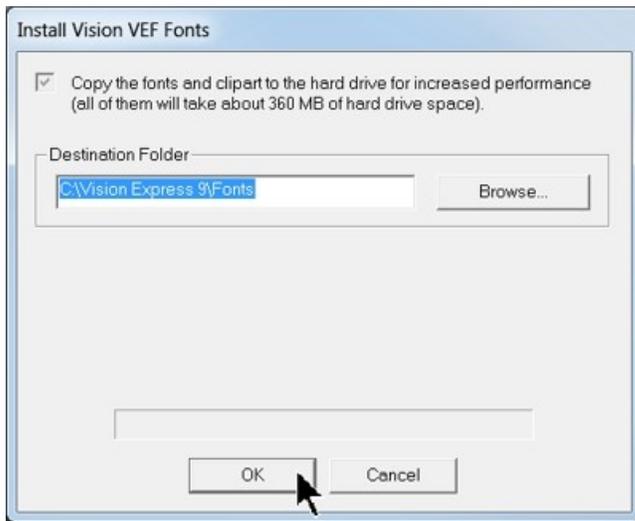
When complete, click on OK.



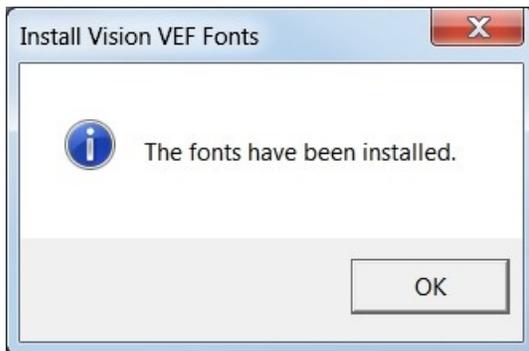
In order to install the fonts on the USB drive, select A Removable drive and from the drop down list, select the drive letter for the Vision USB drive plugged into your computer.



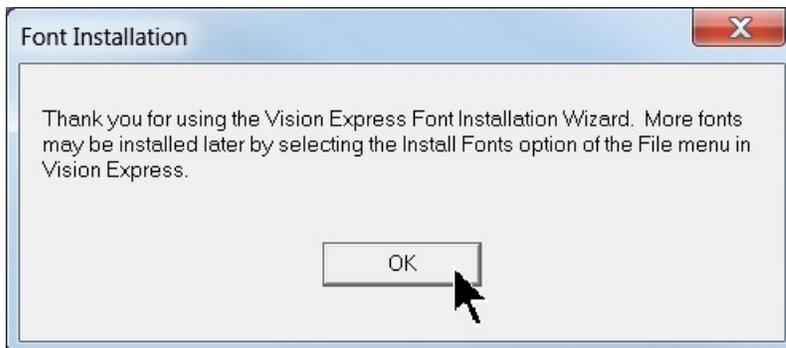
Select OK to install to the default folder.



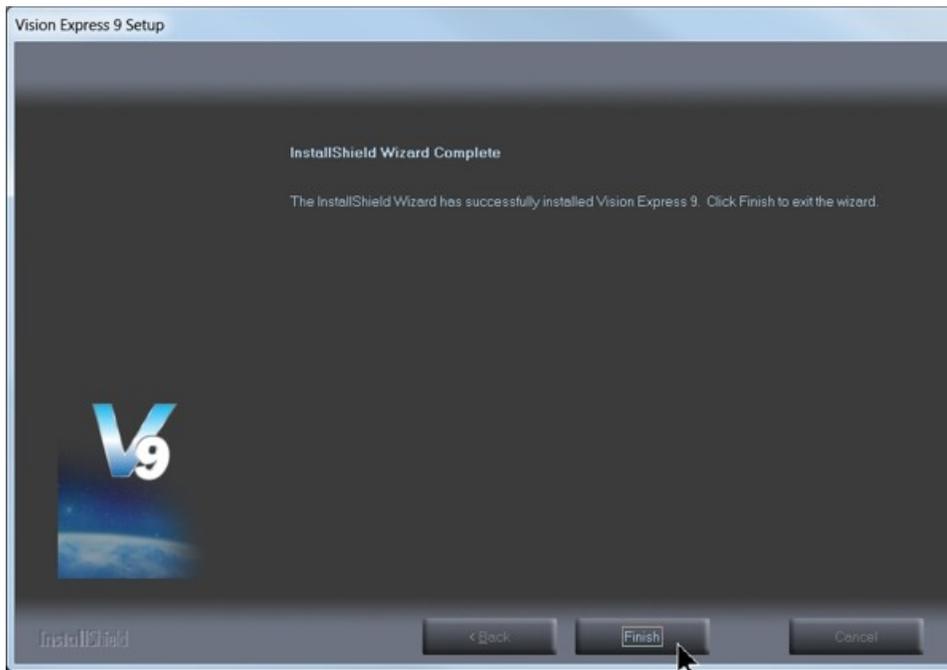
Select OK. All fonts and clipart have been installed from the USB drive at this time.



