

# L<sup>A</sup>T<sub>E</sub>X Support For Futura Fonts From Adobe As Used By No Starch Press

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## Abstract

This package provides L<sup>A</sup>T<sub>E</sub>X support for the Futura fonts from Adobe (the version currently used by No Starch Press). It has everything you need to typeset in these fonts - except the font itself, of course.

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Table 1: PFB Files

File	Font	NFSS Code
<code>futucl13.pfb</code>	Futura Condensed Light	<code>lc</code>
<code>futurc83.pfb</code>	Futura Condensed Medium	<code>mc</code>
<code>futucb18.pfb</code>	Futura Condensed Bold	<code>bc</code>
<code>futceb44.pfb</code>	Futura Condensed Extra Bold	<code>ebc</code>
<code>futurl82.pfb</code>	Futura Light	<code>l</code>
<code>futura.pfb</code>	Futura Medium	<code>m</code>
<code>futurb37.pfb</code>	Futura Book	<code>k</code>
<code>futurb41.pfb</code>	Futura Bold	<code>b</code>
<code>futurh79.pfb</code>	Futura Heavy	<code>h</code>

## 1 Introduction

This package provides support files for the Futura Font family from Adobe. According to the Fontname scheme [1] it corresponds to the family `pfu`. There is a package on CTAN supporting these fonts [2]. Unfortunately the AFM files provided by it seems to be slightly different from the ones used by *No Starch Press*, <http://www.nostarch.com>. The analysis of the copyright statements shows that Walter Schmidt's fonts are newer than ours (the latter are dated 1987). To prevent clash with his `pfu` package, I chose the name `pfv` for this release.

This package is released under BSD license to make updating the fonts metrics easier.

The support is limited to T1 and TS1 encoding. No VTeX support files are included.

## 2 Installation

First, you need to purchase the fonts themselves: the `pfb` files are *not* included in the package. If you got the fonts from *No Starch press*, do not rename the `pfb` files. However, if there are uppercase letters in your file names, downcase them. If you obtained the files from another source, rename the fonts according to Table 1. If your T<sub>E</sub>X system is TDS-compliant, install the files into `$TEXMF/fonts/type1/public/futurans`. Then download <http://ctan.tug.org/install/fonts/psfonts/adobe/futurans.tds.zip> and unzip this file in `$TEXMF`. Add `+pfv.map` to the configuration files of `dvips`, `pdftex` and your dvi previewer.

Run `updmap` and `texhash` programs to update the configuration files and file names database.

Table 2: Additional Font Series Available

NFSS Code	Font
lq	Futura Light Letterspaced (10% spread)
mq	Futura Medium Letterspaced (10% spread)
bq	Futura Bold Letterspaced (10% spread)
hq	Futura Heavy Letterspaced (10% spread)
bp	Futura Bold Extra Compressed (110% stretched Condensed)
hp	Futura Heavy Compressed (90% shrunk Heavy)

### 3 Using L<sup>A</sup>T<sub>E</sub>X Style

The package supplies a number of fonts. The series are listed in Table 1. Each font has normal, slanted (oblique) and small caps version. There are additional series necessary to typeset books in *No Starch Press* style. They were generated using Fontinst [3]. These series are available for Roman fonts only and are listed in Table 2. To select any font, issue the corresponding NFSS command, for example `\fontfamily{pfv}\fontseries{ebc}\selectfont`. To use make the font the default sans serif font you may add `\usepackage{futuraans}` to your preamble.

*option* If you mix Futura with other fonts, you may want to scale it to get better  
**scaled** blending of Sans Serif with Roman. The package option `scaled` can be used for this, for example `\usepackage[scaled=0.95]{futuraans}`.

