

TOLKIENIAN SCRIPTS WITH VIRTUAL FONTS

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1. INTRODUCTION

This package consists of virtual fonts (and a few macros) designed to do what \TeX is meant to do: convert legible, easy-to-type ASCII text files into attractive, properly formatted documents. It’s just that “properly formatted” in this case means written correctly in one of the writing systems invented by J.R.R. Tolkien.

This package supports the tengwar and cirth as described in [Appendix E], and Anglo-Saxon runes as used in [Thror]. Some support is also provided for writing Quenya (but no other language) with sarati and the valmaric script.¹

This package uses several freely available TrueType fonts for the Tolkienian scripts. It is designed to be used with pdf \TeX .

This package uses virtual fonts to convert normal text to tengwar. This is a radically different approach from Ivan Derzhanski’s `tengtex` package, which instead uses sophisticated \TeX macros. Virtual fonts compile faster and there are more books and articles on the subject, which is why I used them; however, they do mean that I have to make several new supporting files for even the most trivial changes in mode, which Derzhanski does not.

If you only want to write Elvish, you can stop reading this document after Section 5.4. The remaining sections are for writing English (much more complicated), for tengwar experts who want to know exactly how my transcription works, or for anyone who wants extra fonts or color effects.

2. LICENSE

This work is copyright Ariel Barton, 2010. It may be distributed and/or modified under the conditions of the \LaTeX Project Public License, either version 1.3 of this license or (at your option) any later version.

The latest version of the license is in

<http://www.latex-project.org/lppl.txt>

¹Sarati is the first of these four scripts that Tolkien invented. It has a place in the Middle-earth cosmology as the alphabet invented by Rúmil of Tirion. Fëanor thus did not invent the tengwar out of whole cloth; they’re an improvement of an earlier system.

The valmaric script was invented by Tolkien after sarati but before tengwar, and looks quite a bit like both of them. I don’t know if Tolkien still thought of it as the alphabet of Valinor after inventing the tengwar.

and version 1.3 or later is part of all distributions of L^AT_EX version 2003/06/01 or later.

This work has the LPPL maintenance status “maintained”. I am the current maintainer; I may be reached at origamist@gmail.com.

This work is a package designed to make it easier to *use* fonts such as Tengwar Annatar. Those fonts **are not** considered a part of this work. The font family Tengwar Annatar is copyright Johan Winge; the fonts Sarati Eldamar, Valmaric Eldamar, Tengwar Parmaite, and Tengwar Eldamar are copyright Måns Björkman; the fonts Cirth Erebor, Tengwar Quenya, Tengwar Sindarin, and Tengwar Noldor are copyright Daniel Smith. It is your responsibility to make sure that your use of these fonts does not violate the creators’ copyrights. (The sunrune font, and this font alone, is considered part of the package, because I made it.)

Similarly, the tengwar, cirth, sarati and valmaric scripts were created by J.R.R. Tolkien; it is your responsibility to ensure that your use of this package does not violate the rights of the person, persons, or entity who owns this intellectual property.

As of August 28, 2010, these fonts are all available for free download, and I can use them in pdf_TE_X documents. No other claims are made by the author regarding these fonts. In particular, I cannot guarantee and take no responsibility to ensure that they will remain available or will work with your distribution of T_EX. Furthermore, any attempts to download, install, or use these fonts are taken at your own risk; I am not liable for any bad consequences of downloading, installing, using, attempting to download, install, or use, or being unable to download, install, or use these fonts.

3. INSTALLING THE PACKAGE

This package requires over a hundred supporting files, not all of which are in its CTAN directory. None of the tengwar fonts come with the package; you have to get them from their creators’ websites.

As of this writing, you can get these fonts from

<http://www.acondia.com/fonts/cirth/index.html>
<http://home.student.uu.se/jowi4905/fonts/annatar.html>
<http://at.mansbjorkman.net/downloads.htm>

It is possible to use the `.pfb` versions of these files instead of the `.ttf` versions. (I find, for example, that pdf_TE_X doesn’t like the file `tengel_a.ttf`, so when using Tengwar Eldamar, I have to use `tengel_a.pfb`.) You change by editing `tolkien.map`. See the comments in that file. (T_EX won’t use the `.afm`, `.pfm` and `.inf` files.)

The fonts and the files that come with this package should be put in appropriate places. Your distribution of T_EX may be able to do some of this for you; however, it probably cannot deal with the TrueType fonts, so you will have to place them yourself.

Most modern T_EX distributions have a folder, usually named `texmf`, where you can store supporting files for the packages you add yourself.² All supporting files should be sorted into specific subfolders of `texmf`. The sorting rules are:

- `.fd` and `.sty` files go in `texmf/tex/latex`
- `.tfm` files go in `texmf/fonts/tfm`
- `.vf` files go in `texmf/fonts/vf`
- `.pfb` files go in `texmf/fonts/type1`
- `.map` files go in `texmf/fonts/map`
- `.mf` files go in `texmf/fonts/source`
- `.ttf` files go in `texmf/fonts/truetype`

In all cases they can go in sub-subfolders; for example, `.tfm` files may be put into `texmf/fonts/tfm/tengwar` and not `texmf/fonts/tfm`.

If you're using some other distribution, you may have some entirely different place where you can put these files. Your distribution's documentation should tell you where.

If you really can't figure out where to put the files, if you're in a hurry, or if you're using someone else's computer and don't want to mess with their `texmf` folder, just dump every file you think you might need into the same folder as the document that uses the package.

You aren't done! T_EX now knows everything it needs to do its job and *arrange* the characters in the font, and so your document will compile, but the postprocessing software (your DVI viewer, your printer, or the PDF files that pdfT_EX produces) don't know about the fonts themselves.

There's a simple way to tell pdfT_EX about the fonts: use the command

```
\pdfmapfile{+tolkien.map}
```

or the lines

```
\pdfmapline{+CirtheXX\space <CirtheErebor.ttf\space <ansinew.enc}
\pdfmapline{+CirtheSXX\space <sunrune.pfb}
\pdfmapline{+SaratiE \space <sarael_.ttf\space <ansinew.enc}
\pdfmapline{+SaratiB \space <saraelb_.ttf\space <ansinew.enc}
\pdfmapline{+Valmaric\space <valmarel.ttf\space <ansinew.enc}
\pdfmapline{+TengwarA\space <tngan.ttf\space <ansinew.enc}
\pdfmapline{+TengwarAA\space <tngana.ttf\space <ansinew.enc}
```

These map lines can go in the respective `.fd` files, `tolkienfonts.sty`, or the file that uses the package.

You may need to download the file `ansinew.enc`; it may be found through <http://ctan.org/>. It goes in `texmf/fonts/enc`.

The advantage to this is that it involves nothing outside of the document you are compiling. Also, the `\pdfmapline` command is part of pdfT_EX, and has been

²If you're using MacT_EX, this folder should be `Users/username/Library/texmf`. If it isn't there, create it.

If you're using MiK_TE_X, it is possible to designate any folder you like as the root of your local tree, that is, the place where you store supporting files. Instructions may be found at <http://docs.miktex.org/manual/localadditions.html#id573803> or through the manual which should have come with MiK_TE_X.

Any time you add supporting files to a local MiK_TE_X root, you have to refresh the file name database; see <http://docs.miktex.org/manual/configuring.html#fndbupdate>.

since 2004 (and `\pdfmapfile` is even older); any distribution of $\text{T}_{\text{E}}\text{X}$ installed or updated in the last six years will be able to deal with the syntax above.

On the other hand, it can be annoying to have to say that everywhere. And this doesn't work at all if you decide you want to produce DVI files and use a postprocessor such as `dvips`.

