



# Tech Info Library

## System 7 Decides Among Bitmap, TrueType, and ATM Fonts (10/96)

Revised: 10/3/96  
Security: Everyone

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Article Created: 31 May 1991  
Article Reviewed/Updated: 3 October 1996

TOPIC -----

This document provides information about how System 7.x decides which font to use when different types of the same font family are installed.

DISCUSSION -----

For this discussion, assume that you have:

- Bitmap Times 24.
- TrueType Times (in any size).
- An Adobe Type Manager (ATM) Times (in any size).

Screen Fonts

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When you choose a font and size, the system uses the following order to decide among the possibilities for displaying type on the screen:

- 1) The bitmap font.
- 2) The TrueType font.
- 3) An Adobe Type Manager (ATM) font if available.
- 4) A bitmap font of a different size, to be scaled to the specified size.

This sequence means that the document you created in bitmap Times 24 will show up in the same bitmap font on the screen to ensure against reformatting. The system looks for the bitmap font first, and if it isn't available, it scales the TrueType font to the proper size.

## PostScript Printer Fonts

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When you print your document, the preference order changes. For type on a PostScript printer (such as a LaserWriter Plus, LaserWriter IINT, IINTX, IIf, IIg, LaserWriter Pro, Personal LaserWriter NT, NTR, LaserWriter Select 310, and many third-party PostScript laser printers), the order is:

- 1) The printer's ROM
- 2) The printer's RAM
- 3) The printer's hard disk
- 4) Type 1 or Type 3 PostScript files in the System Folder (stored inside the Extensions folder in System 7.0 and inside the Fonts folder in System 7.1 or later)
- 5) TrueType
- 6) Bitmap

## Detailed Information on How a PostScript Printer Determines Font Type

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When a job is being processed and when a font is called for in the job, the font is selected using the arbitration scheme described above, and the bitmap is built and cached in the printer's VM (RAM).

If the same font is called again later in the job, then this font in RAM is used unless it was purged by the interpreter to free up room for some other activity, such as to make room to build another font called for in the job. When the job is completed, the VM is flushed. The next job then goes through the same font arbitration process described above, until the bitmap is built in the printer's VM. As long as the font is resident in VM it is used during the course of that job.

Fonts downloaded by a utility or by some other means having the same name as a font in ROM will not be used. To download a font for print jobs to call and use, it must have a unique name. There are some third-party font applications which allow you to change the name of the font. Simply renaming the font in the Mac OS does NOT change the font name. All Apple PostScript printers and most third-party PostScript laser printers manage font arbitration similarly.

## Non-PostScript Printer and Fax Fonts

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For printing to a non-PostScript device (such as an ImageWriter, LaserWriter IISC, Personal LaserWriter SC or LS, LaserWriter Select 300, Personal LaserWriter 300, StyleWriter, StyleWriter II, the DeskWriter by Hewlett-Packard, fax modems, and so on) the order is:

- 1) TrueType

2) ATM (if available)

3) A bitmap font of a different size, scaled to the specified size

Adobe Type Manager (ATM) is a utility that generates bitmap fonts for any size and resolution from Type 1 PostScript fonts. Since TrueType fonts are not PostScript, Adobe Type Manager cannot manipulate them. ATM and TrueType can work side-by-side in your system. If you have some PostScript fonts to display and print using ATM, and you have different fonts in the TrueType format, you should have no problems.

However, keeping the same fonts installed in both ATM and TrueType formats is not recommended. Because of the order of precedence (TrueType over ATM on screen and on non-PostScript printers), if you have the same font installed in both formats, the system uses TrueType -- not ATM.

#### System 7 Installed Fonts

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The System 7 Installer automatically installs TrueType versions of Times, Helvetica, Courier, Symbol, Monaco, Geneva, and Chicago. If you need to use an ATM version of these fonts, you must remove the TrueType version from the System file (in System 7.0 or earlier) or from within the Fonts folder in the System Folder (in System 7.1 or later).

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#### Article Change History:

03 Oct 1996 - Added detailed PostScript font information.  
20 Jun 1996 - Corrected order fonts are addressed  
17 Oct 1994 - Reviewed for consistency and updated format.

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Tech Info Library Article Number:7095