## 4 Implementation

### 4.1 Identification

We start with the declaration who we are. Most `.dtx` files put driver code in a separate driver file `.drv`. We roll this code into the main file, and use the pseudo-guard `<gobble>` for it.

```
1 <style>\NeedsTeXFormat{LaTeX2e}
2 <*gobble>
3 \ProvidesFile{futura.dtx}
4 </gobble>
5 <style>\ProvidesClass{futura}
6 <pfv - drv>\ProvidesFile{pfv-drv.tex}
7 <pfv - map>\ProvidesFile{pfv-map.tex}
8 <!*tlq&!tslq>
9 [2008/03/20 v1.3 Using Futura Fonts in LaTeX]
10 </!*tlq&!tslq>
```

And the driver code:

```
11 <*gobble>
12 \documentclass{ltxdoc}
13 \usepackage{booktabs}
14 \usepackage{url}
15 \usepackage[breaklinks,colorlinks,linkcolor=black,citecolor=black,
16             pagecolor=black,urlcolor=black,hyperindex=false]{hyperref}
17 \PageIndex
18 \CodelineIndex
19 \RecordChanges
20 \EnableCrossrefs
21 \begin{document}
22   \DocInput{futura.dtx}
23 \end{document}
24 </gobble>
```

### 4.2 Fontinst Driver

This follows [4].

First, the preamble

```
25 <*pfv - drv>
26 \input fontinst.sty
27 \setint{smallcapsscale}{750}
28 \setint{slant}{167}
29 \substitutesilent{bx}{b}
```

**bpscale** We scale condensed bold condensed and heavy fonts to get compressed fonts:

```
hpscale 30 \setint{bpscale}{1100}
31 \setint{hpscale}{900}
```

**qspread** We spread light to get light letterspaced:

```
32 \setint{qspread}{50}
```

Starting recording transforms:

```
33 \recordtransforms{pfv-rec.tex}
```

Standard fonts:

```
34 \transformfont{pfv18rc}{\reencodefont{8r}{\fromafm{futucl13}}}  
35 \transformfont{pfvm8rc}{\reencodefont{8r}{\fromafm{futurc83}}}  
36 \transformfont{pfvb8rc}{\reencodefont{8r}{\fromafm{futucb18}}}  
37 \transformfont{pfvx8rc}{\reencodefont{8r}{\fromafm{futceb44}}}  
38 \transformfont{pfv18r}{\reencodefont{8r}{\fromafm{futurl82}}}  
39 \transformfont{pfvm8r}{\reencodefont{8r}{\fromafm{futura}}}  
40 \transformfont{pfvk8r}{\reencodefont{8r}{\fromafm{futurb37}}}  
41 \transformfont{pfvb8r}{\reencodefont{8r}{\fromafm{futurb41}}}  
42 \transformfont{pfvh8r}{\reencodefont{8r}{\fromafm{faturh79}}}
```

Oblique fonts (we do not have original Adobe Oblique fonts, so we fake them):

```
43 \transformfont{pfvlo8rc}{\slantfont{\int{slant}}}%  
44 \reencodefont{8r}{\fromafm{futucl13}}}  
45 \transformfont{pfvmo8rc}{\slantfont{\int{slant}}}%  
46 \reencodefont{8r}{\fromafm{futurc83}}}  
47 \transformfont{pfvbo8rc}{\slantfont{\int{slant}}}%  
48 \reencodefont{8r}{\fromafm{futucb18}}}  
49 \transformfont{pfvxo8rc}{\slantfont{\int{slant}}}%  
50 \reencodefont{8r}{\fromafm{futceb44}}}  
51 \transformfont{pfvlo8r}{\slantfont{\int{slant}}}%  
52 \reencodefont{8r}{\fromafm{futurl82}}}  
53 \transformfont{pfvmo8r}{\slantfont{\int{slant}}}%  
54 \reencodefont{8r}{\fromafm{futura}}}  
55 \transformfont{pfvko8r}{\slantfont{\int{slant}}}%  
56 \reencodefont{8r}{\fromafm{futurb37}}}  
57 \transformfont{pfvbo8r}{\slantfont{\int{slant}}}%  
58 \reencodefont{8r}{\fromafm{futurb41}}}  
59 \transformfont{pfvho8r}{\slantfont{\int{slant}}}%  
60 \reencodefont{8r}{\fromafm{faturh79}}}
```

Compressed fonts:

```
61 \transformfont{pfvb8rp}{\xscalefont{\int{bpscale}}}%  
62 \reencodefont{8r}{\fromafm{futucb18}}}  
63 \transformfont{pfvh8rp}{\xscalefont{\int{hpscale}}}%  
64 \reencodefont{8r}{\fromafm{faturh79}}}
```