With $\text{MacT}_{\text{E}}\text{X}$, I can cause `dvips`, `dvipdfm`, and `pdfT_{\text{E}}\text{X}` to know about these fonts by opening a Terminal window (command prompt) and typing `updmap --enable Map=tolkien.map`.

With $\text{MiK}_{\text{T}}\text{E}_{\text{X}}$, I need to say `initexmf --edit-config-file updmap` and then add the line `Map=tolkien.map` to the file which opens, then run `updmap` from the command line.

Something similar should work with most distributions; it is always wise to check and see what your distribution's documentation says about `updmap` before using it.

4. SETUP

Using the package, once it's installed, is meant to be simple. Say `\usepackage {tolkienfonts}` in the preamble. This will define text commands (such as `\Quenya`) and environments (such as `{quenya}`) which convert their argument or enclosed text into another script:

```
Sing \Quenya{nam\'arie!}
\par\begin{quenya}      Sing 𐌺𐌶𐌵𐌶𐌰𐌶𐌵
ai! laurie lantar lassī 𐌺𐌶𐌵 𐌺𐌶𐌵𐌶𐌰𐌶𐌵 𐌺𐌶𐌵 𐌺𐌶𐌵𐌶𐌰𐌶𐌵
s\'urinen! \end{quenya}
```

If for some reason you want to produce tengwar without using `tolkienfonts.sty` (for example, if you're using plain $\text{T}_{\text{E}}\text{X}$ or $\text{ConT}_{\text{E}}\text{Xt}$), see Section A.

This package supports Måns Björkman's Sarati Eldamar and Valmaric Eldamar fonts, because they seem to be the only Sarati and Valmaric fonts available. It supports Dan Smith's Cirth Erebor font; when the first version of this package came out, this was the only font available that had all of the variant cirth seen in [Mazarbul]. Even it does not have all the variant runes seen on [Thror]; the sunrune font was originally made just so I'd have a font that had everything. You can switch between sunrunes and Cirth Erebor with `\sunrune` and `\fonterebor`. Note that these commands must precede the runic commands they are to affect. `\fonterebor \Moria{balin fundinul \sunrune uzbek khazad-d\~umu}` produces **R𐌺𐌶𐌵 𐌺𐌶𐌵𐌶𐌰𐌶𐌵 𐌺𐌶𐌵𐌶𐌰𐌶𐌵 𐌺𐌶𐌵𐌶𐌰𐌶𐌵**; to get **R𐌺𐌶𐌵 𐌺𐌶𐌵𐌶𐌰𐌶𐌵 𐌺𐌶𐌵𐌶𐌰𐌶𐌵** `\fonterebor \Moria{balin fundinul} \sunrune \Moria{uzbad khazad-d\~umu}`.

There are *many* available Tengwar fonts on the internet. I have put a fair amount of time and effort into making sure my modes look good with Tengwar Annatar; tehtar placement might be suboptimal for other fonts. For this reason, `tolkienfonts` as is supports only this one tengwar font. For information on how to modify `tolkienfonts` to support a few other tengwar fonts, see Section C.1.

Tolkien had several ways of writing with runes, tengwar, and so on. For example, on Thror's map in *The Hobbit*, *the* is spelled 𐌺𐌶; on the title-page inscription for *The Lord of the Rings*, *the* is spelled 𐌺𐌶. Different ways of writing with tengwar are called *modes*; for simplicity I will use the word *mode* to describe any Tolkien writing system.

TABLE 1. Modes, sorted by script and language

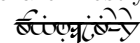
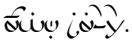
	Quenya	Sindarin	English	Dwarvish
Tengwar	Quenya	Gondor	Orthmode	
	QuenyaA	Arnor	Mazarbul	
	Quenyagen	Beleriand	Tehtamode	
	Quenyared		Phonemic	
Cirth	Eregion	Daeron	Erebor	Moria
	fancyeregion	fancydaeron	fancyerebor	fancymoria
Runic			Hobbit	
			fancyhobbit	
Sarati	Sarati			
	SaratiA			
	barsarati			
	barsaratia			
Valmaric	Valmaric			
	ValmaricA			

`tolkienfonts` supports several modes; each mode has an environment (like `{quenya}` above), and most have a text command (like `\Quenya` above) as well. The available modes, arranged by language and writing system, are shown in Table 1. The command names are shown; to get the environment names, simply set everything to lowercase.

Modes which are only available as environments are listed in red in Table 1; these environments all involve active space characters, which can lead to odd behavior.

You may also use most of the modes as package options (that is, say something like `\usepackage[quenya]{tolkienfonts}`); this will cause the entire document to be typeset in the appropriate mode. Any such option will define the `\textlatin` command, which produces text in Computer Modern.

4.1. Differences between modes. Most of the modes are based on one or a few specific Tolkienian texts. Often, there is only one (or no) mode for a given language/script combination; however, sometimes there are more.

I've only implemented `sarati` and `valmaric` modes for Quenya (there is a general phonemic `sarati` mode, but I thought it would be too annoying to deal with). The differences between the various `sarati` and `valmaric` modes are mostly cosmetic. `barsarati` (or `barsaratia`) is `sarati` drawn with a bar:  instead of . Many cirth texts put dots in the interword spaces: $\text{𐌌} \cdot \text{𐌌} \text{𐌌} \text{𐌌} \cdot \text{𐌌} \text{𐌌} \cdot \text{𐌌} \text{𐌌} \cdot \text{𐌌}$. In the normal cirth modes, you get these dotted spaces with `_` (backslash-space); `fancyerebor` and so forth put the dots in the spaces automatically.

`Sarati` and `valmaric` quenya modes normally do not bother writing the letter a unless absolutely necessary; instead they have a special `tehta` for a consonant followed by no vowel. `sarati` and `valmaric` follow this convention (`calma` is transliterated $\text{𐌌} \text{𐌌} \text{𐌌}$ or $\text{𐌌} \text{𐌌} \text{𐌌}$), but `saratia` and `valmarica` do not ($\text{𐌌} \text{𐌌} \text{𐌌}$ or $\text{𐌌} \text{𐌌} \text{𐌌}$).

`Quenya` is the standard Quenya mode (as seen in [Namárië] and described in [Appendix E]). It has several variations. [Appendix E] says that you can omit the

as when writing tengwar; since almost no extant Quenya tengwar texts do this, `Quenya` defaults to writing as with tehtar $\acute{c}\acute{c}\acute{w}$ and `QuenyaA` omits them $c\bar{c}m$.³

`Quenyared` is a mode identical to `Quenya` except that (in pdfTeX) the tehtar and punctuation are red (and the tengwar are black): $\acute{r}\acute{c}\acute{c}\acute{w} \acute{m} \acute{r}\acute{c}\acute{c}\acute{w}$. For instructions on how to set up a font with this kind of interesting color effects, see Section C.2.

In the standard Quenya mode, it is impossible to correctly transcribe, for example, “Essenya Bilbo” (my name is Bilbo); the closest you can do is “Essenya Mbilvo”. `Quenyagen` is a mode designed mainly for Quenya, but in which it is possible to write Sindarin or Mannish names such as *Bilbo*.

The three Sindarin tengwar modes reflect writing styles of Beleriand, Gondor and Arnor. (`Beleriand` is based on [`Durin`] and [`Elbereth`]; [`Durin`] explicitly calls it the Mode of Beleriand. `Arnor` and `Gondor` are based on [`Letter`]; I got the terms “mode of Arnor” and “mode of Gondor” from [`History`].) The mode of Beleriand has some of the same problems as the usual Quenya mode (*Bilbo* can be written, but *Marcho* cannot); it is possible to transcribe these Mannish names in the modes of Gondor and Arnor. (`Gondor` is a tehta mode $\acute{c}\acute{c}\acute{w}$ and `Arnor` is a full mode $c\bar{c}m$. Otherwise they are much the same.)

