

Additional Notes About Printing in Windows NT

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This document contains information about printing not available in the Microsoft® Windows NT® documentation set or in Help, as well as information on changes that occurred after publication. Some of the topics in this document are specific to particular printer models or printer types, such as PostScript or PCL printers, and some are more general, such as instructions on how to print extended characters.

Additional information is available in the Setup.txt, Readme.wri, and Network.wri files. Setup.txt contains information about installing Windows NT. Readme.wri contains general information about Windows NT, including information on specific hardware and software applications. Network.wri contains information related to networks, including information on network adapter cards, network services, and interoperability.

Using WordPad to View This Document

If you enlarge the WordPad window to its maximum size, this document will be easier to read. To do so, click the Maximize button in the upper-right corner of the window. Or open the Control menu in the upper-left corner of the WordPad window (press ALT+SPACEBAR), and then click **Maximize**.

To move through the document, press PAGE UP or PAGE DOWN. Or click the arrows at the top and bottom of the scroll bar along the right side of the WordPad window.

To have the words wrap to the screen size or the ruler

1. From the **View** menu, click **Options**.
2. Click either **Wrap to window** or **Wrap to ruler**, and then click **OK**.

To print the document

1. From the **File** menu, click **Print**.
2. Select the printer, and then click **OK**.

Before you call for support on a printing issue

First gather the following information:

- Version of Windows NT
- Service Packs and hotfixes applied
- Printer make/model
- Printer driver in use
- Printer language in use (PCL, PostScript, etc.)
- Connection to machine (serial/parallel/DLC/LPR)
- Type of clients
- Event Log errors
- Errors displayed on screen of client or server
- PostScript errors returned by printer
- Can the print server print when the client cannot?

General Printing Issues

The following issues apply to printing in Windows NT or apply to entire types of printers regardless of the manufacturer.

Problems with Printer Names over 32 Characters

Windows NT can create long printer names. However, some applications cannot print to printers with names longer than 32 characters. If you experience problems, create a printer with 31 or fewer characters in the name.

For printers that are shared, the entire qualified name (including the server name, for example, \\PRINTER2\\PSCRIPT) must be less than 32 characters.

Printing Extended or International Characters

In addition to the 128 standard ASCII characters you can type using your keyboard, you can use extended or international characters by using the Character Map application. For more information, see Help for Character Map.

When Windows NT prints a file, each character you typed while using your application is translated from the Windows NT character to the appropriate character on your printer. If your printer supports the same character, the character prints. Otherwise, a character such as a period or other filler character prints instead. Check your printer manual and experiment with your printer to determine which extended characters are supported.

Note

This limitation applies only to the printer's hardware fonts. TrueType fonts provided by Windows NT will print extended characters.

Printing Colored Text on Non-PostScript Printers

If text is not one of the primary printer colors (black, red, green, blue, cyan, magenta, yellow, or white), the color may be mapped to white and you will not see any text. In other cases, it may be mapped to another color.

Using PostScript Printers

If you notice any problems with character spacing when you print to a PostScript printer, see the following procedure to correct the problem.

1. Click **Start**, point to **Settings**, and then click **Printers**.
2. Right-click the printer, and then click **Document Defaults**.
3. Click the **Advanced** tab.

4. In the Graphic section of the tree, click **TrueType Font**.
5. Click **Download as Softfont**, and then click **OK**.
6. Restart the application, and then print the document again.

Using Color Printers

Some Windows 3.1-based and Windows 95-based applications will not print colored text and graphic objects on color PCL printers at 24-bpp (True Color). To produce output with the expected colors, print at a lower color depth.

Troubleshooting Plotters

Seven (7) data bit serial connections to plotters are not supported. Use eight (8) data bits. If some lines are not printing on pen plotters, try setting the plotter (on the plotter's control panel) so installed pens are the minimum width supported by the hardware. Some plotters will not print thin lines unless the thinnest pen is selected.

Pen plotters can take more time to clear their buffers. You may want to set the port time-out to higher values to avoid receiving error messages.

Windows NT plotter drivers for most HP DesignJet series plotters are designed for use with margins set to Normal, paper size set to Software, and autorotation set to Off. When troubleshooting problems, resetting the plotter to the factory defaults and making only necessary changes from the defaults is suggested.

