



# Windows® Driver Installation Guide

Windows 2000 / XP

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## A. Introduction:

This guide describes the procedure for installing and updating drivers for your Printrex printer. Before you begin, you will need:

1. Latest version of driver files, available at the Printrex website (<http://www.printrex.com/drivers.htm>).
  2. The name of the Port to which the printer is connected (LPT1, USB001, etc.). If your printer is connected to a network print server, not directly to your computer, see the Printrex System Administrator's Guide. Please review **Appendix B** for information on connecting the printer.
- If you are installing drivers for a new printer for the first time, see **section B**.
  - If you've already installed drivers, and want to update them, see **section C**.
  - To check which version of driver you currently have, see **Appendix A**.

## B. Installing Printer Drivers:

Once you have connected the printer cable to the printer and the system, turn on the PC and the printer. (Note: Figure 1 shows a Windows XP dialog; all other figures show Windows 2000 dialogs. XP dialogs will have a different style, but operate identically.)

1. After downloading the driver ZIP file to a temporary location (C:\My Documents, for example), insert a blank, formatted floppy disk in drive A:\.
2. Expand the downloaded ZIP file, with the floppy disk as the destination.

If you are using **Windows XP**, right-click on the ZIP file, and select "Extract All". (See Figure 1.)



Figure 1

...Make sure to set the files to be extracted to A:\.

If you are using **Windows 2000**, you will need a third-party utility (such as WinZip, ZipMagic, or PKUNZIP) to extract the files.

(Note: if using PKUNZIP, or other DOS utility, rename the ZIP file to a DOS-compatible name, like *drivers.zip*, before extracting.)

3. Open the Printers folder (Start | Settings | Printers).  
Double-click the Add Printer... icon.  
The Add Printer Wizard starts. ( see Figure 2. )



Figure 2

... and click Next.

4. Select **Local printer** (Figure 3), and click **Next** again.  
(For “Network printer” setup, see the Printrex System Administrator’s Guide.)

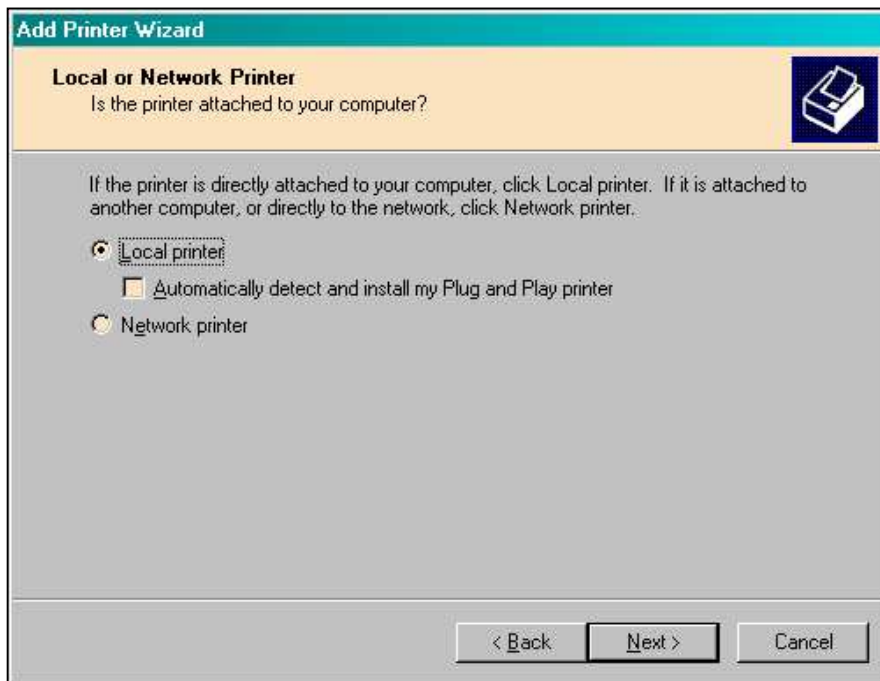


Figure 3

5. Then, choose the port to which the printer will be connected:

Typically, either LPT1:... (See Figure 4)