There are many English modes because Tolkien spent a lot of time experimenting with writing English with strange alphabets. `Hobbit` and `Erebor` are the runic writing systems used in *The Hobbit* and *The Lord of the Rings*, respectively.

Two of the tengwar modes reflect in-universe regional variations: `Orthmode` is designed to replicate Aragorn’s mode in [`Letter`], and `Mazarbul` is designed to replicate Ori’s mode in [`Mazarbul`].

Tolkien rarely wrote English with tehtar; `Tehtamode` is designed to replicate the most well-known example ([`LOTR`]).

`Phonemic` is designed to replicate a number of long inscriptions: [`Errantry`], [`Leithien`], and [`Bombadil`]. The main difference between `Phonemic` and the others is that it is based on English pronunciation, not English spelling: in Aragorn’s mode, *their* and *there* are transliterated $\acute{b}\acute{a}\acute{r}$ and $\acute{b}\acute{a}\acute{r}$, while in the phonemic mode, both should be transliterated as $\acute{b}\acute{a}\acute{r}$.

5. WHAT TO PUT INSIDE THE MODE COMMANDS

5.1. Text. For Hobbit runes, nothing special need be done; just say `\Hobbit{The record of a year’s journey made by Bilbo Baggins of Hobbiton.}` In other English modes, you have to change the spelling a great deal to get it to work properly. See Sections 7 and 8.

For a Tolkienian language, you can generally get the right results by typing the Quenya, Sindarin or Dwarvish phrase in lowercase letters. (The `\lowercase` or `\MakeLowercase` commands can be useful here.)

In the Mode of Gondor, you have to do one other thing. A *w* after a *d*, *g*, or *ch* is transcribed in a special way, which occasionally interferes with preceding vowel tehtar. The simplest way to get the correct result is to replace all *dws*, *gws* and *chws* with *Dws*, *Gws*, and *Chws* or *'dws*, *'gws*, and *'chws*.

Experts might need a few other uppercase letters.

³If you really want $c\bar{c}m$, type `\Quenya{c1m}`. I recommend against doing this unless you’ve found some native Quenya speakers to read your document.

In the Mode of Arnor, *r* is almost always spelled **ṛ**; however, it is occasionally spelled **ṙ**, and I haven't figured out any underlying rule; so if you want **ṙ**, type **R** instead of **r**.

In the Quenya modes, **N/ng**, **S/th** and **V/w** may be used in words that are pronounced with *n*, *s* or *v* but are spelled as if they used *ŋ*, *th* or *w*. There are three different *h*s in Quenya; you get **h** with **H** or just before **r/l**, you get **ch** with **ch** or just before **t**, and you get **h** with **h** otherwise. (See Section B.1.1.)

To the extent that it is possible, I have tried to ensure that text which is spelled correctly in a given mode will produce appropriate results in other modes configured for the same language. For example, **D**, **G**, **C**, and **R** may be used instead of **d**, **g**, **c**, and **r** in the mode of Beleriand, even though there's no reason to.

Otherwise, uppercase letters will often produce odd results; don't use them unless you know what they do and want that effect to occur.

Some rare Sindarin words begin with *ng*. [Road, p. 63] indicates that this *ng* is pronounced as in *sing*. If you believe that the word you are typing instead begins with the sound in *finger*, use **'ng** instead of **ng**.

If you want to transcribe “Elessar Telcontar aran Gondor ar Arnor” (“Elfstone Strider, King of Gondor and Arnor”), you should probably pick one mode and stick to it, even though “Elessar Telcontar” is in Quenya and the titles are in Sindarin. Transcribing “Elessar Telcontar” with Quenya and “aran Gondor ar Arnor” with Gondor is confusing, and Tolkien didn't do it (see [Letter]).

This means that you often need to be able to write names in modes designed for other languages.

If you use Sindarin names with *dh*, *y*, *d* (except *nd*, *rd*, *ld*), *b* (except *mb*), or *g* (except *ng*), you need to use Quenyagen and not Quenya. Otherwise, Quenya and Sindarin names can be used in each others' modes with almost no special spelling. I've tried to deal gracefully with the fact that *y* is a vowel in Sindarin and a consonant in Quenya. Thus, in these modes, *y* produces an appropriate character for a vocalic *y*; the correct character for a consonantal *y* may be produced by either a **Y** or a **y** followed by a vowel.

There is one subtle point: if a Sindarin word starts with an *i* followed by another vowel, the *i* is pronounced (and transcribed as) a consonantal *y*. So to mention Iorhael in a Quenya text, it is best to say `\Quenyagen{yorhael}` **ṙṛṛḷḷḷḷ**; if for some reason you need to start a Quenya word with *io-* in a Sindarin text, type **'io** and not just **io**.

We don't have any attested examples of Westron (or English, or Dwarvish) names in Quenya or Sindarin texts; make something up. A (reasonable) guess is to spell things phonetically, using the conventions described in [Appendix E]. The symbols **cj**, **cl**, **cd** for *j*, *sh*, *zh* (in *azure*) are available in **gondor**, **arnor** and **quenyagen**. The symbol **q** for English *ch* (in *church*) is also available, but you have to get it with **tj**, which was the best letter combination available that I did not want to reserve for Sindarin *ch* (**ch** or **cl**).

5.2. Accented letters. Tolkien used three diacritical marks with the Latin alphabet: *é*, *ê* and *ë*. You can get appropriate transcriptions by using the appropriate TeX accent commands `\'`, `\^` or `\"`. In any mode designed for a Tolkienian language, you can also get appropriate (if sometimes different) transcriptions for acute or circumflex accents by doubling the vowel: **uu** instead of `\'u`, `\^u`. Dieresis marks

TABLE 2. Tengwar Punctuation

		Meaning		
þ	?	Question mark (from [Namárië])	‘	“ or ‘
ʃ	!	Exclamation point (from [Namárië])	’	” or ”
·	,	Short pause	([or (‘
:	. or ;	Medium pause)] or)‘
:	:	Long pause	;	;‘
::	,.		.	.‘
:::	,,		,	,‘
:::	,.,	Very long pause/paragraph break	?	?‘
:::	..		!	!‘
ſ	(or)	Parenthesis (from [Letter], [Thorin])		
~	--	Decoration or end of inscription		
~	---			
=	=			

aren’t actually necessary when writing Elvish; they can be ignored. (Nothing bad will happen if a `\"⟨vowel⟩` winds up in a Quenya text by accident.)

5.3. Punctuation. In transcribing Elvish to the Latin alphabet, a dash indicates compound words; an apostrophe indicates a letter that is pronounced but not written. Neither of these are written in the tengwar text: *lumenn’* becomes $\mathcal{L}\acute{u}m\mathcal{e}n\mathcal{w}$, not $\mathcal{L}\acute{u}m\mathcal{w}$. However, occasionally these marks make a difference to tengwar spelling: *Pant-hael* is not pronounced *panth-ael*, and so should be spelled $\mathcal{p}\mathcal{a}\mathcal{n}\mathcal{t}\mathcal{h}\mathcal{a}\mathcal{e}\mathcal{l}$, not $\mathcal{p}\mathcal{a}\mathcal{n}\mathcal{t}\mathcal{h}\mathcal{a}\mathcal{e}\mathcal{l}$.

In all fonts, we can force $\mathcal{p}\mathcal{a}\mathcal{n}\mathcal{t}\mathcal{h}\mathcal{a}\mathcal{e}\mathcal{l}$ by putting `-`, `’`, `{}`, or `\-` between the `t` and `h`. `-` and `’` behave slightly differently.