All Windows NT plotting support utilizes the HP-GL/2 language. Some plotters supported by Windows NT can be set to receive a choice of plotter languages. To work with Windows NT, HP-GL/2 must be selected.

When printing to plotter models that offer a choice of roll or sheet media, the form to tray assignment must be set to the actual paper size physically available to the plotter. Selecting a cut sheet media size when plotting to roll media or roll media when plotting to cut sheet media is not supported, and may result in misaligned output.

Converting Type 1 Fonts to TrueType Fonts

The following is a list of Type 1 font vendors who have given permission to convert their fonts to TrueType. If a vendor is not listed here, you must contact them for permission to convert a font.

Type 1 Font Vendors

Adobe Systems Incorporated
Alphabets, Inc.
Agfa
Ares Software Corp.
Autologic Inc.
Bear Rock Software Technologies Corp.
Bill Tchakirides, UTF
Bitstream Inc.
Carter & Cone Type Inc.
Castle Systems
Diehl
EmDash
FontShop International
ESSELTE LETRASET LTD

Type 1 Font Vendors (cont.)

Image Club Graphics, Inc.
Lanston Type Co.
Letter-Perfect/Elsware
Linotype
Linotype-Hell
Miles Inc.
Monotype Typography Inc.
Pre Press Solutions
Page Studio Graphics
The Font Bureau Inc.
The Font Company Inc.
Treacy Faces Inc.
U-Design Type Foundry.
URW Software & Type GmbH
Y&Y
Galiad
Galapagos
Varityper

Caching Print Server Information on Windows NT version 4.0

Checks are made between Windows NT version 4.0 Server and Windows NT Workstation version 4.0 to make certain the cache is up to date with the print server. If you are using a version of Windows NT Server version 3.5 or earlier, and the printer settings or driver on the server have been changed since you connected to this printer, information on the cache may not match the information on the server. To update the cache on the computer running Windows NT Workstation, disconnect from the printer, and then reconnect. This will refresh all cached printer settings.

Printing from Windows version 3.1-based Applications

Some Windows version 3.1 applications do not accept port names longer than 5 characters. If you are using a monitor (such as DECPSMON or HPMON) that allows you to use a long name and you experience problems from older applications, rename the port name to 5 characters.

Using Separator Pages

The default separator pages (PCL.SEP, PSCRIPT.SEP, and SYSPRINT.SEP) may not work with some printers. PCL.SEP is targeted for PCL printers, and may not work unless the PCL printer also supports PJL. PSCRIPT.SEP is targeted toward PostScript printers that also support PJL. Also note that PSCRIPT.SEP does not actually print a physical separator page. SYSPRINT.SEP is targeted toward PostScript printers and does produce a physical page.

Printers that do not meet the above specifications will require custom separator pages. For most non-PostScript printers (PCL or otherwise), this will produce a basic separator page (only plain text with no printer-specific control codes):

```
\
\B\S\N\4
\I\4
\U\D\4
\E
```

Micrografx Designer 6.0

Designer (part of the ABC Graphics Suite) may display an error dialog box that refers to SMapLS_IP_EBP_12 in KERNEL32.dll when printing to PostScript printers. The dialog box

appears because Designer misinterprets the operating system version information and tries to call a procedure found only in the Windows 95 version of the .dll file. Clicking **OK** allows printing to continue as expected.

The printer setup property page has a different appearance under Windows NT version 4.0 than it does under Windows 95.

Micrografx Designer substitutes a monospace font such as Courier for TrueType fonts.

Contact Micrografx at (214) 234-2694 or online at <http://www.micrografx.com> for upgrade information.

Microsoft Encarta 95

There are known problems printing from Encarta 95 to PCL printers in 24bpp when metafile spooling is turned on. You can work around this problem by either turning off metafile spooling or by switching to 8 color or 256 color depth in the printer's document properties dialog box.

Printer Drivers

Printer drivers from third party vendors that were used with earlier versions of Windows NT cannot be used with Windows NT version 4.0. Contact your print device vendor directly to obtain an updated printer driver.