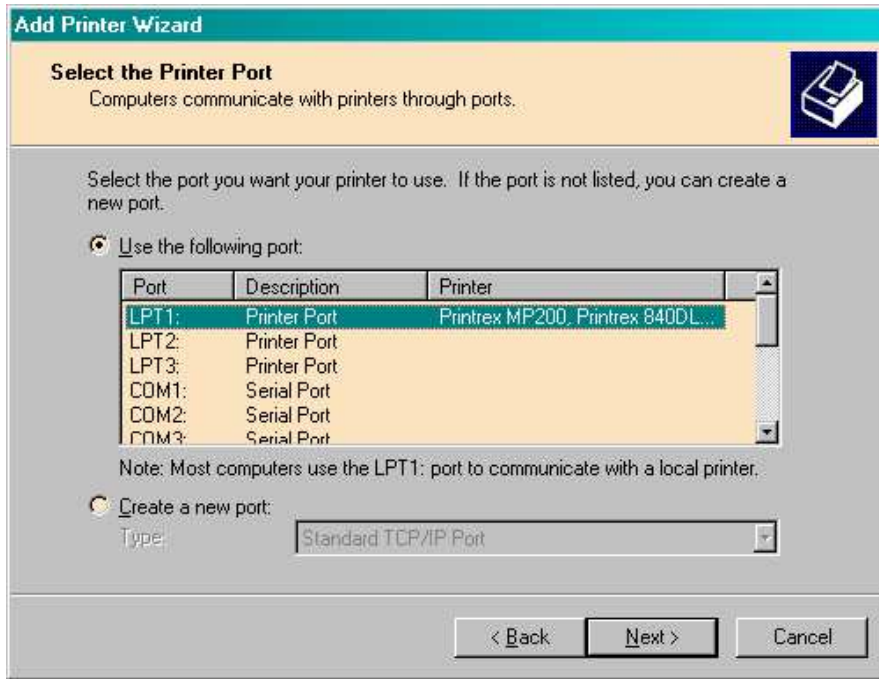


Figure 4

... or, if you have installed a USB-to-parallel converter, a port named USB001 (or similar name, such as USB002 or USB003): (See Figure 5)

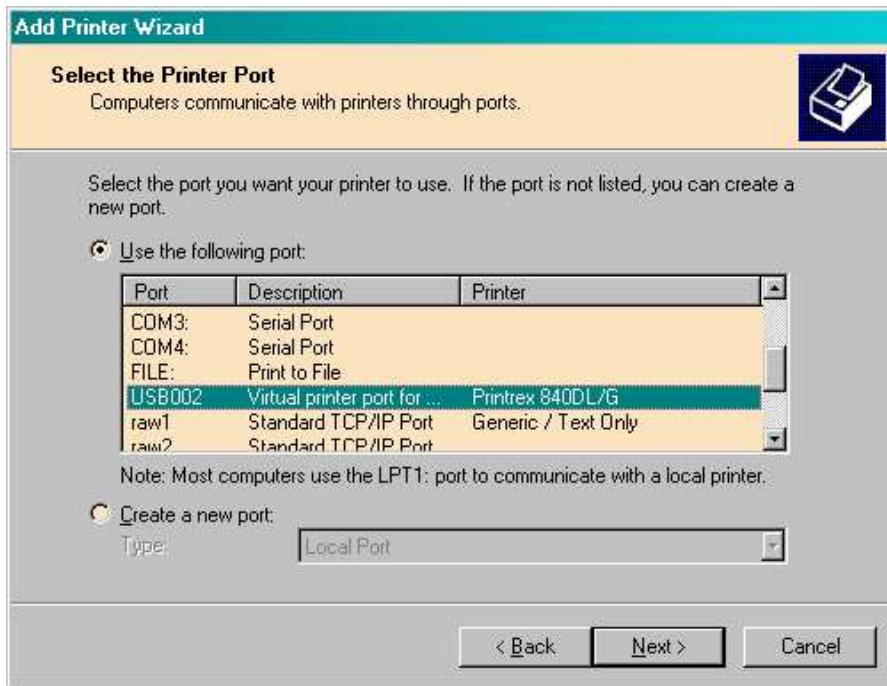


Figure 5

Select the port, then click Next.

6. The standard printer manufacturer/model dialog appears, as in Figure 6:

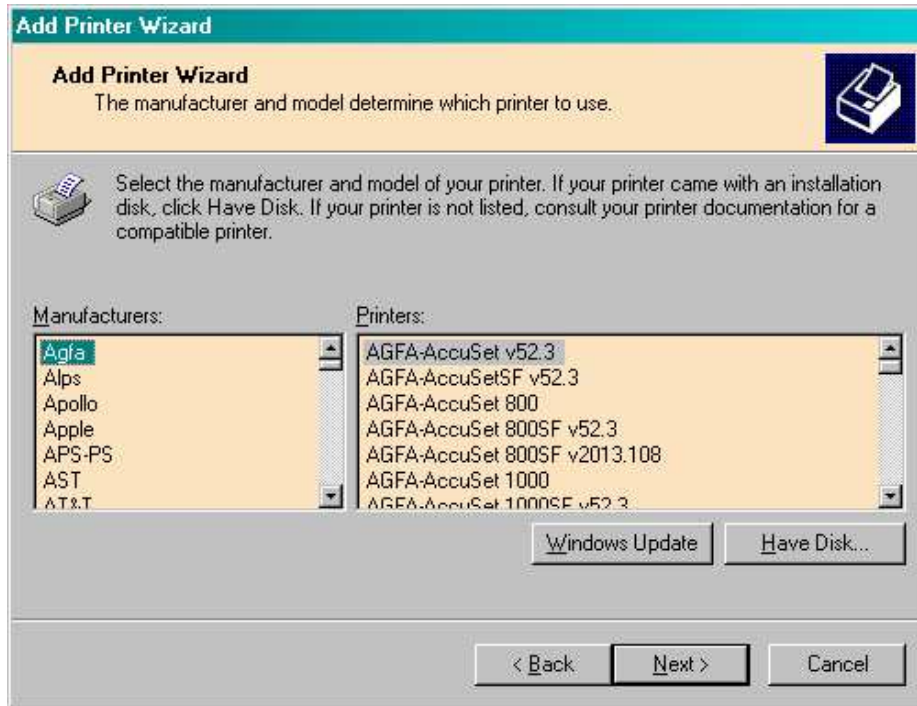


Figure 6

7. ... click **Have Disk...**, and the dialog of Figure 7 appears.
8. Enter "**A:\**" in the dialog, then click **OK**.