Most of the modes have special rules at the start or end of words. For example, in the mode of Arnor, if a word starts with *i* followed by another vowel, the *i* is pronounced as a *y* and transcribed with a λ ; so *iarwain* is transcribed $\mathcal{y}\mathcal{a}\mathcal{r}\mathcal{w}\mathcal{a}\mathcal{i}\mathcal{n}$, but *Imladris* is transcribed as $\mathcal{m}\mathcal{l}\mathcal{a}\mathcal{d}\mathcal{r}\mathcal{i}\mathcal{s}$.

A hyphen (but not an apostrophe) restores start-of-word and end-of-word behavior on either side; so `\Arnor{ben-ion}` produces $\mathcal{a}\mathcal{r}\mathcal{n}\mathcal{o}\mathcal{r}\mathcal{b}\mathcal{e}\mathcal{n}\mathcal{i}\mathcal{o}\mathcal{n}$, but `\Arnor{ben’ion}` produces $\mathcal{a}\mathcal{r}\mathcal{n}\mathcal{o}\mathcal{r}\mathcal{b}\mathcal{e}\mathcal{n}\mathcal{i}\mathcal{o}\mathcal{n}$.











Visible punctuation is also available. In general, the Elves used (varying numbers of) dots to indicate pauses in speech. So in all fonts, the punctuation characters `.`, `:`, `;` produce some number of dots; for decorative effects, or at the end of inscriptions, you can repeat symbols to get clusters of more dots.

In the tengwar fonts, special symbols for `?` and `!` are used (they come from [Namárië]). In the other fonts, these symbols are again dots, since I didn’t know what else to make them.

Again in the tengwar fonts only, there are available symbols for “Elvish parentheses”; furthermore, you can get Latin punctuation, including quote marks. See Table 2.

I’ve done some virtual-font tricks so that the elvish punctuation (but not the Latin punctuation) has small spaces on the left and right, not just on the right.

TABLE 3. s-curls

Curl	Code	Curl	Code
	<code>\char0</code> or <code>\s</code>		<code>\char5</code>
	<code>\char11</code>		<code>\char6</code>
	<code>\char12</code>		<code>\char7</code>
	<code>\char13</code>		<code>\char8</code>
	<code>\char14</code>		<code>\char9</code>

When written ragged right, the spaces on both sides are the same size; however, for technical reasons all of the stretch and shrink has to go on the right-hand side of the punctuation signs. (Except in the active space modes.) If you don't like this effect, see Section C.3.

5.4. Numbers. In Middle-Earth, numbers are written with the least significant digit first (this is backwards relative to the way we write). Also, Elves and Dwarves often wrote numbers in base 12 instead of base 10. (See [Numbers].)

We don't know how to write numbers in Valmaric or Cirth. (We do have some digit tables for Sarati.) The numbers 3, 4, 5, 6 show up in [Mazarbul], but it's hard to extrapolate upwards (or down to 0).

You can get numbers in Sarati or Tengwar in two ways:

- Type them in directly: Bilbo invited `\Orthmode{441}` guests to his special party, and Thorin set out for the Lonely Mountain with one hobbit, one wizard, and `\Orthmode{01}` dwarves, or a total of `\Orthmode{21}` companions. (The commands `\ten` and `\eleven` produce the appropriate digits.)
- Use the `\reversedigits` macro. This macro does the work of converting a base-10 number written with most significant digit first to a base-whatever number written with the least significant digit first. (The default default base is 10. You can get other bases up to 12 by either using an optional first argument or by renewing the command `\defaultbase`.)

For example, `\Orthmode{\reversedigits{16}}` produces ƒττ , and

```
\Orthmode{\reversedigits[12]{16}}
```

```
\renewcommand{\defaultbase}{12}
```

```
\Orthmode{\reversedigits{16}}
```

both produce τ .

6. EXTRA SYMBOLS

Long tengwar look like ƒ . These are used on the One Ring, and also in English mode as abbreviations for “the” and “of”. Occasionally they are used elsewhere as variants. They can be accessed in a tengwar mode by placing a `|` after the code for the corresponding tengwa from Grade 1, 2, 3, or 4. So, for example, `\Gondor{p| dh|}` produces ƒ ƒ .

Tolkien often used curls and flourishes as an abbreviation for *s*: ƒ , ƒ , ƒ , ƒ , and so on. To get these in a tengwar, sarati or valmaric font, you can use the commands `\s` or `\char0`.

With sarati and valmaric, flourishes may be used on either side of a letter. `\s` by default produces the flourish that attaches to the left side of the following symbol; at the end of a word, the flourish which attaches to the right side of the preceding symbol is substituted automatically.

In a Sindarin mode, or English phonemic mode, that’s all you have to do. (The fonts will switch to a good *s*-curl automatically. If you don’t like the curl the font picked out, see Table 3.⁴)

In Quenya tengwar modes, sometimes you want to get things like $\dot{\mathfrak{r}}_3$. From [Appendix E], it is clear that $\dot{\mathfrak{r}}_3$ means *t_sa* and not *tas*; that is, the *s*-curl should happen only if *s* occurs directly after another consonant. In [Quenyanna], this happens only in the combinations *ts*, *ps*, *ls*, *ms*, *ns*, *rs*, and *x*.

Since those letters are all (except \mathfrak{C} *l*) from Series I or II, we can use the same *s*-curl for all of them. So the commands `\sa`, `\se`, . . . , `\su` after *t*, *p*, *m*, *n*, *r*, and some other letters, produce this curl and a tehta. (After *l*, or many other letters, they produce a silme nuquerna plus the appropriate tehta. If you really want $\dot{\mathfrak{C}}_6$, you have to use `1a\char14`.)

In English orthographic modes, similarly, if a word ends with a *silent E*, and you want to attach a *s*-curl, use the command `\es` instead of `\s`.

In all tengwar modes, you can get the short and long carriers *ı* and *ı̇* with the commands `\i` and `\j`, and the variant *rómen* \mathfrak{R} with `\R`. There are some other symbols present in the base fonts which are not accessible in the normal fonts; to get them, you need to use `\tengfont`. (See Section 10.)

7. ENGLISH ORTHOGRAPHIC MODES

When writing Elvish, spelling always dictates pronunciation; aside from a few leftover Quenya spelling rules, pronunciation dictates spelling.

In English, this is not the case. There are two ways to make an English mode in a non-Latin alphabet: by basing it on English spelling, and by basing it on English pronunciation. The first kind are referred to as *orthographic* modes, and the second kind are referred to as *phonemic* modes.

In an “orthographic” mode, you can determine the Latin spelling from the tengwar spelling,⁵ but you can’t determine the tengwar spelling from the Latin spelling. Extra information is present: for example, Tolkien used separate letters for silent and normal *es*. While this would be very nice for any hypothetical Elves who might come here and try to decipher our writing, it does mean that the input has to be a bit more complicated than just normal English text.

To the extent that it is possible, I have attempted to arrange things so that the argument of `orthmode`, `mazarbul`, `tehtamode` and `erebor` can be a case change away from normal English spelling—that is, you get $\mathfrak{p}\mathfrak{a}\mathfrak{r}\mathfrak{t}\mathfrak{e}$, the correct transliteration of *dance*, with `\Orthmode{danCE}` and not `\Orthmode{dans}`.

I have also tried to make sure that you can use the same input for all four modes. Not all of the following rules actually *do* things in all the modes.

You will need to use the following special spelling rules:

⁴If you say `t\char11`, the fonts should usually type out \mathfrak{r}_3 instead of $\dot{\mathfrak{r}}_3$. That is, some fonts have special versions of some letters for use with curls, which usually appear automatically. If they don’t, you can use `\tengfont/\tengalt` to get them; if you don’t want them to happen, you can say `t'\char1`.

