



Tech Info Library

PostScript: How To Modify LaserWriter Character Sets

This article last reviewed: 12 July 1989

TOPIC -----

In each of the Adobe fonts contained in the ROMs of the LaserWriter IINT, there are three types of characters that some users (especially in high-end publishing) need. The three characters are: uppercase and lowercase "thorn", uppercase and lowercase "eth", and a "agoneck."

These characters cannot be seen in Key Caps but are printable from a PC connected to the LaserWriter IINT. When the PostScript code is sent directly to the printer, it works. However, the user needs to print from a word processor. When trying to print from Microsoft Word, the encoding vector in the Laser Prep file does not allow these characters. Here is additional information:

PostScript codes for characters (ref. ISO 6973)

```
/thorn  374 Octal
/THORN  354 Octal

/eth    342 Octal
/ETH    363 Octal

/agoneck 254 Octal
```

DISCUSSION -----

According to PostScript documentation, and after having interrogated the LaserWriter's complete character sets, Apple Tech Comm has determined that the thorn, THORN, eth, ETH, and agoneck characters are not encoded by the Laser Prep file. However, the user can create these required characters by using one of two methods. The first method is the more complicated of the two and requires modifying the Laser Prep file with ResEdit.

Method #1

Any modifications to the System file and Laser Prep file should be made using copies of the files. Once the modifications have been successfully completed, then the original System file and Laser Prep file can be replaced with the modified files.

Using ResEdit, follow these steps to encode the required characters:

- 1) Determine what characters are currently available (using Key Caps), but seldom, if ever, used. These will be the characters that you will replace with the thorn, THORN, eth, ETH, and agoneck.
- 2) Using ResEdit, open the Laser Prep file and POST resource. Locate POST resource -8181 (this is the resource that encodes and maps special characters) and open it as type "STR#" using the "Open As..." menu item.
- 3) Starting at the 8th string, the special characters are encoded by name. Locate the characters, by name, that you determined were not used in step 1.
- 4) One at a time, select the name of the character to be substituted and type the name of the new character (thorn, THORN, eth, ETH, and agoneck).
- 5) Close the resource and the Laser Prep file and answer "YES" to save the changes.
- 6) Open the System file, select and open the FONT resource, and select the font(s) you want to display the thorn, THORN, eth, ETH, and agoneck characters.
- 7) Edit the substituted characters in the fonts to match the new characters.
- 8) Close the resource and the System file and answer "YES" to save the changes.

The Laser Prep file and System file now have been edited to allow the use of the thorn, THORN, eth, ETH, and agoneck characters. They will be recognized by all LaserWriter fonts.

Note: The LaserWriter must be initialized with this new Laser Prep file for the modified font dictionary to be invoked (turn the LaserWriter off and back on). Ensure that the system with the modified Laser Prep file is the first system to print to the printer.

Method #2

The second method is to use a third-party laser font utility. One of the more popular laser font utilities is Fontographer 2.4 from Altsys Corp. For more details, search the Tech Info Library under "Altsys Corp." Here is a description of Fontographer:

Fontographer is a professional outline font editor for the Macintosh computer and PostScript printers. Using Fontographer, you can create a professional-quality PostScript font in hours. When complete, your font can be printed on Apple's LaserWriter, LaserWriter Plus, or any PostScript-compatible device. The characters are defined with cubic Bezier

curves and straight lines, so your characters look good at any size or resolution from 300 dot-per-inch laser printers to 2450 dot-per-inch typesetting machines.

Fontographer fonts work just like the standard built-in LaserWriter fonts to give you fast, high-resolution printing. Bitmap fonts can be generated automatically. A copy of FONTastic font editor is included to perform the final fine-tuning of your bitmap fonts for screen display.

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Keywords: <None>

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19960215 11:05:19.00

Tech Info Library Article Number: 4142