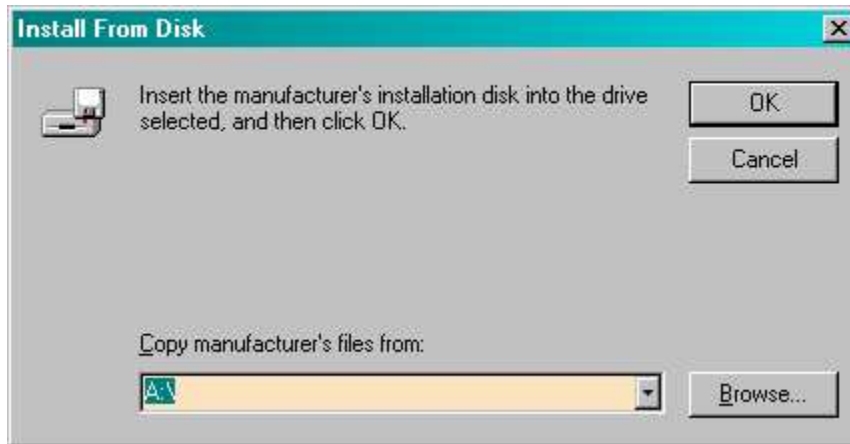


Figure 7

9. Select the desired printer model from the list shown in Figure 8, and click **Next**.

(See **Appendix C** for information regarding model selection.)

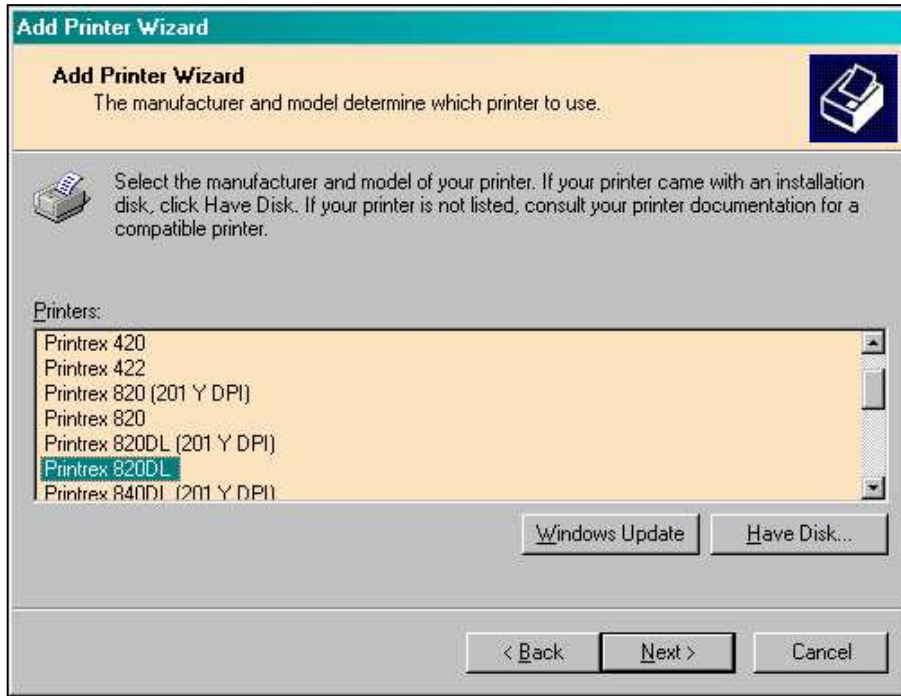


Figure 8

10. If you previously had any version of the driver installed, you may see the following dialog: (Figure 9)



Figure 9

Select **Replace existing driver** and click **Next**.

11. Then, for installations where the primary application does **not** allow selection of the printer, set the printer to be the system default: (Figure 10)