⁵Except for *c/k* and, sometimes, *i/y* and *u/w*.

- (1) A diphthong is two vowels in a row which are run together into one syllable. These are often, but not always, written in a special way. For example, in the mode of Beleriand, *taur* (one syllable) is spelled $\text{p}\acute{\text{e}}\text{y}$, but *Tuor* (two syllables) is spelled $\text{p}\text{o}\text{c}\text{y}$.

In the English modes, you can prevent two vowels from forming a diphthong by putting something between them (‘, -, { }). You can also prevent a diphthong by using \": $\text{ro}\backslash\text{ac}$ produces $\text{r}\acute{\text{o}}\acute{\text{a}}$, not $\text{r}\acute{\text{e}}\text{a}$.⁶

If a diphthong is available, you can force it to appear by replacing the second vowel with its capital.⁷ (*w* is considered to be a vowel; *beware* should be transcribed as $\text{p}\text{w}\text{a}\text{r}\text{e}$, but *dewy* should be transcribed as $\text{p}\text{w}\acute{\text{e}}$. To get the second one, use W.)

If you do not do any of these things, what happens depends on the pair of vowels and the mode; experiment if you’re curious.

- (2) Apostrophes should usually be skipped: if there’s a short form of *nt*, you want to use it in *can’t*.
- (3) Vocalic *y* should be written with *y*; consonantal *y*, or *y* as the second letter of a diphthong, should be written with *Y*.
- (4) Silent *es* should be input as *E*, not *e*. (Note that the *es* in *dale*, *water*, *walked* are considered to be silent.)
- (5) A soft *c* (as in *princess*) should be input as *C*, not *c*. (A hard *c* in *cat* should be left as *c*.)
- (6) There are two different *ngs* in English: the *ng* in *sing* and the *ng* in *finger*. Since the first one is more common, you get it with *ng*; to get the *ng* in *finger*, you should type *Ng*.
- (7) English has two kinds of *ch*: the soft *ch* in *church*, and the *ch* pronounced as *c* which is so common in Greek loan words like *echo*. German and Sindarin loan words contain a third kind of *ch*. The first should be spelled with *ch*.

The other two should be spelled with $\text{c}\text{h}/\text{c}\text{H}$, $\text{c}\text{H}/\text{cH}$, $\text{c}\text{H}/\text{cH}$ or $\text{c}\text{h}/\text{c}\text{H}$. Which one is which is up to you; Tolkien uses ch in *Christmas* in [Brogan], but uses cH in *Michael* in [Endorion].

I prefer to use $\text{c}\text{h}/\text{c}\text{H}$ for the Sindarin *ch*, so that you use the same symbol in the Sindarin and English modes. This leaves $\text{c}\text{h}/\text{c}\text{H}$ for *Christmas*.

Since words like *backhand* are so common in English, *kh* just produces *k+h*.

- (8) There are two different *th* sounds in English, which Tolkien describes as “the voiceless *th* of English in *thin cloth*” and “the voiced (soft) *th* of English *these clothes*”. You get the first one with *th*; you get the second one with *dh* or *tH*.

This means that a normal *dh* (in, say, *childhood*) needs to be spelled as $\text{d}\text{'h}$ or $\text{d}\{\text{h}\}$. *dhs* in Elvish names (such as *Maedhros*, *Caradhras*) are

⁶This sometimes—but not always—works in the Elvish modes. In Quenya and Sindarin, every pair of vowels is either *always* a diphthong or *never* a diphthong, so the \ is superfluous unless something strange is going on. It would have been complicated to make $\text{t}\backslash\text{ai}$ transliterate as $\text{t}\acute{\text{a}}\text{i}$ (not a diphthong) instead of $\text{p}\acute{\text{a}}$ (diphthong), so I didn’t bother. $\text{ta}\backslash\text{i}$, or $\text{t}\backslash\text{ai}$ in a Sindarin mode, should still prevent a diphthong.

⁷This rule may or may not take precedence over \. Being consistent on this particular point was not worth the effort.

intended to be pronounced as this voiced *th* (it's not *Carad-hras*), so do not separate them.

The following rules only apply to tengwar (not cirth):

- (9) A *w* which is silent or pronounced in combination with another consonant (*two*, *twenty*) or a silent *u* after a consonant (*quiet*, and probably also *build*, *guest*,) should be written with a twist tehta. This should not be done in compounds such as *westward*, so you have to tell `tolkienfonts` that you want the *u* or *w* to become a twist by using the capital version.⁸ I'm pretty sure twists are used only in the combinations *gu*, *bu*, *tw*, *dw*, *sw*, *thw*, *gw*, and *schw*, plus *Chw* if you include Sindarin names. These are the only combinations where *W*, *U* produce twists.
In the tehta mode, you have to worry about vowel and twist tehtar interfering.
As in the mode of Gondor, *T*, *B*, *D*, *S*, and *G* behave exactly as their lowercase counterparts, except that they do not take vowel tehtar. Since *C* is too busy representing soft *c* to represent *ç* with no tehtar, if you want a *ç* or *č* just after a vowel, I'm afraid you'll just have to put a *'* or *{}* before it.
- (10) Tolkien abbreviated the common words *and*, *of*, *the*, and *of the* as $\overline{p\bar{o}}$ / $\overline{p\bar{o}}$, $\overline{f\bar{o}}$, $\overline{h\bar{o}}$, and $\overline{p\bar{o}h\bar{o}}$, instead of using the longer spellings $\overline{a\bar{p}\bar{o}}$ / $\overline{f\bar{o}}$, $\overline{c\bar{h}\bar{o}}$ / $\overline{h\bar{o}}$, $\overline{h\bar{o}a\bar{h}\bar{o}}$, and $\overline{c\bar{h}\bar{o}h\bar{o}}$ / $\overline{h\bar{o}}$. You can get the abbreviations with `ndE`, `v|`, `tH|/d|`, and `vv|`, as well as with the commands `\&`, `\of`, `\The/\THE`, and `\ofthe`.⁹
- (11) No English text uses *ȝ*. It's anyone's guess what Tolkien would have used it for. But a reasonable guess is *rh* in *rhyme*, *rhythm*, (or *Rhovanion*),¹⁰ and so you get it with *Rh*. (Words like *neighborhood*, which shouldn't be spelled this way, are too common for me to let *rh* produce *ȝ*.)
- (12) In tehta mode, never use *N* unless the next letter is *g* or *G*. For technical reasons, *<vowel>+Ng* and *<vowel>+mg* produce the same thing in tehta mode; in the unlikely event that you actually want a word with *mg* in it,¹¹ you'll want to separate them `m{ }g`.
- (13) In tehta mode, (at least, with Tengwar Annatar) you probably want to get *č* with *Wh* after vowels because it will place the tehtar better. You usually want to get *ç* with *CH* (not *c|*) for the same reason.

If you want to go further and spell *age* and *his* as they are pronounced (as *aje*, *hiz*), you will need to spell them in the input as `ajE`, `hiz`. (Tolkien used *az* for *as* in [LOTR], but spelled *his* and *bridge* as *his* and *bridge* (not *hiz* and *bridje*) in [Letter].)

8. ENGLISH PHONEMIC MODE

Tolkien often wrote English with Tengwar phonemically. I'm not too fond of this mode; I find that the orthographic modes are easier to read and easier to

⁸Except after *q*. *q* always produces the proper glyph or glyphs for *qu*, since there isn't a known way to write just *q* with any Tolkienian script. Any *u* after a *q* should silently vanish.

⁹`\the` and `\and` are predefined TeX macros, so I did not want to redefine them.