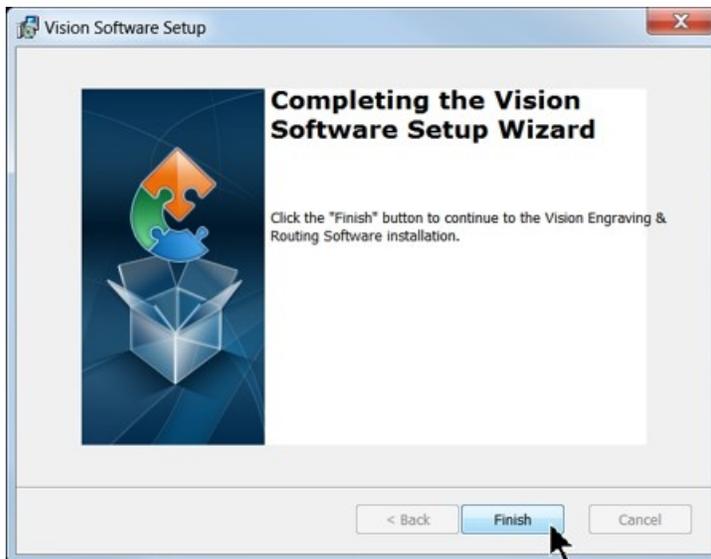
Select OK to return to the main installation screen.



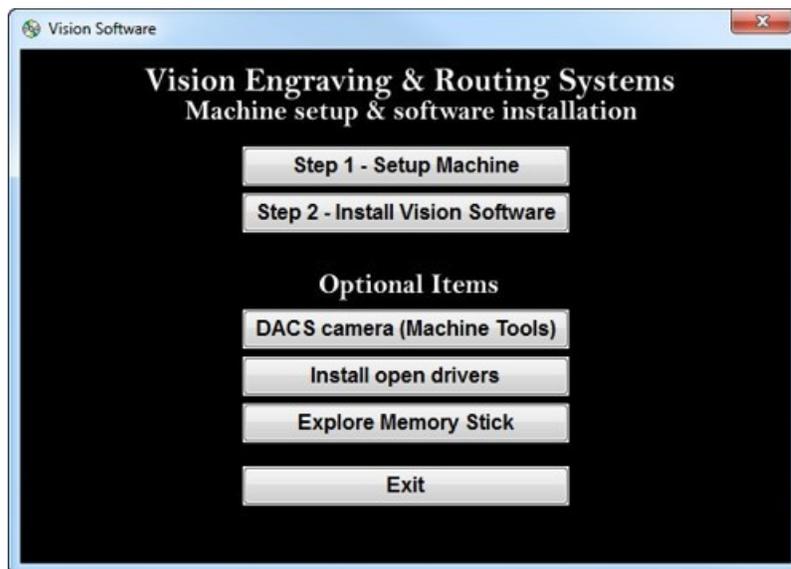
To complete the installation, select Finish.



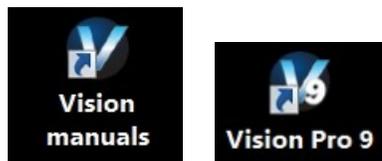
To close the Software Setup window, select Finish.



Select Exit to close the installer.



The Vision manuals icon should now appear on your computer's desktop along with an icon for your version of Vision 9 software.



Clicking on the Vision manuals link will give the user access to User Manuals, Installation Guides, Accessories and Training Videos.

If you were supplied with a White/Blue or Orange Dongle, keep it installed in your computer's USB port in order to use the Vision software. If you were supplied with another color USB stick with your machine, it can be removed at this time from your computer. Installation is now complete.

2 General Electrical and Facility Requirements

Machine Model	Requirements
1624R, 2525, 2550 Router T-Slot Table With High Frequency Router Head With Engraving Head With NSK High Frequency Spindle	One 110 VAC 15 Amp OR One 220 VAC 10 Amp Single Phase (Vision controller) AND One 220 VAC 30 Amp Single Phase (3 HP router) One 110 VAC 15 Amp OR One 220 VAC 10 Amp Single Phase Two 110 VAC 15 Amp OR Two 220 VAC 10 Amp Single Phase
2550 Router with Vacuum Table With High Frequency Router Head With Engraving Head With NSK High Frequency Spindle	One 110 VAC 15 Amp OR One 220 VAC 10 Amp Single Phase (Vision controller) AND One 220 VAC 30 Amp Single Phase (3 HP router) AND One 220 VAC 20 Amp Single Phase (vacuum pump) One 110 VAC 15 Amp OR One 220 VAC 10 Amp Single Phase (Vision controller) AND One 220 VAC 20 Amp Single Phase (vacuum pump) Two 110 VAC 15 Amp OR Two 220 VAC 10 Amp Single Phase AND One 220 VAC 20 Amp Single Phase (vacuum pump)
Optional Equipment Engraving Chip Removal System Router Chip Extraction System	One 110 VAC 15 Amp One 110 VAC 25 Amp OR One 220 VAC 20 Amp Single Phase
Optional Equipment Requiring Compressed Air Supply UNIST Misting System NSK High Frequency Spindle	Clean Dry Compressed Air Supply 60 - 90 PSI Clean Dry Compressed Air Supply 1 SCFM @ 40 PSI

NOTE: In addition to the above requirements, a 110 VAC standard outlet is required for the computer.

3 Pendant Holder Installation

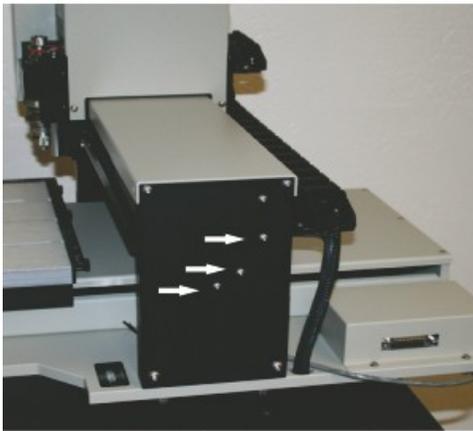
Pendant Holder Installation for 1624R, 2525 and 2550 machines

Your machine is shipped with an optional Pendant Holder to give the user a place to secure the Pendant.

