

# Communication Troubleshooting

## VR CNC Software

A step-by-step guide to help establish communication with the CNC machine.

It is recommended that the teacher (or person confronting this problem) consult the IT person at the school or district if problems remain after following the steps in this guide. Because COM port communication can often be a problem with the computer itself, Denford cannot be responsible for individual computer problems.

Screens shown in this document have been taken from the VR Milling software. The same instructions apply to using the VR Turning software.

Please read through these pages carefully and follow all instructions.

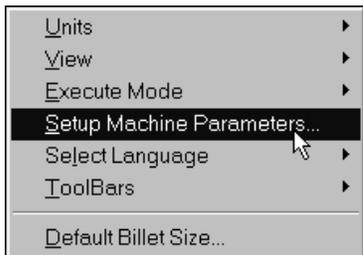
### 1 Is the RS232 cable plugged into a COM port on the computer?

One end of the cable plugs into the CNC machine while the other end plugs into a COM port on the computer.

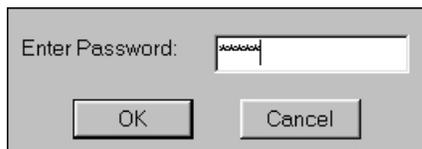
### 2 Is the CNC machine turned on? It must be turned on for proper communication.

### 3 Is the correct COM port specified in the VR software?

- What COM port is the machine plugged into on the computer? If you do not know, assume that it is COM 1.
- Open the VR CNC software.
- Click Setup from the main menu bar.
- Click Setup Machine Parameters.



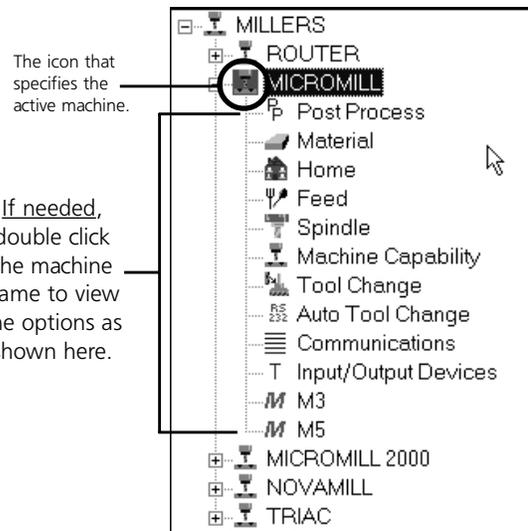
- When asked for a password, type **denny** in all lowercase letters. The password is case-sensitive. Click OK.



*If typing the password wrong, the Machine Properties Editor will appear but all options will be disabled.*

***In addition, machine properties can be adjusted only if you ARE NOT connected or attempting to connect to the CNC machine.***

- The Machine Properties Editor will appear. A red icon will be shown before the active machine. For example, if the machine you are using is a Micromill, a red icon should be shown before the word "Micromill".



#### FOR MICROMILL USER'S:

If the Micromill you are using is equipped with spindle & feed override knobs, set the active machine to Micromill 2000. To do this, right click the machine name and select "Set as Active Machine"

- Click Communications under the machine.



It is not Denford's responsibility to troubleshoot matters concerning computer operator error or computer / software conflict.

- h.) Change the COM port to read the port being used. If you do not know what COM port is being used, try COM 1.

If needed, set the Baud rate to read 19200.  
If needed, set the Polling Delay to read 100.

Communications	
Baud rate	19200
Com Port	1
Stop Bits	1
Mint File	MICROMILL.mnt
Polling Delay	100

- i.) Click Input/Output Devices under the active machine.



- j.) Set the COM port to 3 (or higher). This COM port cannot be the same port as that being used by the CNC machine.

Tutor File	VRMilling.Keys
Com Port	3
Virtual World	MICROMILL.xvr

- k.) Click the OK button. If you cannot see the OK button, the display settings on your computer are too low. You must open the Display option in Control Panel and increase the Screen Area size to a minimum setting of 800 x 600. Consult your Windows manual if help is needed.
- l.) Click the Machine button. If a Machine Mode window appears and the machine can be homed, communication has been established. If problems remain, continue to step 4.

#### 4 Try a different COM port setting in the VR software.

Follow step 3 again but this time use a different communications com port number. For example, if you specified COM 1 in step 3 - part h, try typing 2 in the COM port slot. Click OK, then click the Machine button to see if communication can be established.

#### 5 Check the status of the control card.

The control card is the main electrical board in the CNC machine. A problem with this card can cause problems with communications.

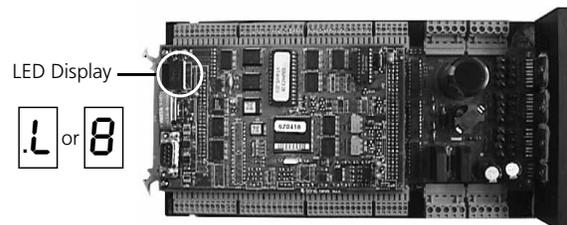
- a.) View the control card.

If using a micro series machine (i.e., Micromill, Microturn), remove the back machine panel OR some machine models were manufactured with a black plug or hole in the back. This will allow you to look inside the cabinet without having to remove the back panel.

If using a larger denford machine, such as a Nova or router, open the control box. To open the box, machine power must be turned off. Consult the machine manual for instructions.

- b.) Make sure the CNC machine is turned on.

- c.) Look for the LED display that is mounted on the main control card. A blinking dot with an L or the number 8 should be shown. If not, call Denford.



#### 6 Is the COM Port functional? Consult your IT person or Computer Tech for help with these issues.

- a.) Check the com port settings in Windows by accessing the Device Manager.
- b.) Are the com ports enabled and labeled properly in the BIOS?
- c.) Is the physical port itself functional? For example, Windows and the BIOS may show that the ports are fine, but the port is not seen by external devices.

#### 7 When all else fails....

- a.) Check the RS232 cable. If the cable is bad, communication will not occur.
- b.) Try another computer.
- c.) Upgrade the version of VR software (if a newer release is available)
- d.) Check out Denford's website for support information. [www.denford.com](http://www.denford.com)