¹⁰The other obvious possibilities are *rr*, *rd* and that it simply isn't used. *rd* and *rr* are spelled $\overline{r\bar{p}\bar{o}}$ and $\overline{r\bar{d}}$ in all three drafts of [Letter], and *rh* has to be spelled with *something*.

¹¹[Ispell] knows two such words: *broomgrove* and *slumgullion*.

TABLE 4. English full phonemic mode

This table shows the tengwar and tehtar available in the phonemic mode.

Symbols shown in black or purple are probably used in the mode of [Errantry], [Bombadil] and [Leithien]. Symbols shown in red or orange are attested in some other example (in most cases, [Thorin], [Treebeard] or [DTS 39]) but are probably not used in the mode of [Errantry]. Symbols in green are not attested in any phonemic examples that I know of. (Blue and orange symbols seem to be variants of other symbols. č is unattested, and cd is attested only in [Thorin].)

It is unclear whether certain letters are best transcribed as \acute{o} , \acute{u} or \acute{o} , \acute{u} . Therefore, both sets are available.

Note that u is not available in all fonts; u will be substituted if necessary.

e produces \acute{e} if the next tengwa is in Series III, as in the Mode of Beleriand; $\backslash.\text{e}$ may be used otherwise.

p t to	p p pass	q ch branch	q k call
p^{b} d had	p^{b} b built	cq j orange	cq g gilded
b th think	b f for	d sh fish	č kh loch
b^{h} dh, tH there	b^{h} v river	cd zh occasion	cd gh
m n in	m m merry	ca nY	ca ng long
r r for	r u pull, to	u U under	u a cargo
y R merry	y Rh	z l load	z L
z s across	z S, C	z z was	z Z
h h he	h hw	y Y	o o orange
j y yellow	d wh what	w w was	
j \j you		w W with	

a A, E, I, O a, of	a a cargo	o o gondola
i iy, ee between	ä ay, ii bright	ö oy joy
	ä au, aw down	ö ow, oe yellow
i i in, he*	ä aa hat	
	ä \ 'a father	\acute{o} \ 'o law
c e merry	u u pulled, to*	u U up
\acute{c} \.e feather	b uw, ue blue	u V under
\check{c} ey, ae lay	\acute{b} uu blue	

*He and to should be spelled with i and u only when unstressed; otherwise, use i and \acute{b} .

Vowels and tehtar

a a	c e	i AEIO	o o	u u	u U	j J
ä ay/ai, ii	\check{c} ey/ei, ae	i iy, ee	ö oy/oi	b uy/ui	\acute{u} Uy	j yy
ä aw/au	\check{c} ew/eu	i iw/iu	ö ow/ou, oe	b uw, ue	\acute{u} Uw	j yw
ä \.a, aa	\acute{c} \.e	i \.i, i	\acute{o} \.o	b \.u	\acute{c} \.U	j \.J
ä \ 'a	\acute{c} \ 'e	i \ 'i	\acute{o} \ 'o, oo	b \ 'u, uu	\acute{c} \ 'U	j \ 'y
ä \ ^a	\acute{c} \ ^e	i \ ^i	\acute{o} \ ^o	b \ ^u	\acute{c} \ ^U	j \ ^J
a aaa	\acute{r} \ 'r	\acute{r} \ ^r	y Y		u V	

write. However, I've heard some people say they prefer the phonemic modes, so I'm making one available.

Note that I am not trained at all in linguistics; it's likely that I got some of the stuff in Table 4 quite wrong. Generally, your best bet is to figure out for yourself what tengwa you should use, and then look up in the table what letters you should use with it.

Here are some notes:

Accented (long) vowels are usually treated as simply stressed vowels in this mode (there's no special way of writing them); in [Leithien], *Lúthien* is spelled $\mathcal{L}\acute{u}b\acute{i}c\acute{m}$, with the same letter as in $\mathcal{j}\acute{u}l$ use, $\mathcal{l}\acute{u}$ who.

The abbreviations $\mathcal{f}\mathcal{h}$ and $\mathcal{f}\mathcal{h}$ are not used in this mode; *of* is spelled $\mathcal{u}\mathcal{b}$, *of the* is spelled $\mathcal{u}\mathcal{b}\mathcal{f}\mathcal{h}$. $\mathcal{f}\mathcal{h}$ is still used for *the*. $\mathcal{f}\mathcal{h}$ is not an abbreviation; that's the correct spelling of *and* in this mode.

You can get a schwa using any of the letters A, E, I, or O. A schwa can be indicated either with an undotted carrier, or an underdot under the *following* tengwa. I haven't been able to figure out a systematic rule for when a dot is used and when a carrier is used; therefore, E and A turn into underdots if they are followed by a reasonable letter and I and O do not.

A y after most consonants turns into double overdots (as in $\mathcal{p}\mathcal{u}\mathcal{h}\mathcal{e}\mathcal{m}$ *perfume*); a W after some consonants or consonant groups (\mathcal{t} , \mathcal{d} , \mathcal{g} , \mathcal{s} , \mathcal{th} , and \mathcal{sh}) becomes an overtwist.

Note that some pronunciation symbols show up twice; for example, both \mathcal{i} and \mathcal{i} have IPA symbol *i*. This is not a coincidence; Tolkien sometimes used one, sometimes the other. (He used *each of them* in the word *beard*. This might be a mistake; or it might be because both spellings are "correct". Usually, \mathcal{i} is used at the ends of words and \mathcal{i} is used inside words. The difference between \mathcal{u} and \mathcal{u} seems to be mostly a matter of stress.)

Finally, note that all this analysis is based on Tolkien's examples, which are based on the way English was pronounced by educated Englishmen in the early twentieth century. If you want to spell things differently because you pronounce things differently because you are a twenty-first-century American, that's probably all right.

9. WRITING DIRECTION

According to [Sarati], *sarati* was often written right-to-left, boustrophedon (alternating left-to-right), or vertically.

A small package called `boustr.sty` should have come with `tolkienfonts`. It contains some environments for writing direction:

```
\begin{rtl} Right to left
\end{rtl}                                Right to left

\begin{boustrophedon}
Boustrophedon...
\end{boustrophedon}                    Boustrophedon, starting on the
right and switching to the left.
```

```

\boustrightfalse
\begin{boustrophedon}
Boustrophedon...
\end{boustrophedon}

\begin{sidewaysflip}{1in}
Flipped vertical text
\end{sidewaysflip}

```

Boustrophedon, starting on the
.ɹɹɹɹ ɹɹɹ ɹɹɹɹɹɹɹɹɹɹ ɹɹɹ ɹɹɹ

Flipped vertical text

(I didn't see the need to make a plain sideways environment; the `rotating` package already has one.)

Be warned that `rtl` and `boustrophedon` are delicate. They do bad things to displayed math, and stop working if you put any of a number of odd things (such as `\clearpage`) inside; don't do anything too weird inside these environments. In particular, don't make any zero-point vertical skips inside the environment; if for some reason you really want to say `\setlength{\parskip}{0pt}`, make it `\setlength{\parskip}{1sp}` instead.

`rtl` could perhaps have avoided this, but I wanted it to be capable of breaking across pages.

10. RAW FONTS

If you examine the documentation that came with your tengwar fonts, you'll see that the keymapping is, frankly, bizarre. To get ᚱᚾᚰᚰᚰ out of these fonts, you have to type `5#t~C7T'V`; being able to get it by typing `nam\`arie` instead is the entire point of this package.

Nonetheless, fonts in their raw form have their uses. Occasionally, you may find that you want to use, say, ᚾ . But Tolkien only used this symbol when writing Old English, so it's not available in any standard mode. Alternatively, you may have already determined that in the raw font, `7D~Vj% j%k$w#3G w6E15~` produces your name, and want to copy and paste. You can get the raw encoding with the commands `\tengfont` and `\tengalt`.