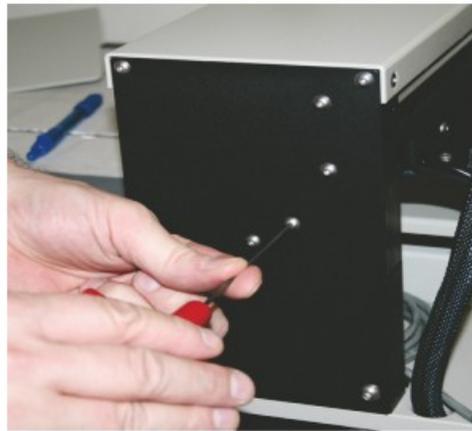
To install the Pendant Holder on the 16 Series machines, follow the below procedure.

16 Series Pendant Holder Installation

Step 1- Locate the 3 screws



Step 2 - Remove screws with allen tool



Step 3 - Mount Pendant Holder
and re-install screws



Step 4 - Mount Pendant in Holder

To install the Pendant Holder on the 25 Series machines, follow the below procedure.

24 and 25 Series Pendant Holder Installation

Step 1- Locate the 3 nuts



Step 2 - Remove nuts with wrench



Step 3 - Mount Pendant Holder and re-install nuts



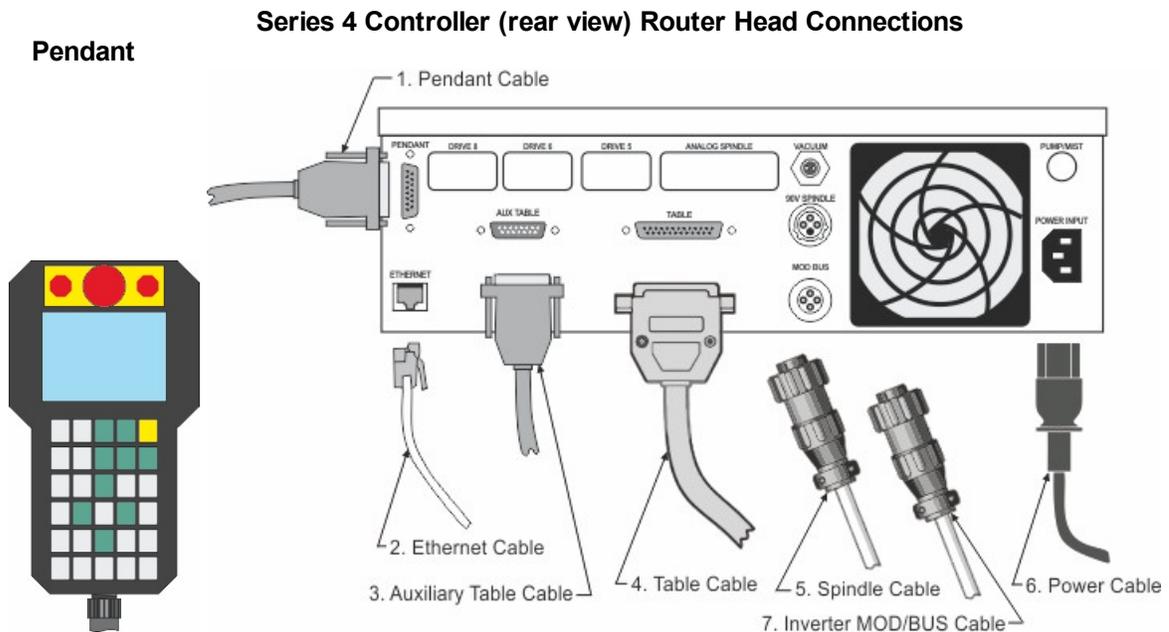
Step 4 - Mount Pendant in Holder

4 16 Series and 25 Series Routers

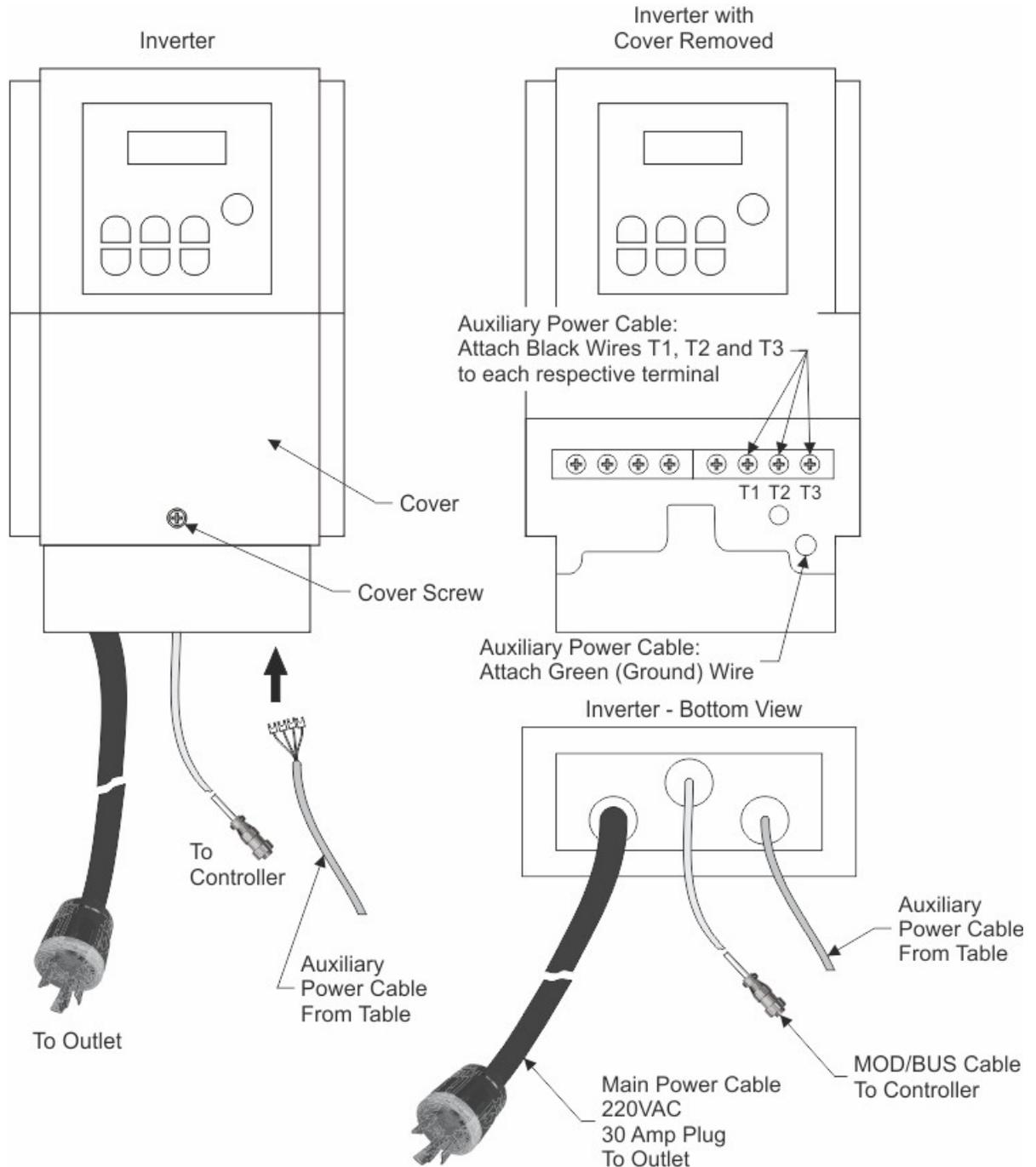
4.1 High Frequency Router Head

High Frequency Router Head Wiring Connections

1. The controller Pendant is connected to the Pendant port on the controller.
2. The Ethernet Cable from your computer, hub or network is connected to the Ethernet port on the controller
3. The Auxiliary Table Cable is used on the 25 Series machines ONLY. It connects the Serial Table Connector on the machine to the Aux Table port on the controller.