There is no hook in fontinst.sty for writing our own preamble to .fd file. However, we need to add scaling commands to the preamble. OK, we will patch fontinst:

```
65 \fontinstcc  
66 \def\fd_family#1#2#3{  
67 \a_toks{#3}  
68 \edef\lowercase_file{\lowercase{  
69 \edef\noexpand\lowercase_file{#1#2.fd}}}  
70 \lowercase_file  
71 \open_out{\lowercase_file}  
72 \out_line{\percent_char~Filename:~\lowercase_file}
```

```

73 \out_line{\percent_char~Created~by:~tex~\jobname}
74 \out_line{\percent_char~Created~using~fontinst~v\fontinstversion}
75 \out_line{}
76 \out_line{\percent_char~THIS~FILE~SHOULD~BE~PUT~IN~A~TEX~INPUTS~
77   DIRECTORY}
78 \out_line{}
79 \out_line{\string\ProvidesFile{\lowercase_file}}
80 \out_lline{[
81   \the\year/
82   \ifnum10>\month0\fi\the\month/
83   \ifnum10>\day0\fi\the\day\space
84   Fontinst~v\fontinstversion\space
85   font~definitions~for~#1/#2.
86 ]}
87 \out_line{}

```

Here is our patch:

```

88 \out_line{\string\expandafter\string\ifx\string\csname\space
89   Fns@scale\string\endcsname\string\relax}
90 \out_line{\space\string\let\string\Fns@@scale\string\@empty}
91 \out_line{\string\else}
92 \out_line{\space\string\edef\string\Fns@@scale\left_brace_char
93   s*[\string\csname\space Fns@scale\string\endcsname]
94   \right_brace_char\percent_char}
95 \out_line{\string\fi\percent_char}
96 \out_line{}

```

End of the patch.

```

97 \out_line{\string\DeclareFontFamily{#1}{#2}{\the\a_toks}}
98 {
99   \csname #1-#2\endcsname
100   \out_line{}
101   \let\do_shape=\substitute_shape
102   \csname #1-#2\endcsname
103   \let\do_shape=\remove_shape
104   \csname #1-#2\endcsname
105 }
106 \x_cs\g_let{#1-#2}\x_relax
107 \out_line{}
108 \out_line{\string\endinput}
109 \close_out{Font~definitions}
110 }
111 \normalcc

```

Now we install the fonts. First T1. Note the scaling code (taken from PSNFSS packages). Also, we generate a lot of fake small caps fonts.

```

112 \installfonts
113 \installfamily{T1}{pfv}{}
114 \installfont{pfv18tc}{pfv18rc,newlatin}{t1}{T1}{pfv}{1c}{n}{
115 <->\string\Fns@@scale}
116 \installfont{pvm8tc}{pvm8rc,newlatin}{t1}{T1}{pvm}{mc}{n}{