Existing Windows NT version 3.x drivers are upgraded to Windows NT version 4.0 compatible drivers. However, the Windows NT version 3.x drivers are retained for use by Windows NT version 3.x clients when connecting to printers shared through a computer running Windows NT version 4.0.

Printers are now set up and accessed from the new Printers folder.

To view the Printers folder

Click **Start**, point to **Settings**, and then click **Printers**.

To add a new printer

From the **Printers** folder, click the **Add Printer** wizard.

Note

The **Add Printer** wizard supports the installation of printer drivers for Windows 95, all versions of Windows NT, and all architectures of Windows NT. However, the Windows NT version 4.0 compact disc does not contain printer drivers for earlier versions of Windows NT or Windows 95. To use the **Add Printer** wizard to install earlier versions of Windows NT printer drivers, you must have the installation media that contains the earlier version of the driver. The **Add Printer** wizard can install Windows 95 printer drivers from a share which contains decompressed Windows 95 printer driver files and printer .INF files. The **Add Printer** wizard cannot install files directly from a Windows 95 compact disc because the files are compressed on the compact disc.

Windows 95 Printer Drivers on Windows NT

Windows 95 printer drivers can be installed on computers running Windows NT. The printer drivers can be obtained from an existing Windows 95 installation or from a Windows 95 compact disc. Be aware that drivers on the Windows 95 compact disc must be decompressed before they can be installed on a Windows NT computer. Before you decompress the files, first create a directory for the decompressed files.

To decompress files from the Windows 95 compact disc

1. At the command prompt of the computer running Windows NT, type **md c:\win95. flat**
Flat indicates that the files in the directory are not compressed.
2. Insert the Windows 95 compact disc in the CD-ROM drive on the computer running Windows NT.
3. From the command prompt, switch to the CD-ROM drive.
4. Type **cd \win95.**
5. Type **extract /a /e win95_02.cab /L c:\win95.flat.**
6. Then type **extract /a /e precopy1.cab /L c:\win95.flat**

Upgrading Printer Drivers for Non-Native Processors

Non-native printer drivers (for example, x86-based printer drivers on a Digital Alpha computer) are not always upgraded during Setup. In some cases, new printer drivers must be installed using the Printers folder.

Non-native printer drivers are upgraded only if you upgrade a previous version of Windows NT from a compact disc, and you start Setup by booting your computer from a Windows NT 4.0 installation floppy disk or the Windows NT compact disc. If you install Windows NT version 4.0 using Winnt.exe or Winnt32.exe, the non-native printer drivers are not updated.

Remote Printer Administration

To provide quick access to the printer folder for several servers, drag and drop the remote printer folders to your local printer folder.

To add remote printer folders to the local printer folder

1. Click **Start** and then click **Run**.
2. Type the name of the print server preceded by two backslashes (\\).
3. Drag the printer folder to your local printer folder. If necessary, follow the on-screen instructions to install the printer driver.

PriorityClass Registry Entry No Longer Supported

Windows NT Workstation and Windows NT Server no longer support the \HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Print\PriorityClass registry entry. You do not need to remove it; it is simply ignored.

You can now use SpoolerPriority instead of PriorityClass. SpoolerPriority can be set to IDLE_PRIORITY_CLASS, NORMAL_PRIORITY_CLASS, or HIGH_PRIORITY_CLASS. If it is set to anything else, Windows NT defaults to NORMAL_PRIORITY_CLASS. The registry value type for SpoolerPriority is REG_DWORD.

By default, there is no SpoolerPriority entry in the Registry and the process priority is NORMAL_PRIORITY_CLASS.

Long Printer Names

Several Windows version 3.x applications cannot print to a printer if the printer name contains more than a specified number of characters. Some applications will generate a General Protection Fault if this is attempted. Other applications may not print to any printer, even printers with short names, if the default printer has a "long" name. To resolve these problems, rename the printers used with the applications to shorter names and make one of those printers the default printer. See

"General Printing Issues" later in this document.

Configuring Your Printer's DIP Switch Settings

The following printer models require certain DIP switch settings in order to work properly in Windows NT. Make sure you configure your printer's DIP switch settings before you install the printer.

Canon Bubble-Jet BJ-10e, BJ-10ex, and BJ-130e

All DIP switches should be set to the factory-default position. For the BJ-10e and BJ-130e models, this is the OFF position.