4. The Table Cable connects from 25 Pin Table Connector on the machine to the Table Port on the controller
5. The machine's Spindle Cable connects to the Spindle port on the controller.
6. The Power Cable connects a 110 - 220 VAC electrical source to the controller and powers the controller and table.
7. The MOD/BUS Cable from the Inverter connects to the MOD/BUS port on the controller and controls the High Frequency Router Motor.



Wiring Connections for Inverter (used with High Frequency Router Head only)



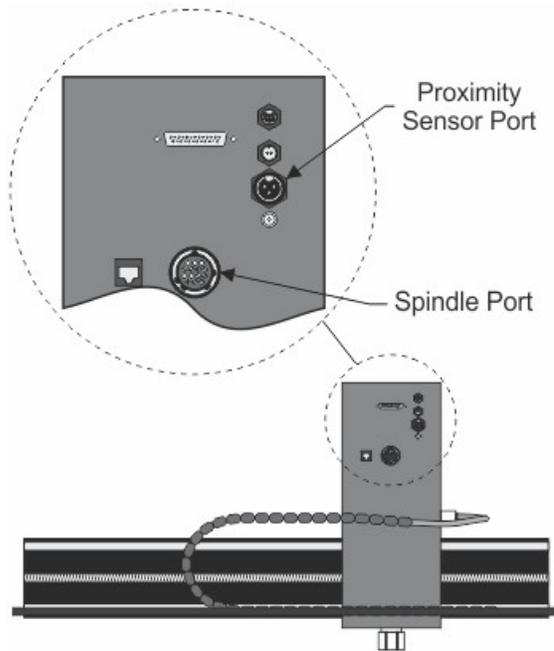
NOTE: The Auxiliary Power Cable is pre-wired on all 16 and 25 Series Routers.

Remove Inverter Cover and feed the Auxiliary Power Cable through hole in bottom of Inverter. Connect the three black wires labeled, T1, T2 and T3, to their respective connection points. Connect the Green (Ground) wire to the connection point shown. Connect the Main Power Cable to a 220VAC source and connect the MOD/BUS Cable to the machine controller's MOD/BUS port.