```

```

117 <->\string\Fns@@scale}
118 \installfont{pfvb8tc}{pfvb8rc,newlatin}{t1}{T1}{pfv}{bc}{n}{
119 <->\string\Fns@@scale}
120 \installfont{pfvx8tc}{pfvx8rc,newlatin}{t1}{T1}{pfv}{ebc}{n}{
121 <->\string\Fns@@scale}
122 \installfont{pfvl8t}{pfvl8r,newlatin}{t1}{T1}{pfv}{l}{n}{
123 <->\string\Fns@@scale}
124 \installfont{pfvm8t}{pfvm8r,newlatin}{t1}{T1}{pfv}{m}{n}{
125 <->\string\Fns@@scale}
126 \installfont{pfvk8t}{pfvk8r,newlatin}{t1}{T1}{pfv}{k}{n}{
127 <->\string\Fns@@scale}
128 \installfont{pfvb8t}{pfvb8r,newlatin}{t1}{T1}{pfv}{b}{n}{
129 <->\string\Fns@@scale}
130 \installfont{pfvh8t}{pfvh8r,newlatin}{t1}{T1}{pfv}{h}{n}{
131 <->\string\Fns@@scale}
132 \installfont{pfvb8tp}{pfvb8rp,newlatin}{t1}{T1}{pfv}{bp}{n}{
133 <->\string\Fns@@scale}
134 \installfont{pfvh8tp}{pfvh8rp,newlatin}{t1}{T1}{pfv}{hp}{n}{
135 <->\string\Fns@@scale}
136 \installfont{pfvlo8tc}{pfvlo8rc,newlatin}{t1}{T1}{pfv}{lc}{sl}{
137 <->\string\Fns@@scale}
138 \installfont{pfvmo8tc}{pfvmo8rc,newlatin}{t1}{T1}{pfv}{mc}{sl}{
139 <->\string\Fns@@scale}
140 \installfont{pfvbo8tc}{pfvbo8rc,newlatin}{t1}{T1}{pfv}{bc}{sl}{
141 <->\string\Fns@@scale}
142 \installfont{pfvxo8tc}{pfvxo8rc,newlatin}{t1}{T1}{pfv}{ebc}{sl}{
143 <->\string\Fns@@scale}
144 \installfont{pfvlo8t}{pfvlo8r,newlatin}{t1}{T1}{pfv}{l}{sl}{
145 <->\string\Fns@@scale}
146 \installfont{pfvmo8t}{pfvmo8r,newlatin}{t1}{T1}{pfv}{m}{sl}{
147 <->\string\Fns@@scale}
148 \installfont{pfvko8t}{pfvko8r,newlatin}{t1}{T1}{pfv}{k}{sl}{
149 <->\string\Fns@@scale}
150 \installfont{pfvbo8t}{pfvbo8r,newlatin}{t1}{T1}{pfv}{b}{sl}{
151 <->\string\Fns@@scale}
152 \installfont{pfvho8t}{pfvho8r,newlatin}{t1}{T1}{pfv}{h}{sl}{
153 <->\string\Fns@@scale}
154 \installfont{pfvlc8tc}{pfvl8rc,newlatin}{t1c}{T1}{pfv}{lc}{sc}{
155 <->\string\Fns@@scale}
156 \installfont{pfvmc8tc}{pfvm8rc,newlatin}{t1c}{T1}{pfv}{mc}{sc}{
157 <->\string\Fns@@scale}
158 \installfont{pfvbc8tc}{pfvb8rc,newlatin}{t1c}{T1}{pfv}{bc}{sc}{
159 <->\string\Fns@@scale}
160 \installfont{pfvxc8tc}{pfvx8rc,newlatin}{t1c}{T1}{pfv}{ebc}{sc}{
161 <->\string\Fns@@scale}
162 \installfont{pfvlc8t}{pfvl8r,newlatin}{t1c}{T1}{pfv}{l}{sc}{
163 <->\string\Fns@@scale}
164 \installfont{pfvmc8t}{pfvm8r,newlatin}{t1c}{T1}{pfv}{m}{sc}{
165 <->\string\Fns@@scale}
166 \installfont{pfvkc8t}{pfvk8r,newlatin}{t1c}{T1}{pfv}{k}{sc}{