Digital 9-Pin and 24-Pin Printers Supported by Windows NT

These printers should be set to Emulation (IBM ProPrinter) mode. See your printer manual for details on how to set the emulation.

Digital DECWriter 95

To use a Digital DECWriter 95 printer with Windows NT version 4.0

1. Upgrade your system with Windows NT version 4.0.
2. Remove the printer model Digital DECWriter 95 from the Printers folder and reinstall the printer again by using the **Add Printer** wizard.
3. Set the DIP switches for ESCP2MS emulation mode.

Digital Laser Printers Supported by Windows NT

Printers listed that say (LJ) after the model name must have an HP LaserJet emulation cartridge installed. The printer must be set to LaserJet mode. See your printer manual for details on how to set the emulation.

Epson 9-Pin and 24-Pin Printers Supported by Windows NT

The following DIP switch settings are required for all Epson 9-pin and 24-pin printers:
Auto LineFeed: OFF Skip Over Perf: OFF

Fujitsu 9-Pin and 24-Pin Printers Supported by Windows NT

The following DIP switch settings are required for all Fujitsu 9-pin and 24-pin printers:
Color: AUTOSEL LF Code: LF Only CR Code: CR Only Emulate: DPL24/DPL24C

Mannesmann Tally 9-Pin and 24-Pin Printers Supported by Windows NT

The emulation on the MT 130/9, MT 131/9, MT 230/9, MT 230/18, and MT 340 models should be set to ANSI + IBM ProPrinter. See your printer manual for details on how to make this change.

The emulation on the MT 130/24, MT 131/24, MT 230/24, and MT 330 models should be set to ANSI + Epson LQ2500 emulation. See your printer manual for details on how to make this change.

Olivetti 9-Pin and 24-Pin Printers Supported by Windows NT

These printers should be set to Epson mode. See your printer manual for details on how to set the emulation.

Seikosha LT-20

The following DIP switch setting is required:

Hewlett-Packard, Canon, and PCL Printers

This section contains information specific to printing on Hewlett-Packard, Canon, and PCL printers.

PCL Printers: Setting Printer Memory

When you create a PCL printer, make sure that the memory specified in the printer's Properties Device Settings tab matches the memory your printer contains. Specifying an incorrect amount of memory can cause the printer to print incorrectly.

HP LaserJet IIIsi Language Switching

System language switching must be set to ON (SYS SWITCH=ON*) when printing to LaserJet IIIsi printers. If language switching is set to OFF, the printer may not print.

HP LaserJet IIIsi in PostScript Mode

If you are using a LaserJet IIIsi printer in PostScript mode, unless you are writing PostScript programs and need error information for debugging, make sure the PRT PS ERRS option on your printer panel menu is turned off (the factory-default setting). If this option is on, your print jobs pause, and a message appears on your printer panel each time a PostScript error is encountered. In most cases, your documents still print, but the printing process is interrupted.

HP LaserJet Series III: Upgrading Printer Drivers

The HP LaserJet III printer driver included with Windows NT is named HPPCL5MS.DRV. In earlier versions of Windows, this driver was named HPPCL5A.DRV. If you upgrade to Windows NT, the Setup program updates the printer driver for the HP LaserJet III printer. However, some applications store the information about the printer driver file with the document, and if you try to print a document that you created before you upgraded to Windows NT, you may receive a message notifying you that the printer driver cannot be found. If this problem occurs, choose the Printer Setup command in your application to update the driver information stored in the document.

Hewlett-Packard 5L

When you print to your HP LaserJet 5L the following error message might appear:

Error writing to <port name> for <document name>. The system cannot find the file specified.

This error might indicate that your HP LaserJet 5L failed to power-on (or "wake up") after entering Sleep Mode.

If your HP LaserJet 5L fails to power-on (or "wake up") after entering Sleep Mode, contact Hewlett-Packard at (208) 323-2551.

HP PaintJet XL Margins

You should set all margins to at least 0.5-inch for the PaintJet XL. If clipping occurs, increase the margin on the clipped side.

Additional Printers and Font Packages

This section contains information specific to font packages and printing on miscellaneous printers.