Carriage Wiring Connections

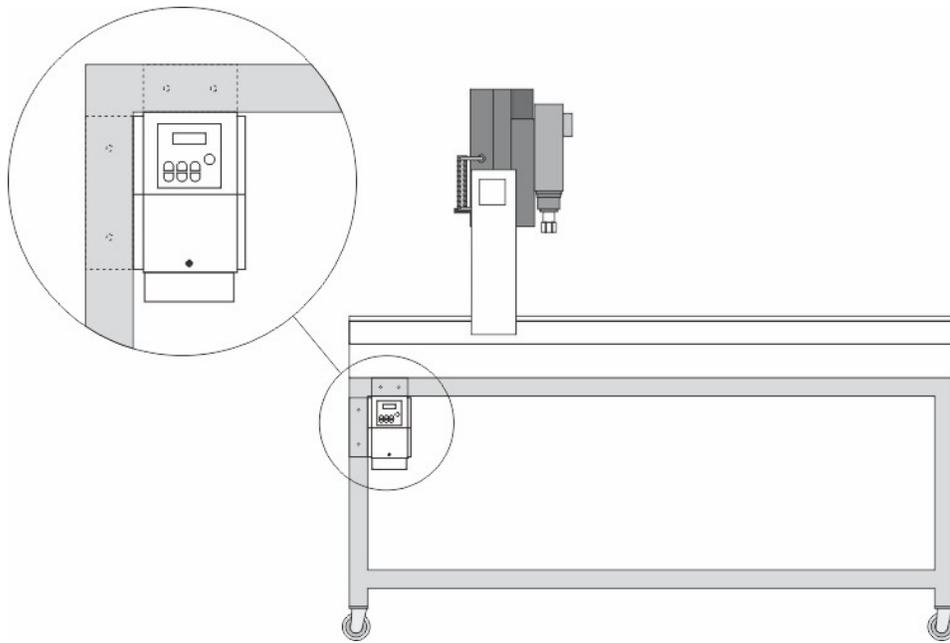
The Motor Plug connects to the Spindle Port on the back of the Carriage.

Carriage (rear view)



Mounting the Inverter on the 25 Series Table Stand

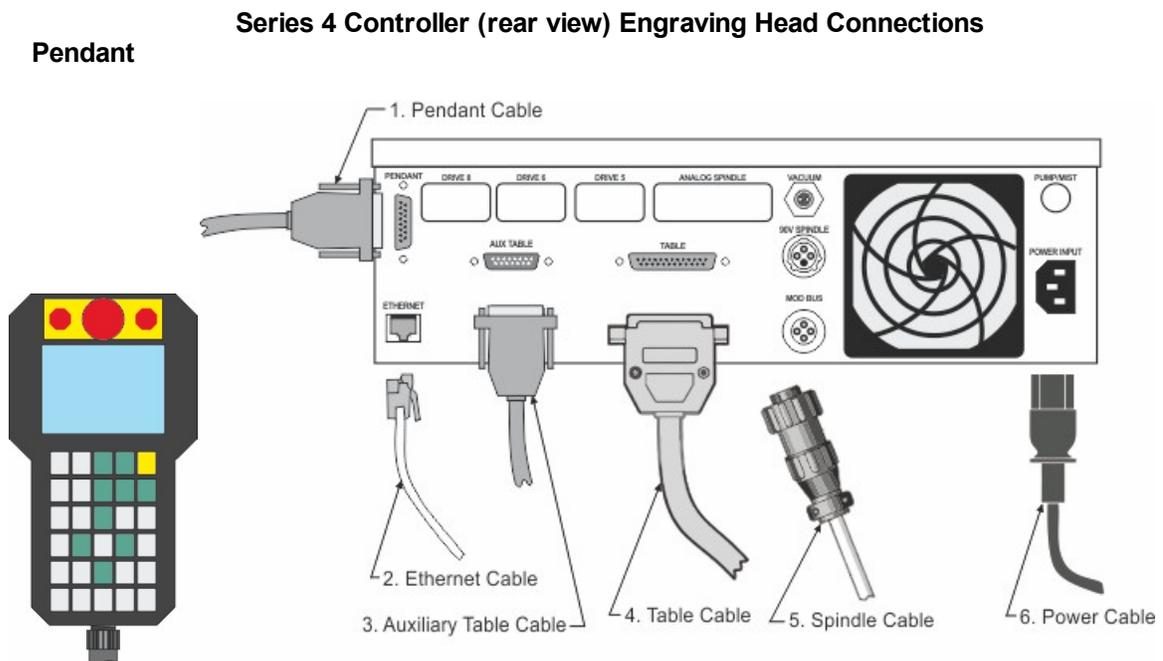
The Inverter is mounted on the top-left corner of the machine's stand. There are two flanges mounted on the rear of the inverter. These flanges are placed in the inside of the stand's legs. Screws are included with the inverter to secure the inverter to the stand. Instructions for assembly of the stand are included with the stand, which is packed underneath the machine in its shipping crate.



4.2 Engraving Head

Engraving Head Wiring Connections

1. The controller Pendant is connected to the Pendant port on the controller.
2. The Ethernet Cable from your computer, hub or network is connected to the Ethernet port on the controller
3. The Auxiliary Table Cable is used on the 25 Series machines ONLY. It connects the Serial Cable Port on the machine to the Aux Table port on the controller.
4. The Table Cable connects from 25 Pin Table Connector on the machine to the Table Port on the controller
5. The machine's Spindle Cable connects to the Spindle port on the controller.
6. The Power Cable connects a 110 - 220 VAC electrical source to the controller and powers the controller and table.

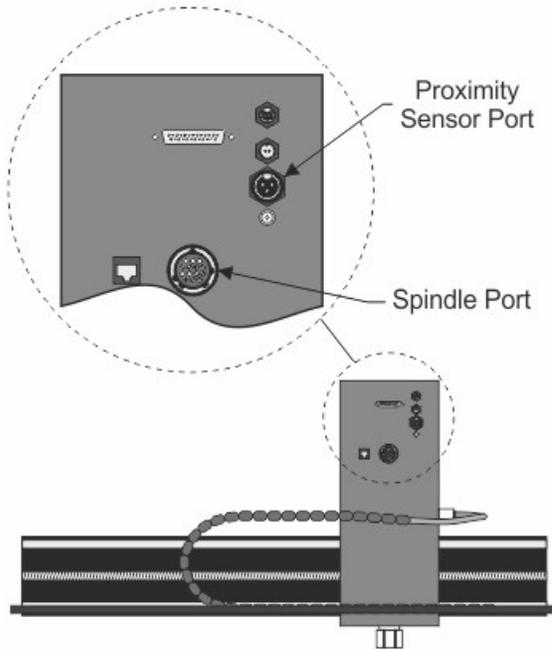


NOTE: The Auxiliary Power Cable which is pre-wired on all 16 and 25 Series Routers is NOT used with the Engraving Head. If your router was not equipped with the High Frequency Router Head or the Porter Cable Router Head, this cable can remain disconnected at all times.