```

```

167 <->\string\Fns@@scale}
168 \installfont{pfvbc8t}{pfvb8r,newlatin}{t1c}{T1}{pfv}{b}{sc}{
169 <->\string\Fns@@scale}
170 \installfont{pfvhc8t}{pfvh8r,newlatin}{t1c}{T1}{pfv}{h}{sc}{
171 <->\string\Fns@@scale}
172 \installfont{pfvl8tlq}{pfvl8r,newlatin}{t1q}{T1}{pfv}{lq}{n}{
173 <->\string\Fns@@scale}
174 \installfont{pfvl8tmq}{pfvm8r,newlatin}{t1q}{T1}{pfv}{mq}{n}{
175 <->\string\Fns@@scale}
176 \installfont{pfvl8tbq}{pfvb8r,newlatin}{t1q}{T1}{pfv}{bq}{n}{
177 <->\string\Fns@@scale}
178 \installfont{pfvl8thq}{pfvh8r,newlatin}{t1q}{T1}{pfv}{hq}{n}{
179 <->\string\Fns@@scale}
180 \endinstallfonts

    And then TS1

181 \installfonts
182 \installfamily{TS1}{pfv}{}
183 \installfont{pfvl8cc}{pfvl8rc,textcomp}{ts1}{TS1}{pfv}{lc}{n}{
184 <->\string\Fns@@scale}
185 \installfont{pfvm8cc}{pfvm8rc,textcomp}{ts1}{TS1}{pfv}{mc}{n}{
186 <->\string\Fns@@scale}
187 \installfont{pfvb8cc}{pfvb8rc,textcomp}{ts1}{TS1}{pfv}{bc}{n}{
188 <->\string\Fns@@scale}
189 \installfont{pfvx8cc}{pfvx8rc,textcomp}{ts1}{TS1}{pfv}{ebc}{n}{
190 <->\string\Fns@@scale}
191 \installfont{pfvl8c}{pfvl8r,textcomp}{ts1}{TS1}{pfv}{l}{n}{
192 <->\string\Fns@@scale}
193 \installfont{pfvm8c}{pfvm8r,textcomp}{ts1}{TS1}{pfv}{m}{n}{
194 <->\string\Fns@@scale}
195 \installfont{pfvk8c}{pfvk8r,textcomp}{ts1}{TS1}{pfv}{k}{n}{
196 <->\string\Fns@@scale}
197 \installfont{pfvb8c}{pfvb8r,textcomp}{ts1}{TS1}{pfv}{b}{n}{
198 <->\string\Fns@@scale}
199 \installfont{pfvh8c}{pfvh8r,textcomp}{ts1}{TS1}{pfv}{h}{n}{
200 <->\string\Fns@@scale}
201 \installfont{pfvb8cp}{pfvb8rp,textcomp}{ts1}{TS1}{pfv}{bp}{n}{
202 <->\string\Fns@@scale}
203 \installfont{pfvh8cp}{pfvh8rp,textcomp}{ts1}{TS1}{pfv}{hp}{n}{
204 <->\string\Fns@@scale}
205 \installfont{pfvlo8cc}{pfvlo8rc,textcomp}{ts1}{TS1}{pfv}{lc}{s1}{
206 <->\string\Fns@@scale}
207 \installfont{pfvmo8cc}{pfvmo8rc,textcomp}{ts1}{TS1}{pfv}{mc}{s1}{
208 <->\string\Fns@@scale}
209 \installfont{pfvbo8cc}{pfvbo8rc,textcomp}{ts1}{TS1}{pfv}{bc}{s1}{
210 <->\string\Fns@@scale}
211 \installfont{pfvxo8cc}{pfvxo8rc,textcomp}{ts1}{TS1}{pfv}{ebc}{s1}{
212 <->\string\Fns@@scale}
213 \installfont{pfvlo8c}{pfvlo8r,textcomp}{ts1}{TS1}{pfv}{l}{s1}{
214 <->\string\Fns@@scale}