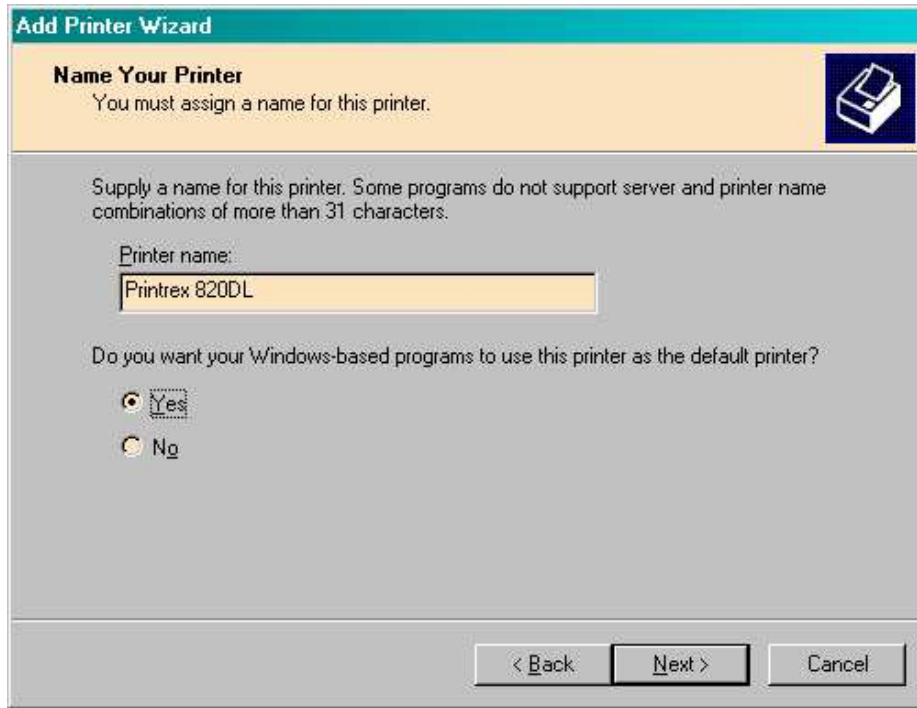


Figure 10

... and click **Next**.

12. If your system has *Windows File and Printer Sharing* enabled, you may see the following dialog: (Figure 11)

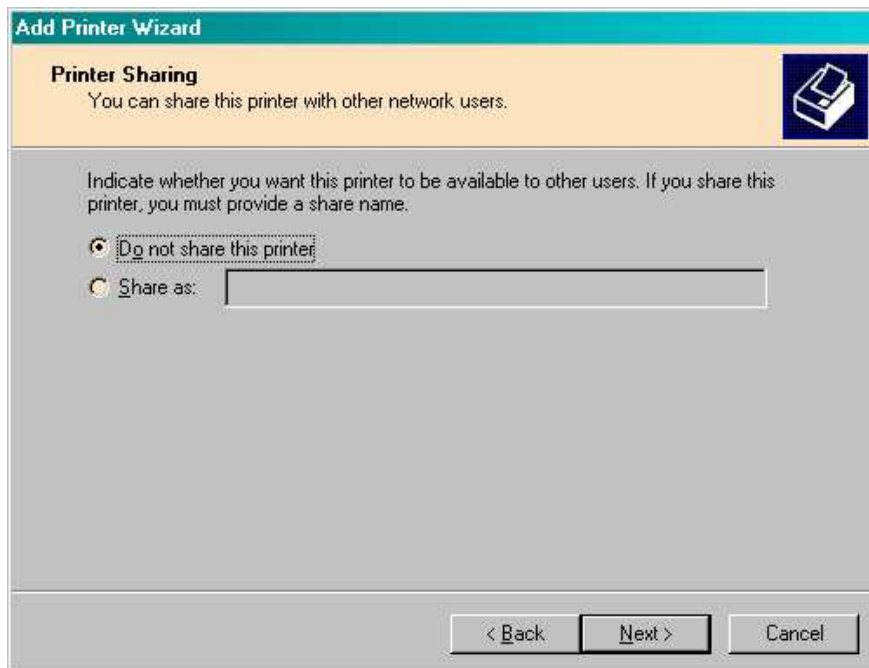


Figure 11

If you wish, you can specify a name for the printer, which will appear in Network Neighborhood, connected to your system. For further information, see the Printrex System Administrator's Guide. Click **Next**.

13. It is always useful to print a test page to verify installation (Figure 12): select **Yes**, then **Next**:

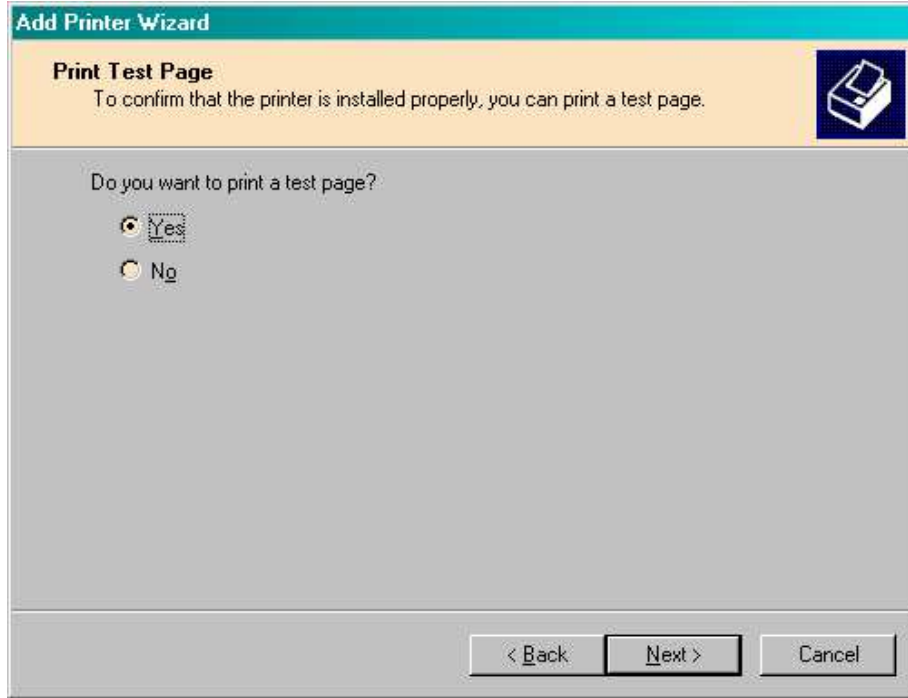


Figure 12

14. Then, a confirmation panel appears (Figure 13):  
... click **Finish**.



Figure 13

A verification dialog (Figure 14) will then appear:

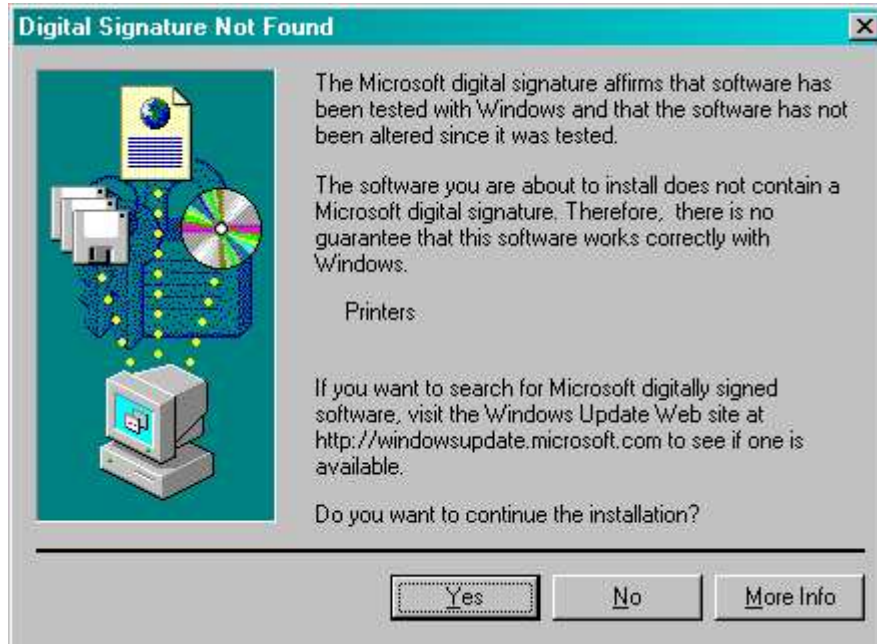


Figure 14

...click **Yes** to continue.

15. Files will then be copied from the floppy disk, and, if the printer is connected, with power on, paper loaded, and on line, the test page should begin to print within 5 – 20 seconds, depending on system resources. A small dialog (Figure 15) will then appear:

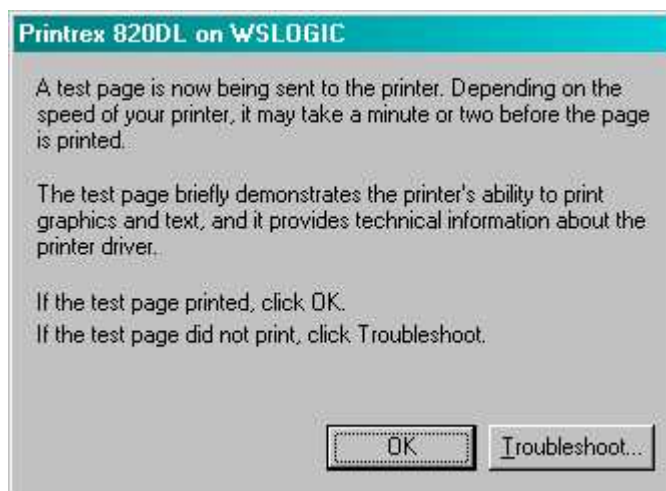


Figure 15

... Click **OK**.

If the test page printed successfully, the printer is now correctly installed and ready for use.

If it did not, check:

- Power is on.
- Paper is present, loaded correctly, and door is closed.
- Printer cable is securely connected.
- Correct port was specified in Step 6.
- If these are all OK, click Troubleshoot... in the dialog of Figure 15.

Note: In Windows 2000, before Service Pack 3, the printer installer ignored the default page size specified by the driver. This may cause the initial test page of a 1200DL installation to fail (since a Letter size page is not possible with the printer). To clear this initial condition, right-click on the printer icon, select Printing Preferences, Advanced, and then OK, and OK.

Retry the test page, by right-clicking on the printer icon, selecting Properties. On the General tab, click **Print Test Page**.

Depending on the application to be used, you may need to change some default settings of the printer. For example, the default paper size is 'Letter', for compatibility with the Windows printer installer, but most users will want to change this setting to "8.75 x 11", for roll paper, or "8.75 x 6.25 Half Page", for fanfold paper.

See the Printrex Windows Driver User's Guide (Document No. 1028-0062) for information on printer settings.

### C. Updating Existing Printer Drivers:

Before starting this section, download and expand the driver files, as described in Section A, steps 1 through 3. When you have created the floppy disk with the new files, proceed:

1. In the Printers folder, right-click on the printer icon, and select Properties. The dialog of Figure 16 will appear:

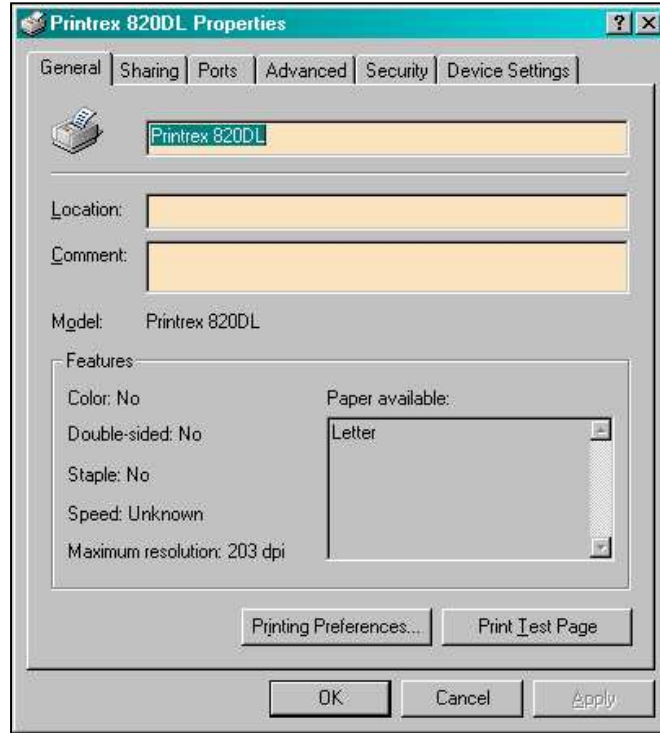


Figure 16

2. Select the Advanced tab (Figure 17)....

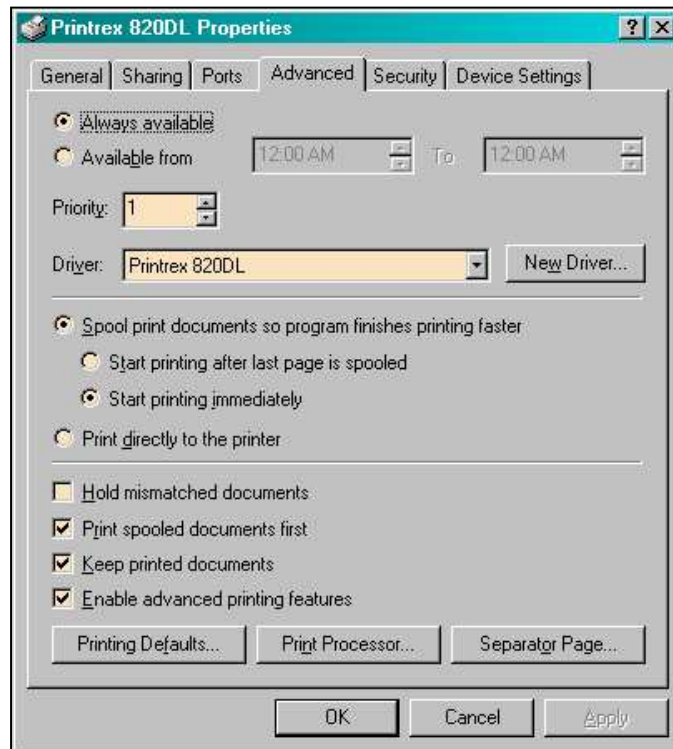


Figure 17

... and click the 'New Driver...' button.

The dialog in Figure 18 appears:



Figure 18

...click **Next**.

3. The dialog of Figure 19 follows; click '**Have Disk...**'.

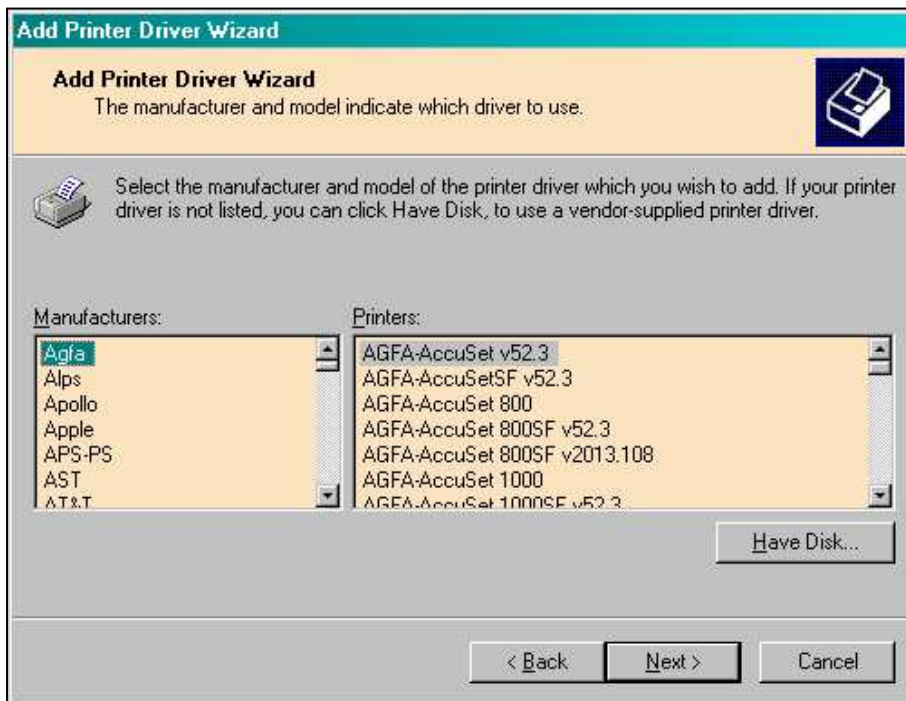


Figure 19

4. Then, be sure the dialog in Figure 20 is set to “A:”, and click **OK**.



Figure 20

5. The list of available drivers is then displayed, as in Figure 21. Be sure to select the **same model driver** that is currently installed.