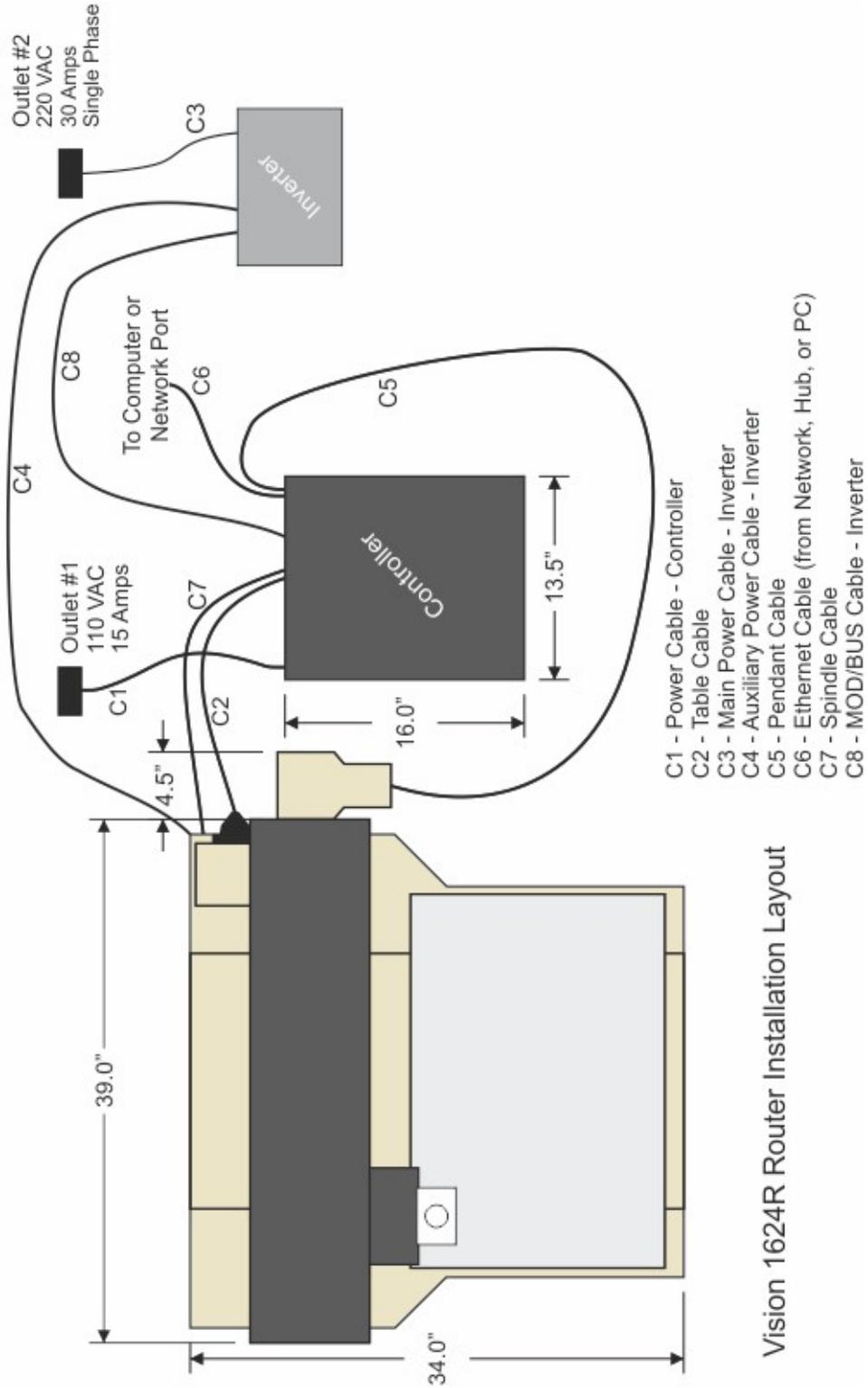
Carriage Wiring Connections

The Motor Plug connects to the Spindle Port on the back of the Carriage.