In the raw font, many important glyphs are placed over special characters. The easiest way to get `~`, `j` and ᚰ is with `\tengfont{\char'\\}`, `\tengfont{\char'\~}` and `\tengfont{2\char'\~}`.¹² Several of the other characters (`#`, `$`, `%`, `&`, `_`, `{`, and `}`) must be preceded by a backslash `\` to come out properly.

The unusual characters can be referenced with the `\char` command. For example, the Tengwar Annatar keyboard map says that ᚾ is character 190; to get it in \TeX , use `\tengfont{\char190}`.

The commands `\cirthfont`, `\saratifont`, and `\valmarfont` are defined similarly.

APPENDIX A. DOING WITHOUT `tolkienfonts.sty`

Most of the work of `tolkienfonts` is done by the virtual fonts; the file `tolkienfonts.sty` provides macros, environments, package options, etc., but can be dispensed with if necessary.

¹²`\tengfont{2\~}` will *not* produce ᚰ .

TABLE 5. Font family names and modes

When using font names or font family names, beware of capitalization issues. Sometimes you have to say `TengwarASB`; other times you have to say `tengwarasb`.

Scripts and fonts

<code>TengwarA</code>	Tengwar Annatar
<code>CirthE</code>	Cirth Erebor
<code>CirthS</code>	Sunrunes
<code>SaratiE</code>	Sarati Eldamar
<code>SaratiB</code>	Sarati Eldamar with bar
<code>Valmaric</code>	Valmaric Eldamar

Languages and modes

	Raw tengwar, sarati, or valmaric font
<code>A</code>	Raw tengwar alt font
<code>XX</code>	Raw cirth font
Tengwar	
<code>QQ</code>	Quenya default mode
<code>QR</code>	Quenya red mode
<code>QG</code>	Quenya generic mode
<code>QA</code>	Quenya mode without <i>as</i>
<code>SA</code>	Sindarin mode of Arnor
<code>SG</code>	Sindarin mode of Gondor
<code>SB</code>	Sindarin mode of Beleriand
<code>EO</code>	English full orthographic mode
<code>EM</code>	English mode of Mazarbul
<code>ET</code>	English tehta orthographic mode
<code>EP</code>	English full phonemic mode
Runes	
<code>QE</code>	Angerthas Daeron/Eregion, arranged for Quenya
<code>SD</code>	Angerthas Daeron/Eregion, arranged for Sindarin
<code>DM</code>	Angerthas Moria, arranged for Dwarvish
<code>EE</code>	Angerthas Erebor, arranged for English
<code>EH</code>	Runes from <i>The Hobbit</i> , arranged for English
Sarati/Valmaric	
<code>QQ</code>	Quenya default mode
<code>QA</code>	Quenya mode with <i>as</i>

The (real and virtual) fonts used by `tolkienfonts` do not follow the Berry naming scheme. Instead, the font names are constructed by starting with the script name (usually `Tengwar`) and appending three capital letters to indicate font, language, and mode, plus (for Tengwar Annatar) a few lowercase letters to indicate font shape.

So the virtual font for `beleriand` is `TengwarASB`. See Table 5 for the complete font/mode list.

The names of the \LaTeX font families are constructed by taking the names of the (normal-shaped) fonts and translating them to lowercase.

In \LaTeX , you can use these fonts without `tolkienfonts` in several ways:

- You can create a text-mode command


```
\DeclareTextFontCommand{\Beleriand}
{\fontencoding{T1}\fontfamily{tengwarasb}\selectfont}
```

 which you can use like `\textbf{\Beleriand{tin\'uviel}}`
- Alternatively, you can change fonts directly inside the document:


```
\usefont{T1}{tengwarasb}{m}{n} tin\'uviel
```
- If you want the entire document in tengwar, you can use


```
\renewcommand{\rmdefault}{tengwarasb}
\begin{document}
tin\'uviel
```
- If you're having trouble getting font families to work, you can use `\newfont`:


```
\newfont{\Beleriand}{TengwarASB at 10pt}
{\Beleriand tin\'uviel}
```

 However, `\newfont` does not play nicely with L^AT_EX's size-changing mechanisms, so if you can get any of the above techniques to work, it's probably better to use them.

All of these produce *ᐅᐅᐅᐅᐅᐅᐅᐅ*.

In plain T_EX, you use direct font definitions

```
\font \beleriand = TengwarASB
```

as usual.

In either case, you should be aware of a few things. First, to adjust the spacing, you need to adjust some spacefactor codes:

```
\sfcode' ,=2000 \sfcode' ;=2000
```

for all fonts, and

```
\sfcode')=1000 \sfcode']=1000 \sfcode'?=1999
\sfcodes'!=1999
```

for tengwar.

If you're likely to use a capital letter just before a punctuation mark, you might want to say `\sfcode'R=1000` to fix the spacing.

Also, the commands

```
\ten \eleven \twelve \ldots \of \ofthe \The \THE \& \r
\R \s \es \sa \se \si \so \su \sy
```

and `_` (runic modes) are redefined by `tolkienfonts.sty`; don't use them with tengwar without it. You can get ten and eleven with `<` and `>`.

You can do without `\"` (by using quote marks or dashes); you can get long vowels with a left quote `a'`. Alternatively, if you want `\'` (and `\"`, `\^`) to work properly, in L^AT_EX, you can use the `fontenc` package:

```
\usepackage[T1]{fontenc}
```

In plain T_EX, you can use `plainenc`:

```
\input plainenc
\fontencoding{T1}
```

If you do this, `\^` will occasionally produce a different result from `\'`; they will both be legitimate transliterations of long vowels, but possibly different ones.

APPENDIX B. TENGWAR DISCUSSION: WHY DID I MAKE THE MODE CHOICES I DID?

Given the paucity of examples, there are a lot of decisions I had to make regarding the fine points of mode operation. They are discussed below.

Note: *kh* refers to the Scottish, German or Sindarin hard *ch*, not the English soft *ch*; it sounds more like a cat hissing than anything in English. It is usually transliterated *ch*; in this appendix, I am going to call it *kh* to distinguish the two. If you don't speak German, *h* is probably the best English substitute when speaking aloud.

B.1. Quenya modes. The general mode was based on [DTS 38, 42, 43, 44, 46, 64]. It's been designed to produce reasonable things if Sindarin words, as well as Quenya words, are entered. Therefore, many of the Sindarin special rules (e.g. ƿ at the ends as well as the beginnings of words) work in the general mode **Quenyagen** but not in **Quenya**.

A notable feature of this mode is that diphthongs are always written with two tehtar. All the other Elvish tehta modes write diphthongs with a tehta and a special tengwa; however, ñ for *ai* is well attested. This is also a good idea in that a generic mode needs to support the Sindarin *e*-glide diphthongs *ae*, *oe* as well as the Quenya *i*-glide diphthongs *ai*, *oi*, *ui*. You can force diphthongs to be written with special tengwar by using E, I or U as the second letter.

The Quenya tengwar mode is based on descriptions in [Appendix E], the example [Namárië], and also on the analysis in [Textbook] and [Quenya]. (If you don't know anything about the Quenya mode and you would like to, [Quenya] is a good place to start.)

To construct `\Eregion` and the sarati and valmaric fonts, I used [Appendix E], [Sarati] and [Valmaric] to determine which glyph meant which sound. Additional rules were then taken from the tengwar mode. `\Eregion` and `\Daeron` were carefully constructed to be as similar as possible; there are a few minor differences.

There was one decision I had to make: what to do with **h**.

B.1.1. The *h* question. So: does *aha* have an *aha* in it?

It would not be unprecedented for the answer to be no. If we follow the usual *r*-rule, *óre* is spelled ŕ , with a *rómen*—no *óre* is present.