Digital PrintServer Printers

Digital Equipment Corporation PrintServer printers are smart devices that can be soft loaded from your Windows NT Workstation or Server by using bootp and tftp.

If your printer is configured but will not soft load, and if ?54 appears on the front panel of the PrintServer, try the following:

- Configure the proper hardware address for the PrintServer printer in Printers folder. Select the PrintServer printer in the Printers folder. Right-click the printer, and click **Properties**. Click the **Ports** tab, and then click **Configure Port**.
If you are not sure of the hardware address, check the Print Servers front panel after starting. The panel will display the hardware Ethernet address.
- The PrintServer printer and the Windows NT system must be in the same TCP/IP subnet to soft load the printer. You may print to a PrintServer printer from anywhere on your network, regardless of subnet.
- Check your network hardware. Some types of hardware (bridges, for example) may be configured to filter bootp packets. To resolve this problem, soft load the PrintServer printer from a Windows NT system that is on the same side of the bridge as the printer, or have your network administrator disable bootp packet filtering on that bridge.

Printing from ThinkPad 7xx Computers

If printing from the ThinkPad 7xx results in illegible output, you may need to change, in the BIOS setup program, parallel port arbitration in the computer's system setup to Disabled. This will force the parallel port to no-DMA ISA computer-compatible mode and it will resolve the data handshake error with some printers.

To change parallel port arbitration in the computer's system setup to disabled

1. Turn on the ThinkPad.
2. Press CTRL+ALT+INS after memory check. Enter a password if required.
The IBM logo will appear.
3. Press ENTER.
4. Click **Set Configuration**, and then press ENTER.
5. Click **Change Configuration**, and then press ENTER.
6. Click **Parallel Port Arbitration Level**. Press F6 several times until Disabled appears.
7. Press F10 to save the current setting. Press ENTER.
8. Press F3 twice to exit the setup program, and then press ENTER to start the operating system.

If this procedure does not resolve the problem, contact Xircom for a driver update.

Printing Graphics on Canon Bubble-Jet BJ 10e or BJ 130e

If you are printing in 360x360 dpi graphics mode and parts of the graphics images in your documents are missing, make sure the DIP switch to control graphics image density is set to HIGH.

Fonts with Epson LQ 510, LQ 850, and LQ 1050 Printers

The Epson LQ 510, LQ 850, and LQ 1050 printer drivers support the full set of fonts provided with the latest versions of these printer models. Earlier versions of these printer models only support the Roman and Sans Serif fonts.

TrueType Fonts on Kyocera F-series Printers

To print TrueType fonts on Kyocera F-series printers, make sure that the Download TrueType Fonts check box is cleared in the Advanced Document Properties dialog box when configuring

your printer. Otherwise, TrueType fonts may not print correctly.

Soft Fonts on Mannesmann Tally MT 92C

Only HP LaserJet compatible fonts can be downloaded and only if the 256K memory card is fitted. HP DeskJet compatible fonts will not work.

Cut-Sheet Feeder on NEC Pinwriter P7 Printer

The Paper Source option, Cut Sheet Feeder, does not work properly with the NEC Pinwriter P7 printer. To use the cut-sheet feeder as the paper source, you must specify a left margin of about three inches for your document so that text prints correctly on the page.

Feeding Paper on Fujitsu 9-Pin Dot-matrix Printers

The manual-feed option is not supported on Fujitsu 9-pin dot-matrix printers. All paper is automatically fed to the printer from the roller.

Changing Printer Settings with Bitstream Facelift Version 1.0

With some applications, you can change the settings for your printer on a per-page basis. You cannot use this feature in Bitstream Facelift version 1.0 when printing multiple-page documents.

Setting Fonts for a Specific Printer using Crosstalk 2.2 for Windows

An error message appears when you attempt to set the fonts for the specific printer by using the **Print Setup** dialog box. To work around this problem, perform the following steps:

To set fonts within CrossTalk 2.2 for Windows

1. Click **Start**, point to **Settings**, and then click **Printers**.
2. Right-click the desired printer, and then click **Set As Default**.
3. Close the Printers window.
4. Open Crosstalk.
5. On the **File** menu, click **Printer Setup**.
6. Select Default Printer, and then set the font for the default printer.