

AdobeSM Customer Services

ATM™ and Type 1 Fonts

INSTALLING AND UNDERSTANDING FONTS AND ATM UNDER WINDOWS™ 3.0 AND 3.1

To ensure that your Adobe PostScript™ fonts and Adobe Type Manager™ operate seamlessly, we will describe the role of AFM (Adobe Font Metrics), INF (Font Information), PFB (Printer Font Binary), and PFM (Printer Font Metrics) files.

In Windows, ATM requires two files in order to rasterize (create) scalable screen fonts, PFM files, and PFB files. PFM files contain the metrics information for the typeface, and PFB files contain the outline or printer information of the typeface. Each font needs to have matching PFM and PFB files in order for ATM to create scalable screen fonts. Most font packages contain AFM, INF, and PFB files; others contain PFB and pregenerated PFM files.

Adobe font packages are a part of the Adobe Type Library, which contains more than 300 font packages. These packages contain font disks, Installer disks, and Font Foundry™ disks. A font package also contains Adobe PostScript downloaders and an important Read Me First card. The Read Me First card explains that if ATM is installed, you should skip the Installer and Font Foundry programs that come with the font package. The Read Me First card recommends that fonts be installed through the ATM Control Panel under the Windows Main Group. The ATM Control Panel has an Add option button to install additional fonts.

INSTRUCTIONS FOR ADDING FONTS

- 1 Open the ATM Control Panel, located in the Windows Main Group.
- 2 Insert the font disk into the disk drive.
- 3 Click on the Add button.
- 4 Select the disk drive letter in the Directories box. Use the scroll bar to move to the bottom of the list.
- 5 Highlight and double-click on the drive letter.
- 6 Highlight all the desired fonts in the Available Font box.
- 7 Click on Add.

When adding fonts through the ATM Control Panel, ATM first looks for PFM and PFB files. If there is no PFM file, ATM will look for AFM and INF files and create a PFM file automatically.

Note: When adding fonts from Multiple fonts disk, it may be necessary to switch disks more than once. See the technical note “Installing Fonts from Packages with Multiple Disks” for additional information.

DEFINITIONS

AFM

Adobe Font Metrics, a text file that defines metric and pair kerning information. AFM files can be used by ATM and Font Foundry programs.

Adobe Type Manager

A system software utility that quickly generates type at any size from Type 1 outline fonts. ATM software belongs to a category of software programs called *type rasterizers*.

Bitmapped Fonts (Screen Fonts)

A pattern of dots (bits) that closely resembles a character shape in a given typeface, point size, rotation, and resolution. Bitmapped characters used as screen fonts tend to be jagged, as opposed to smooth characters generated from outlines. Bitmaps cannot be scaled without distortion and require considerable storage space. They provide screen pictures of what certain fonts look like at specific sizes. Bitmapped screen fonts are installed through the Windows Control Panel under Fonts.

Downloader

A program that transfers outline font data from the computer to the printer's memory or hard disk. PC fonts ship with three PostScript downloaders: PCSEND, PSDOWN, and WINDOWN. PCSEND is the parallel downloader that runs under DOS and can be used in a DOS batch file. PSDOWN is the serial downloader that runs under DOS and uses an interactive menu. WINDOWN works with parallel and serial ports and runs only under Windows. WINDOWN has additional features, such as formatting and downloading fonts to most printers' SCSI hard drives, updating the Windows WIN.INI file after downloading a font, and printing samples of all resident fonts and fonts downloaded to printer memory.

Font Foundry

A utility that converts Adobe Type 1 fonts into Hewlett-Packard® PCL (Printer Control Language) fonts. Font Foundry generates nonscalable (bitmapped) screen and printer fonts. These fonts are PCL level 4 compatible, which means they will work in HP® LaserJet® II, III, and IV PCL printers.

INF

PC Font information file used by ATM and Font Foundry programs. ATM recognizes a file as a font through the INF or PFM file.

PFB

Printer Font Binary or Outline font—a file containing the description of each character in a typeface. PFB files are used by PostScript printers, typesetters, slide printers, ATM, and Font Foundry. They are mathematical descriptions of characters in the PostScript language, which describes characters by anchor points, curved lines, and straight lines. Because each character is described mathematically, it may be scaled (sized) infinitely without loss of definition. No metric information is contained in a PFB file.

PFM

Printer Font Metric, a file used only by Microsoft® Windows. A PFM file is a subset of the AFM file and is generated when you add a font through the ATM Control Panel.

ATM EXPLAINED

Adobe Type Manager is technically referred to as the *PostScript font rasterizer*. Simply stated, this means that ATM knows how to combine PFM and PFB files together to display smooth bitmaps of any size to a computer screen or to any supported printer under Windows. In order for ATM to work, it must be installed under Windows. ATM consists of four file types, the control panel, the driver, the DLL (Dynamic Link Library) files, and the fonts files (PFM and PFB), which must all be correctly loaded into Windows. If any of these files are missing, ATM will not work.

