



**NAME**

gsftopk – render a ghostscript font in TeX pk form

**SYNOPSIS**

**gsftopk** [-i *path*] [-q] [-t] [--debug=*n*] [--dosnames] [--interpreter=*path*] [--mapline=*line*] [--mapfile=*file*] [--quiet] [--test] [--help] [--version] *font dpi*

**ARGUMENTS**

*font* Name of the font to be created.

*dpi* Desired resolution of the font to be created, in dots per inch. This may be a real number.

**DESCRIPTION**

**gsftopk** is a program which calls up the ghostscript program **gs**(1) to render a given font at a given resolution. It packs the resulting characters into the **pk** file format and writes them to a file whose name is formed from the font name and the resolution (rounded to the nearest integer). The font may be in any format acceptable to Ghostscript, including *.pfa*, *.pfb*, *.gsf*, and *.tff* files.

This program should normally be called by a script, such as **mktexpk**, to create fonts on demand.

**gsftopk** obtains the character widths from the *.tfm* file, which must exist in the standard search path. It also must be able to find the font in a map file (such as **psfonts.map**), formatted as in **dvips**(1), unless the **--mapline** option is used. The set of map files is given by the **--mapfile** option, or in the files **config.ps**, **\$HOME/.dvipsrc**, and **config.gsftopk** (as would be used by **dvips -Pgsftopk**).

The following **pk** "specials" are added at the end of the output file, to provide an internal check on the contents of the file: "**jobname=font**", "**mag=1**", "**mode=modeless**", and "**pixels\_per\_inch=dpi**". This is in accordance with the TeX Directory Standard (TDS).

**OPTIONS**

**--debug=*n***

Set the **Kpathsea** debug flags according to the integer *n*.

**--dosnames**

Use a name of the form *font.pk* instead of *font.dpi.pk*.

**-h, --help**

Print a brief help synopsis and exit.

**-i path, --interpreter=path**

Use *path* as the Ghostscript interpreter.

**--mapfile=file**

Use *file* to look for the map information for *font*. This should be the full name of the file (in other words, no path searching algorithms are applied).

**--mapline=line**

Use *line* instead of looking for an entry in a map file. The first word of *line* must match *font*.

**-q, --quiet**

Operate quietly; i.e., without writing any messages to the standard output.

**-t, --test**

Test run: return zero status if the font can be found in the map file(s), and nonzero status if it cannot. If this option is specified, then the *dpi* argument is optional (since the font

will not be generated).

**-v, --version**

Print the version number and exit.

## ENVIRONMENT VARIABLES

<b>DVIPSRC</b>	Name of file to read instead of <b>\$HOME/.dvipsrc</b> . This should be the full name of the file (in other words, no path searching algorithms are applied).
<b>GSFTOPKFONTS</b>	See <b>TFMFONTs</b> .
<b>GSFTOPKHEADERS</b>	See <b>TEXPSHEADERS</b> .
<b>PSHEADERS</b>	See <b>TEXPSHEADERS</b> .
<b>TEXCONFIG</b>	Colon-separated list of paths to search for map files. An extra colon in the list will include the compiled-in default paths at that point. A double slash will enable recursive subdirectory searching at that point in the path.
<b>TFMFONTs</b>	Colon-separated list of paths to search for the <i>.tfm</i> file associated with the font. Double slashes and extra colons behave as with <b>TEXCONFIG</b> . This information may also be supplied by using the environment variables <b>TFMFONTs</b> or <b>GSFTOPKFONTs</b> . These environment variables are checked in the order <b>GSFTOPKFONTs</b> , <b>TFMFONTs</b> , <b>TFMFONTs</b> ; the first one (if any) having a value is used.
<b>TEXPSHEADERS</b>	Colon-separated list of paths to search for the Ghostscript driver file <b>render.ps</b> and for any PostScript header or font files ( <i>.enc</i> , <i>.pfa</i> , <i>.pfb</i> , <i>.gsf</i> , or <i>.ttf</i> files). Double slashes and extra colons behave as with <b>TEXCONFIG</b> . This information may also be supplied by using the environment variables <b>PSHEADERS</b> or <b>GSFTOPKHEADERS</b> . These environment variables are checked in the order <b>GSFTOPKHEADERS</b> , <b>TEXPSHEADERS</b> , <b>PSHEADERS</b> ; the first one (if any) having a value is used.
<b>TFMFONTs</b>	See <b>TFMFONTs</b> .

## CONFIGURATION

In order to determine the set of map files to be used and the path for finding PostScript files, **gsftopk** reads, in order, the files **config.ps**, **.dvipsrc**, and **config.gsftopk**. The files **config.ps** and **config.gsftopk** are searched for using the environment variable **TEXCONFIG**, the **Kpathsea** configuration file, or the compiled-in default paths. The file **.dvipsrc** is searched for in the user's home directory.

These files are in the same format as for **dvips** (as well as being in the same locations). The entries used by **gsftopk** are as follows.

**H path** Indicates that the Ghostscript driver file **render.ps** and the PostScript header and font files are to be searched for using *path*.

**p file** Indicates that the list of map files is to be erased and replaced by *file*.

**p + file** Indicates that *file* is to be added to the list of map files.

All other entries are ignored.

This is similar to the handling of these options when running **dvips -Pgsftopk**. For more details, see the **Kpathsea** manual.

## BUGS

**gsftopk** sometimes has trouble with fonts with very complicated characters (such as the Seal of the University of California). This is because **gsftopk** uses the **charpath** operator to determine the bounding box of each character. If the character is too complicated, then old versions of Ghostscript fail, causing **gsftopk** to terminate with an error message

### Call to gs stopped by signal 10

(The number may vary from system to system; it corresponds to a bus error or a segmentation fault.) The best way to fix this bug is to install a current version of ghostscript. As an alternative, **gsftopk** can be instructed to use the bounding box provided with the font (if one exists) instead of finding a bounding box for each character. To do this, include the string

```
/usefontbbox true def
```

in the font map file; *e.g.*,

```
ucseal "/usefontbbox true def"
```

This will not affect use of the font by **dvips**.

## SEE ALSO

**gs(1)**, **gftopk(1)**, **tex(1)**, **xdvi(1)**, **dvips(1)**

## AUTHOR

Written by Paul Vojta. This program was inspired by Karl Berry's **gsrenderfont**.

## MODIFICATIONS

Modified by Yves Arrouye to use Karl Berry's **Kpathsea** library.