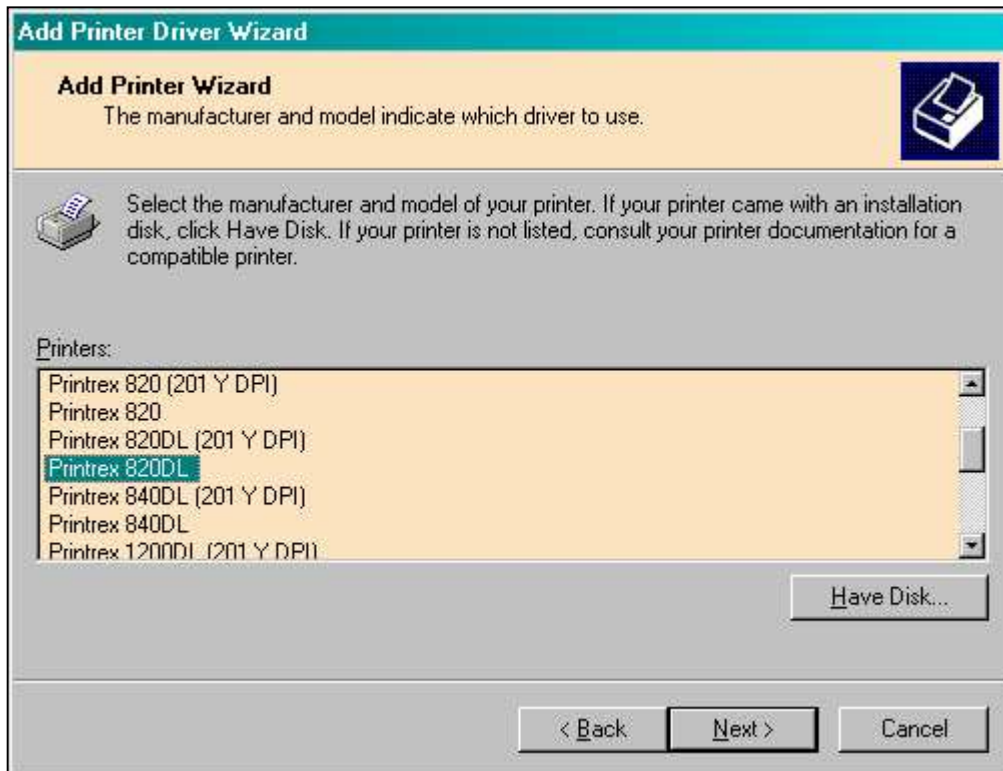


Figure 21

Click on the model name, then **Next**.

- 6. The dialog in Figure 22 provides a summary of the selections that you have made, and provides a last chance to go back and make changes.



Figure 22

If this information is correct, click **Finish**.

- 7. The verification dialog in Figure 23 then appears; click **Yes**.



Figure 23

8. Windows will then copy files from the floppy disk, and return to the Properties dialog, Advanced tab, as first seen in Figure 17.
  
9. To test the update, click on the 'General' tab of the Properties dialog (see Figure 16), and click 'Print Test Page'.  
  
To verify the version information, see **Appendix A**.
  
10. Installation is complete; click **OK**.

**Appendix A: How do I find out which version is currently installed?**

To check the current driver version on your system, go to the Printers folder, and right-click on the printer icon. Select 'Printing Preferences'. Then, right-click anywhere on or around the paper icon. A tiny popup, 'About', will appear (Figure 24).

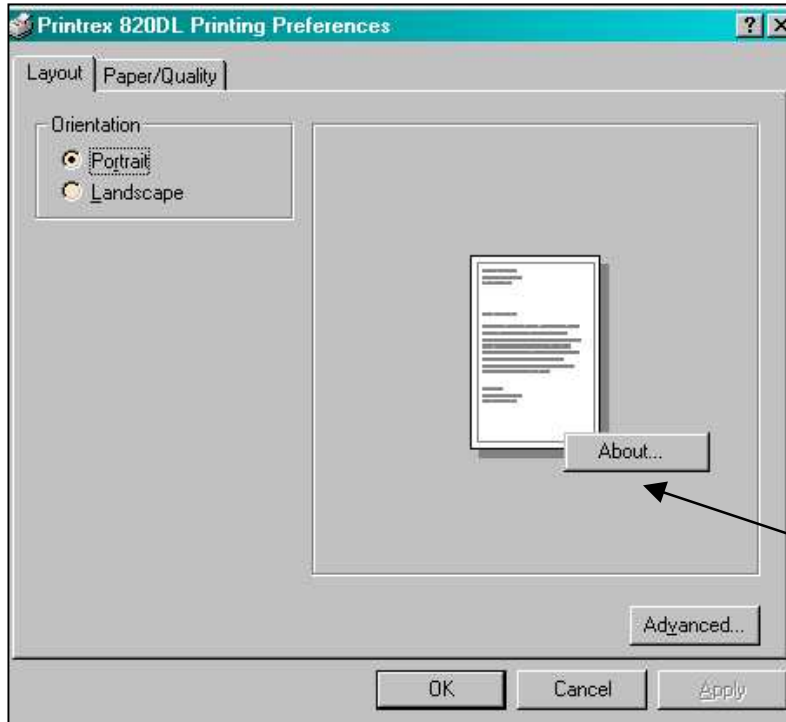


Figure 24

Left-click on this popup, and a dialog similar to that in Figure 25 will appear. The second line of this dialog is the Windows System driver version, which may depend on which Service Pack is installed.