ATM must be installed into Windows through the Installer program that accompanies the package. The ATM installer program copies the ATM files onto the hard disk, creates an ATM.INI file, and installs any fonts included on the ATM disks. The ATM.INI file contains the list of fonts installed and the current option setting. See the technical note “Contents of the ATM.INI File” for additional information.

Note: *The ATM installer program is not provided for network installations.*

TYPE 1 AND TRUETYPE™ FONTS

Type 1 fonts are still the standard for PostScript printers and most service bureaus. Thousands of Type 1 fonts are available, and hundreds of new Type 1 fonts are introduced each year by Adobe, Linotype*, Monotype®, and others. TrueType fonts were recently introduced (1992) when Microsoft introduced Windows 3.1 and are now supplied with Windows software and by third-party manufacturers.

Note: *Adobe Illustrator™ requires Type 1 fonts and ATM to convert type into outline art.*

VERSION HISTORY

The following is a summary of changes Adobe has made to ATM over time. See the end of this tech note for upgrade information.

ATM 2.5

- Softfonts on the fly for Windows 3.1 printer drivers

When running Windows 3.1, ATM 2.5 will print soft fonts on the fly for printers whose drivers support softfont creation. This will increase the printing speed to HP LaserJet printers in HP emulation mode. Although some printers may have the capability to handle downloaded printer softfonts, this feature is dependent on the capability of the Windows printer driver. To verify if a Windows 3.1 printer driver is capable of creating soft fonts, check the Printer Setup Options dialog box from the Windows Printer Control Panel. If you do not see the option Print TrueType as Graphics, the driver most likely cannot create printer softfonts on the fly.

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- Adding and removing fonts without restarting Windows

ATM 2.5 now adds and removes fonts without having to restart Windows. Some applications, such as Windows Write and Lotus 1-2-3 for windows, update their available font lists immediately, although others, such as Lotus AmiPro 3.0 and Aldus PageMaker 4.0, require reselecting the current printer to display a change in the font menu. A few applications, such as Adobe Illustrator 4.0 and QuattroPro for Windows 1.0, derive their font menus from the list of fonts available upon launching. You must launch these applications again for font changes to take effect.

- Improved PostScript softfont management

When you add or remove fonts using the ATM 2.5 Control Panel, the PostScript softfont entries in the WIN.INI file are automatically updated. If you change printer ports, however, Windows will not transfer the font entries from printer port to printer port. Reinstall fonts so that the font entries will be written to the newly selected port. ATM version 2.5 now removes the PostScript softfont entries from the WIN.INI and ATM.INI files when you remove a font using the ATM Control Panel.

ATM 2.02

- Supports IBM PS/2 machines that have the 386SLC accelerator chip.
- Supports IBM Lexmark 4029 printers in PPDS mode. Must have version 3.03 of the driver.
- Corrects a problem with third-party fonts—fonts not appearing on-screen when typing.

ATM 2.0

- Improved screen speed. There are two ATM DLL files—ATM16.DLL and ATM32.DLL. The ATM32.DLL works on 386 or faster machines when Windows is running in enhanced mode and increases the speed of font rasterization on the screen.
- Updates the WIN.INI files and sets up fonts for automatic download when adding fonts (adds the PFB string).

ATM 1.15

- Support Berthold® fonts. Berthold fonts are very complex and detailed fonts that have over 1000 kerning pairs. ATM 1.15 or later will support these fonts.

ATM 1.1

- Correct a problem with Word for Windows version 1.1 short cut keys.
- Widen the ATM Control Panel font list.

ATM 1.0

- Original version
- Compatible in Windows 3.0 or later.

INSTALLATION

Below is a table summarizing where the ATM installer program puts the ATM and font files.

Note: *PCL files are nonscalable printer fonts. These files are not normally included with ATM.*

HOW TO UPGRADE ATM

If you have not yet upgraded to ATM 2.5, call Adobe Inside Sales at 800-833-6687.

If you are a registered ATM user, and you have purchased an Adobe Berthold font or have an IBM PS/2 386SLC acceleration chip installed, call Adobe Technical Support.

File Name	Correct Location
ATMCNTRL.EXE	Windows directory (all versions)
ATM16.DLL	Windows/System directory (ATM 2.0 or later)
ATM32.DLL	Windows/System directory (ATM 2.0 or later)
ATM.DLL	Windows/System directory (ATM 1.15 or earlier)
ATMSYS.DRV	Windows/System directory (all versions)
PFM files	Psfonds/PFM directory (recommended)
PFB files	Psfonds directory (recommended)
PCL files	Pclfonts directory (recommended)
FON files	Windows/System directory (not included with ATM)

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