

The STEP fonts

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The STEP fonts are a free Times-like (i.e., Times replacement) font family, implementing a design first created for *The Times* of London in 1932. These fonts are meant to be compatible in design with Adobe’s digitization of Linotype Times, commonly used in publishing. Linotype’s Times design is similar, but not exactly identical to Monotype’s Times New Roman. STEP is an acronym for *Serif Typeface for Electronic Publishing*, though its meaning is intentionally flexible.

I History

The STEP fonts are based on the STIX¹ and XITS² fonts. The core character set came from STIX; Khaled Hosny made some improvements and fixes in XITS. Other improvements were made by myself in upstream XITS. STEP, unlike XITS, does not hold itself to the goal of strict backwards compatibility. STEP’s math fonts (available in OpenType format only at present) are almost unchanged from XITS’. STEP changes vertical and horizontal metrics from XITS (mostly useful for non- \LaTeX applications) to match those of Adobe’s Linotype Times. Further, for text fonts, STEP supports the Type 1 format and includes support for use with \LaTeX , although some features remain available in OpenType only.

2 Why STEP?

The STEP fonts are far from the only free digitization of Times available for use with \LaTeX . The fonts provide some features not found in other commonly-used versions, including

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¹<https://ctan.org/pkg/stix>

²<https://github.com/alif-type/xits>

small capitals and old-style figures which were manually drawn instead of scaled (semi-) automatically, ensuring higher quality; other Times fonts available often do not include small capitals or old-style figures at all. STEP also includes superior and inferior figures. The utmost care has been taken to ensure that all characters in STEP are of high quality.

Greek support is limited; polytonic Greek is found in the regular font, whereas the other fonts in the family support monotonic Greek only. The Greek does not correspond in design to Linotype Times, but rather to MicroPress' TM Text Extension (MicroPress kindly donated some outlines to the STIX project). A better match is discussed in the *Usage* section. Cyrillic support is from URW's Nimbus Roman. I do not personally use the Cyrillic alphabet, so I cannot comment on the character set. STEP's character support for certain other languages which use the Latin alphabet (e.g., Vietnamese) is lacking, and improvements are planned for the future.

3 Usage

To use the STEP, you may use the \LaTeX package `step`.

```
\usepackage{step}
```

Do remember that it is usually wise to load `fontenc` with the appropriate encoding(s). The \LaTeX package does not include support for any math fonts; I recommend that you use STIX's math fonts instead with `\usepackage[notext]{stix}`. Alternatively, you can use `newtxmath` using `\usepackage{newtxmath}`. See the documentation for those packages to find out more about available options.

3.1 Package Options

Package Option	Feature
<code>lining</code>	Use lining figures (default) 1234567890
<code>oldstyle</code>	Use old-style figures 1234567890

3.2 Text Commands

Text Command	Feature
<code>\lining{}</code>	Use lining figures 1234567890
<code>\oldstyle{}</code>	Use old-style figures 1234567890
<code>\textsc{}</code>	Use small caps (regular font only) ABCDE\$&
<code>\textsu{}</code>	Use superior figures 1 ²³⁴⁵⁶⁷⁸⁹⁰
<code>\textin{}</code>	Use inferior figures 1 ₂₃₄₅₆₇₈₉₀

3.3 Greek text using txfontsb

For a Greek font which is better suited for text (and which includes bold, italic and bold italic as well as regular), I recommend using the fonts from txfontsb. You can access these by adding the following to your preamble:

```
\usepackage{substitutefont}
\substitutefont{LGR}{\rmdefault}{txrc}
```

3.4 Using superior figures for footnotes

To use superior figures for footnotes, include the following line in your preamble:

```
\usepackage[supstfm=STEP-Regular-sup-t1]{superiors}
```

3.5 Usage with fontspec

If you do not need to use an 8-bit T_EX engine, you may simply use fontspec³ as follows:

```
\usepackage{fontspec}
\setmainfont{STEP}
```

If you wish to use the math font as well (which is based on XITS), this is possible:

```
\usepackage{unicode-math}
\setmathfont{STEP Math}
```

When using fontspec, all font options are handled according to that package's facilities. See its documentation for details.

³<https://ctan.org/pkg/fontspec>

4 Contributing

Contributions to the fonts and their \LaTeX support may be sent as pull requests to the project's GitHub repository.⁴

5 Licensing

STEP is licensed under the Open Font License (OFL) version 1.1; see STEP-COPYING for details.

⁴<https://github.com/dbenjaminmiller/step>