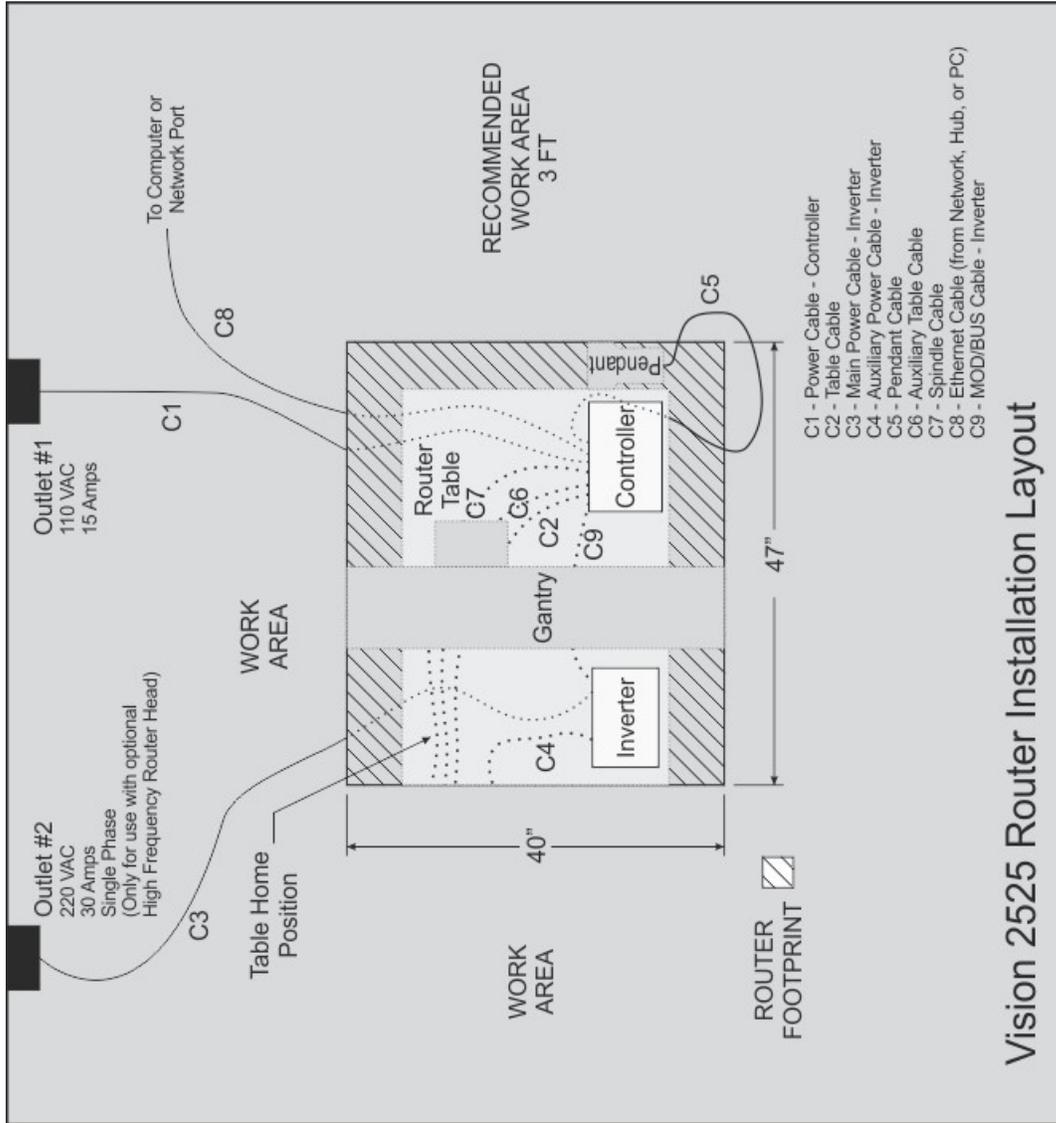
Carriage - rear view

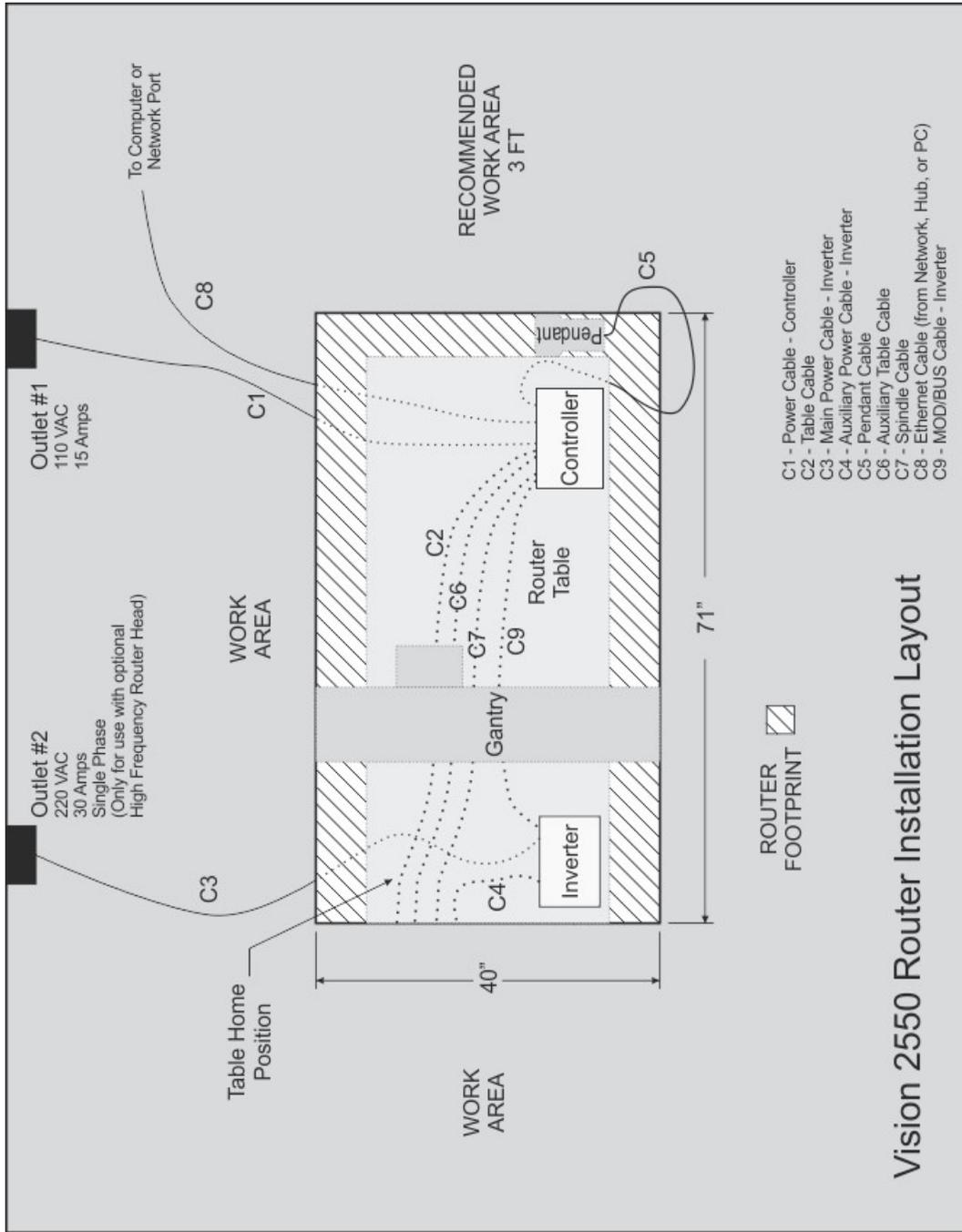


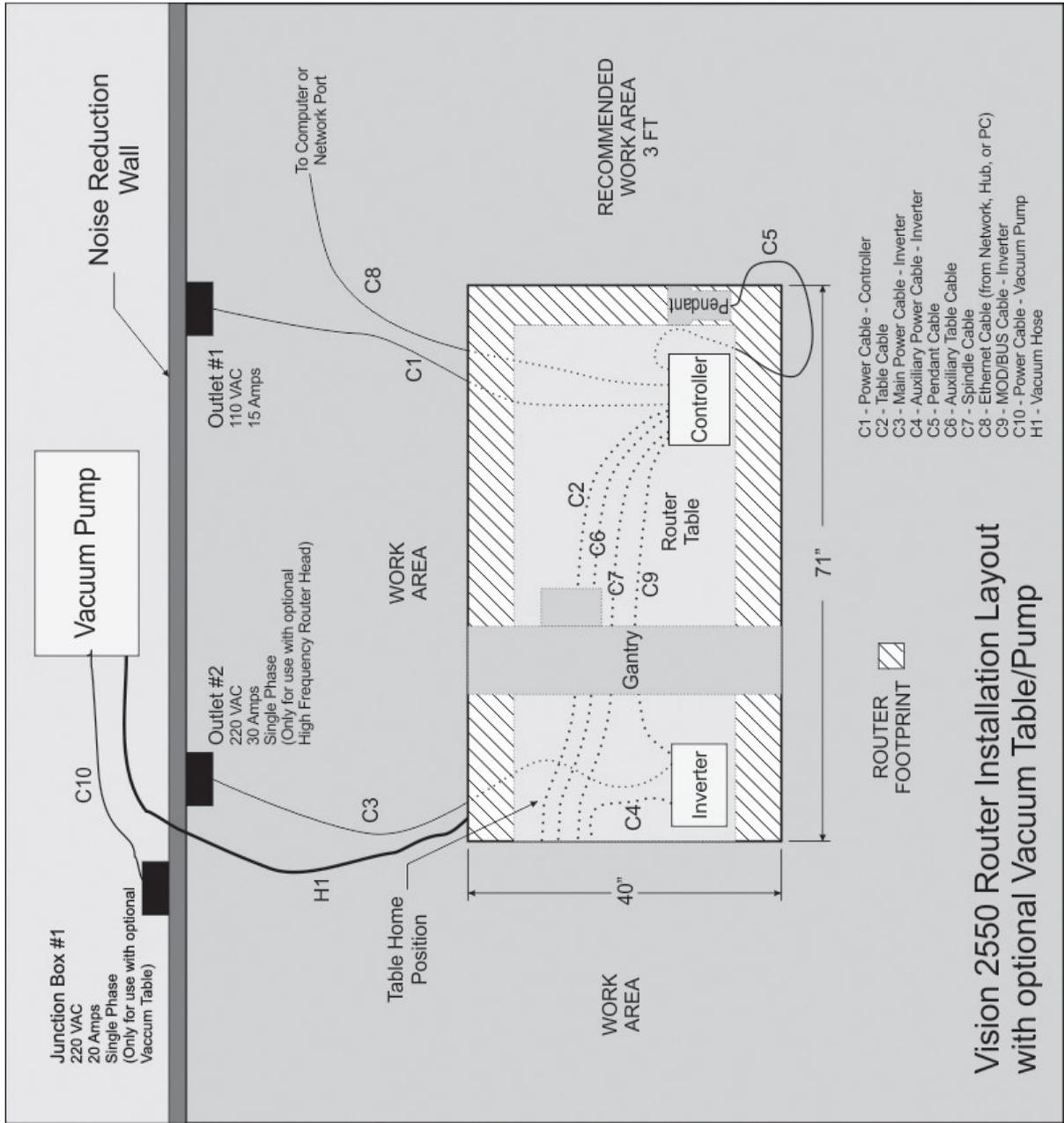
4.3 1624R Router Layout Diagram



4.4 2525 and 2550 Router Layout Diagrams







4.5 Vacuum Pump Connection - Vacuum Table Model Only

The Main Vacuum Port on the 2550 Router is located on the bottom of the valve panel as show below. The user will need to attach the valve panel to the end of the table as shown in the photo and connect the flexible hose from the vacuum inlet on the filter canister to the Main Vacuum Port on the valve panel.



The vacuum pump has been supplied with an electrical connector designed for a 20 amp, 220 VAC, single phase power supply. A qualified and licensed electrician must be used to complete all wiring and grounding of the vacuum pump according to all state, local, and national electrical codes.