```



```

215 \installfont{pfvmo8c}{pfvmo8r,textcomp}{ts1}{TS1}{pfv}{m}{s1}{
216 <->\string\Fns@@scale}
217 \installfont{pfvko8c}{pfvko8r,textcomp}{ts1}{TS1}{pfv}{k}{s1}{
218 <->\string\Fns@@scale}
219 \installfont{pfvbo8c}{pfvbo8r,textcomp}{ts1}{TS1}{pfv}{b}{s1}{
220 <->\string\Fns@@scale}
221 \installfont{pfvho8c}{pfvho8r,textcomp}{ts1}{TS1}{pfv}{h}{s1}{
222 <->\string\Fns@@scale}
223 \installfontas{pfvl8cc}{TS1}{pfv}{lc}{sc}{
224 <->\string\Fns@@scale}
225 \installfontas{pfvm8cc}{TS1}{pfv}{mc}{sc}{
226 <->\string\Fns@@scale}
227 \installfontas{pfvb8cc}{TS1}{pfv}{bc}{sc}{
228 <->\string\Fns@@scale}
229 \installfontas{pfvx8cc}{TS1}{pfv}{ebc}{sc}{
230 <->\string\Fns@@scale}
231 \installfontas{pfvl8c}{TS1}{pfv}{l}{sc}{
232 <->\string\Fns@@scale}
233 \installfontas{pfvm8c}{TS1}{pfv}{m}{sc}{
234 <->\string\Fns@@scale}
235 \installfontas{pfvk8c}{TS1}{pfv}{k}{sc}{
236 <->\string\Fns@@scale}
237 \installfontas{pfvb8c}{TS1}{pfv}{b}{sc}{
238 <->\string\Fns@@scale}
239 \installfontas{pfvh8c}{TS1}{pfv}{h}{sc}{
240 <->\string\Fns@@scale}
241 \installfont{pfvl8clq}{pfvl8r,textcomp}{ts1q}{TS1}{pfv}{lq}{n}{
242 <->\string\Fns@@scale}
243 \installfont{pfvl8cmq}{pfvm8r,textcomp}{ts1q}{TS1}{pfv}{mq}{n}{
244 <->\string\Fns@@scale}
245 \installfont{pfvl8cbq}{pfvb8r,textcomp}{ts1q}{TS1}{pfv}{bq}{n}{
246 <->\string\Fns@@scale}
247 \installfont{pfvl8chq}{pfvh8r,textcomp}{ts1q}{TS1}{pfv}{hq}{n}{
248 <->\string\Fns@@scale}
249 \endinstallfonts

    And the end:
250 \endrecordtransforms
251 \bye
252 </pfv - drv>

```

### 4.3 Letterspacing Driver

This follows [5]. We need both T1 and TS1 files:

```

253 <*tlq | ts1q>
254 \relax
255 \encoding
256 \resetint{letterspacing}{\int{qspread}}
257 \setcommand\gobblethree#1#2#3{}%
258 \let\ligature=\gobblethree

```

```

259 <t1q>\inputetx{t1}
260 <ts1q>\inputetx{ts1}
261 \endencoding
262 </t1q|ts1q>

```

## 4.4 Fontmap Generation

This is a standard procedure [4]

```

263 <*pfv – map>
264 \input finstmsc.sty
265 \resetstr{PSfontsuffix}{.pfb}
266 \adddriver{dvips}{pfv.map}
267 \input pfv-rec.tex
268 \donedrivers
269 \bye
270 </pfv – map>

```

## 4.5 Style File

The scaling code is from the `helvet` package:

```

271 <*style>
272 \RequirePackage[T1]{fontenc}
273 \RequirePackage{textcomp}
274 \RequirePackage{keyval}
275 \define@key{Futurans}{scaled}[1]{%
276   \def\Fns@scale{#1}}
277 \def\ProcessOptionsWithKV#1{%
278   \let\@tempc\relax
279   \let\Fns@tempa\@empty
280   \ifx\@classoptionslist\relax\else
281     \@for\CurrentOption:=\@classoptionslist\do{%
282       \ifundefined{KV@#1\CurrentOption}%
283         {}%
284       {%
285         \edef\Fns@tempa{\Fns@tempa,\CurrentOption,}%
286         \@expandtwoargs\@removeelement\CurrentOption
287           \@unusadoptionlist\@unusadoptionlist
288       }%
289     }%
290   \fi
291   \edef\Fns@tempa{%
292     \noexpand\setkeys{#1}{%
293       \Fns@tempa\@optionlist{\@currname.\@currext}%
294     }%
295   }%
296   \Fns@tempa
297   \let\CurrentOption\@empty
298 }
299 \ProcessOptionsWithKV{Futurans}

```

```
300 \AtEndOfPackage{%  
301   \let\@unprocessedoptions\relax  
302 }  
303 \renewcommand{\sfdefault}{pfv}  
304 </style>
```

**Acknowledgement** This package was written for No Starch Press, <http://www.nostarch.com>.

## References

- [1] Karl Berry. *Fontname. Filenames For T<sub>E</sub>X Fonts*, September 2005. <http://ctan.tug.org/tex-archive/info/fontname>.
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- [4] Philipp Lehman. *The Font Installation Guide*, December 2004. <http://www.ctan.org/tex-archive/info/Type1fonts/fontinstallationguide>.
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