



Tech Info Library

System 7: How Apple PostScript Printers Handle TrueType (11/93)

Revised: 11/9/93
Security: Everyone

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Article Created: 5 August 1991
Article Reviewed/Updated: 9 November 1993

TOPIC -----

With what Apple PostScript printers will TrueType work?

DISCUSSION -----

First, a little history on TrueType and PostScript:

The TrueType format places all PostScript devices into one of three class categories depending on the device and its TrueType capabilities. The three classes are:

- 1) Class A devices are those with a TrueType scaler embedded in the PostScript device (the ROM.) For example, the LaserWriter IIx/IIg, LaserWriter Pro 600/630, and the LaserWriter Select 360 all fall into this category.
- 2) Class B devices are those that depend on the TrueType scaler to be downloaded to the device separately from the font itself. Most third-party 680x0 PostScript printers and the LaserWriter Pro 810 fall into this category.
- 3) Class C devices do not have TrueType available in any form.

Here's how TrueType works with Apple LaserWriter Printers:

LaserWriter

The original LaserWriter, containing a 68000 microprocessor, can't print TrueType. The TrueType rasterizer CANNOT be downloaded to the original LaserWriter which has ROM version 1.0 (PostScript version 23.0). Thus, it CANNOT print TrueType fonts. The TrueType rasterizer can only be

downloaded to LaserWriters with PostScript version 38.0 or ABOVE.
PostScript version 38.0 or 47.0 ROMs are LaserWriter Plus ROMs which can be installed on an original LaserWriter, making it a LaserWriter Plus.

In terms of which LaserWriter driver to use, version 6.1 or greater is required to print TrueType.

LaserWriter Plus

The LaserWriter Plus, also 68000-based, does not download the scaler code, but TrueType will work. It converts TrueType code to encrypted Type 3 instructions (better known as unhinted Type 1) before delivering it to the printer. Performance is slow due to memory management constraints in that version of ROM. Memory constraints affect performance when converting and downloading large numbers of TrueType fonts.

LaserWriter IINT

The LaserWriter IINT, also 68000-based, downloads the scaler code and TrueType does work. The performance and handling of multiple fonts is faster than the previous printers but slower than the LaserWriter IINTX.

LaserWriter IINTX and IINTX-J (Kanji version)

The LaserWriter IINTX and IINTX-J, which contain a 68020 microprocessor, download the scaler code and TrueType does work. Performance and handling with multiple fonts is faster than with the earlier printers. How much faster depends on the RAM available size.

Personal LaserWriter NTR

The TrueType Scaler is in ROM for optimum TrueType font performance.

LaserWriter IIx & IIg

The TrueType Scaler is in ROM for optimum TrueType font performance.

LaserWriter Select 310

The LaserWriter Select 310 downloads the scaler code and TrueType does work.

LaserWriter Pro 600 & 630

The TrueType Scaler is in ROM for optimum TrueType font performance.

LaserWriter Select 360

The TrueType Scaler is in ROM for optimum TrueType font performance.

LaserWriter Pro 810

The LaserWriter Pro 810 supports TrueType using the downloaded scaler.

Article Change History:

9 November 1993 - Added all Apple PostScript printers to date.

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Tech Info Library Article Number:7991