The last line of the dialog is the Printrex driver version. This is the version of the installable printer driver. Note that the driver ZIP files posted on the Web have a *package* version number; not every driver is updated when the package is updated, so check that the driver for your printer is updated before downloading a new package.



Figure 25

## Appendix B: Basic Printer Installation:

This section reviews the basic installation procedure, and assumes that the printer is being connected directly to the user's PC, rather than to a network print server device, or to a Print Server computer.

(See the Printrex System Administrator's Guide for suggestions on setting up a networked installation, or for other interface configurations.)

### *What cable should I use?*

The Microsoft parallel port drivers in Windows 2000 and XP support a relatively low data rate. For a Printrex model 810, this rate does not affect the printer's operation. For other printer models, however, the system will be unable to supply data fast enough to allow the printers to run at full speed. Note that processor (CPU) speed is unrelated to this rate: it is due to a legacy bus architecture that supplies data to the traditional parallel and serial ports of a PC.

**We recommend using a USB-to-Parallel converter cable.** This allows all products to operate at full speed, when the minimum system requirements are met.

For Windows 2000 and XP, the Operating System contains drivers for these converters. When you plug in the cable, Windows automatically installs the driver, and adds a port named 'USB001' or 'USB002' to the list shown in Figure 4.

### *I don't have any USB ports on my system.*

If it is necessary to use the parallel port, we strongly recommend using an **IEEE-1284 Compliant** cable. There have been cases where users of "99-cent-special" cables have experienced data loss.

Further: NO switch boxes, "daisy-chained" disk drives or scanners are permitted. The cable must connect **directly from the PC port connector to the printer**, in a single length of cable (don't use 'extension' cables, obtain a single cable of sufficient length.).

Several cases have arisen where daisy-chained disk drives or scanners have resulted in corrupted print data.

### *But my software needs a hardware key to work!*

Parallel port security keys are a necessary evil in many industries. Newer hardware keys have been used successfully in-line with the printer cable, but it becomes very important to have a top-quality cable to avoid further signal degradation. It is also necessary to install the latest versions of the hardware key drivers.

In many organizations, it may be possible to have a USB card added to the system; they are available at very low cost (under \$20). This allows the printer to be connected via a USB-to-parallel cable, ending any potential conflicts with the hardware key.

## Appendix C: which driver should I install?

For most Printrex products, the driver disk supplies a single driver for a printer model, and that is what you should select in Figure 8 (Step 10) of the installation procedure.

**Models 820, 820DL, 840DL, and 1200DL** can each use two different drivers: the driver with the Model Name only (“Printrex 820/820DL/840DL/1200DL”), or the “201 Y DPI” version (“Printrex 820/820DL/840DL/1200DL (201 Y DPI)”).

The mechanical resolution of the printer is 203 DPI widthwise (X direction) by 201 DPI lengthwise (Y direction). The “Printrex 820/820DL/840DL/1200DL (201 Y DPI)” models report this 203 x 201 DPI resolution back to Windows, and an 8” by 10” rectangle drawn onto the printer page will print out at 8.00” wide by 10.00” long.

However, one issue arises from this installation:

*The Windows rendering system contains a bug in the way that dashed lines are drawn* that is exposed in some data logging applications. Specifically, a dashed line may be drawn with segments that are 25X too long. For example, a line with a 2 mm long line, then 1 mm space, repeated, will print as a 50 mm long line, then 25 mm space, repeated. This behavior began with NT4.0, and persists today in Windows 2000 and XP.

Note that the *consumer* versions of Windows (95/98/ME) do *not* exhibit this behavior.

This defect is not addressed by Microsoft because the vast majority of printing devices in existence use integer-multiple X and Y resolutions (300 x 300, 600 x 1200, 720 x 1440 DPI); this *conceals* the rendering defect.

To follow suit, we have changed the resolution of the primary drivers (“Printrex 820/820DL/840DL/1200DL”) to be 203 x 203 DPI.

**For most purposes, the driver with the Model Name only is recommended.** The printed output will then appear as designed under all conditions, with the Windows rendering defect concealed. Note, however, that applications that involve physically measuring the printed output will find that the Y-direction (lengthwise) size of the printout is stretched by 0.99%. That is, an 8” wide by 10” long rectangle on the display will print at 8.00” wide by 10.099” long.

For installations where absolute length accuracy is critical, the 201 Y DPI models (“Printrex 820/820DL/840DL/1200DL (201 Y DPI)”) should be used, with the warning that dashed lines may not be rendered correctly by Windows.

The newer product family (840DL/G, 820DL/G, 820G, 810M, 810) supports the Dot Line Adjustment control code, which allows fine-tuning of print length accuracy, as well as setting the effective printer resolution to 203 x 203, thus avoiding the Windows rendering defect.

**Document Revision History:**

<b>Version</b>	<b>Date</b>	<b>Change Description</b>
R1	3/20/03	Initial Release

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