Here's what we know.

Originally, Quenya had a *kh* sound. It was written with đ ; the Noldor named this letter *kharma*. Quenya also had an *h* sound (as in English *house*;) it was written with h . Finally, it had a *hy* sound, written with λ .

At some point, the Noldor decided that words which *began* with *kh* should begin with *h* instead. Somewhat unusually (possibly because they were keeping *khs* that occurred inside words), they decided to alter the spellings of these words. At or around this time, they started to use λ for the *h* sound, and λ̣ for *hy*.¹³

So now *harma* did not have a đ in it. The Noldor began to call đ *aha*; presumably, at that time, *aha* was spelled h̄đ . However, according to [Appendix E], *any h* standing on its own with no nearby consonants is pronounced as in *house*. (*ht* is for some strange reason pronounced as *kht*.)

¹³They kept r around to indicate voiceless *r* and l : ṛ , ṛ̣ . These are the same sounds which Sindarin writes with ṛ and ṛ̣ ; in Quenya, they are transcribed as *hr* and *hl* instead of *rh* and *lh*.

There are two possible explanations for this situation.

- When they started calling \mathcal{d} *aha*, it was pronounced *aha*, not *akha*. This doesn't make sense to me.
- When they started calling \mathcal{d} *aha*, it was pronounced *akha*, not *aha*. Quenya *later* lost all of its remaining *khs* except those just before *ts*. For whatever reason, the Noldor didn't change the name of \mathcal{d} again.

It should be noted that Tolkien mentions *kh* as “remaining medially”, but that [Quenyanna] has no *chs* or *khs* in it; as far as we know, in Third Age Quenya, *kh* only happens just before *t*. It is possible that *kh* originally only happened at the start of words or before *t*, but it seems unlikely.

It should also be noted that the Sindarin words *acharn* and *achas* mean *vengeance* and *dread*; it seems likely that they and *aha* come from a common proto-Eldarin root with a *kh* in it.

In the first case, all medial *hs* should be spelled with \mathcal{d} . In the second case, *hs* before *ts* should probably be spelled with \mathcal{d} . Medial *hs* that used to be *khs* might *also* still be spelled with \mathcal{d} (which would explain why *tehta* is not spelled *techta*); unfortunately, we don't actually know which *hs* used to be *khs*. You can guess based on Sindarin cognates; you can assume that it is all of them; or you can just write them with λ s instead.

This is what `tolkienfonts` does: it uses \mathcal{d} before a *t*, \mathcal{f} before a *r* or *l*, and λ for all other *hs* which are not part of combinations. If you want a medial *h* to be written with \mathcal{d} , you have to use `ch` or `kh` instead.

B.2. Sindarin modes. The mode of Beleriand is based on [Elbereth] and [Durin], as well as on the analysis in [Appendix E], [Sindarin] and [Textbook]. The Third Age Sindarin modes (**Arnor** and **Gondor**) are based mainly on [Letter], but also on [LOTR] and [Appendix E].

Like `Quenyagen`, the Sindarin modes have some special rules borrowed from the other Elvish language to allow you to easily write isolated Quenya words. You can get \mathfrak{y} and \mathfrak{z} with either the Sindarin initial **rh**, **lh** or the Quenya **hr**, **hl**. A **Y**, or a **y** followed by a vowel, produces the same tengwa (\mathfrak{j} or \mathfrak{x}) that is used at the start of *ionnath*, that is, in the only place where Sindarin has a consonantal *y* sound.

The Quenya diphthong *oi* does not occur in [Parviphith], and *iu* occurs only at the start of words. *Eu* does occur (in *leutha*); the author seems to think that it is an “unusual diphthong” rather than separated vowels. Consequently, these three combinations are diphthongs like *ai*, *au* in all three modes (except for initial *iu*, which produces $\mathfrak{x}'\mathfrak{j}\mathfrak{o}$ as usual).

`\Daeron`, like `\Eregion`, is based on the Angerthas Daeron in [Appendix E], with some special rules that parallel rules in the tengwar mode.

Mh is \mathfrak{m} in the modes of Gondor and Arnor, and so is presumed to be \mathfrak{m} in the mode of Beleriand.

In [Appendix E], final *ng* is said to be pronounced as η (as in *sing*). Initial *ng* is described as being pronounced η in (archaic) Quenya; in [Road, p. 63], it is also mentioned as being pronounced η in Sindarin. Therefore, initial *ng* is transcribed with \mathfrak{ca} or \mathfrak{ca} .

However, [Parviphith] has some words that begin with *ng* that it claims should be pronounced η *g*. These *ngs* should probably be transcribed with $\mathfrak{ca}'\mathfrak{g}$; to get them initially, use `'ng`.

Most of the uncertainty in the Sindarin tengwar modes lies in how to deal with *u* after a vowel or *w* in any situation.

In the tehta mode, I follow [Textbook] and [Sindarin] and use \hat{o} for *au*.

[Letter] uses overtwists in Sindarin for *w* after a consonant (labialization). It also uses overtwists for English *u*-glide diphthongs. Therefore, I use overtwists for labialization and *u*-glide diphthongs in both of the Third Age modes.

It seems reasonable to assume that the mode of Beleriand is meant to be easy for native Quenya readers to deal with, and that the Sindarin modes of Gondor and Arnor are meant to be easy for native Westron readers to deal with. The modes of Beleriand and Gondor were used thousands of years apart, by people of different races; while they are both Sindarin modes, there's no real reason to expect them to be similar.

Analogy with Quenya¹⁴ leads me to conclude that in the mode of Beleriand, Series IV probably represents labialization of Series III. So *gw* and *chw* are w and d , not w and d . (*dw* is written with p plus a tehta, since q , d or a would be confusing.)

[Appendix E] says that “the sign for following *w* (required for the expression of *au*, *aw*) was in this mode the *u*-curl or a modification of it”. This could be interpreted to mean an overtwist c , as in the Third Age modes; however, the overtwist does not seem to be used in writing Quenya, and so the mode of Beleriand, as used in Beleriand, probably used simply the *u*-curl c . (Maybe the mode of Eregion used the overtwist.) *dw* is written with the same tehta.

Quenya and the mode of Beleriand both use a for *w*. However, [Appendix E] says that b was “often used for *w*”, and b is used in *war* and *Westmarch* in the title-page inscription for *The Lord of the Rings*, which is English written “as a man of Gondor might write it”. Therefore, Westron tehta mode¹⁵ probably used b , and so the modes of Gondor and Arnor are assumed to do the same.

B.3. English and Dwarvish. The full orthographic English mode supplied by `orthmode` is based on [Letter]; the `mazarbul` variant is based on [Mazarbul]. (The use of h as *wh* comes from [Lowdham].) The cirth mode `erebor` is based on [Mazarbul] as well (it has some pages written with cirth and some pages written with tengwar).

The mode `moria` is based almost entirely on [Appendix E]. The only extant text written in this mode (in fact, the only extant text in Dwarvish at all) is [Balin]. If Dwarvish has any special rules, I don't know what they are.

We have very few tehta mode examples. (There is [LOTR], [TTT], [Brogan], and [Endorion]. That's about it.) What's more, the examples we do have are inconsistent. [TTT] uses i for *o*; [Brogan] uses i for *e* and i for *i*; etc.

Therefore, the English tehta mode supported by `tolkienfonts` derives many of its rules from the English orthographic mode and the mode of Gondor.

These two modes agree on everything, except:

¹⁴Also see [Appendix E]: “*hwesta sindarinwa* [d] or ‘Grey-elven *hw*’ was so called because in Quenya [d] had the sound of *hw*, and distinct signs for *chw* and *hw* were not required.”

¹⁵[History] presents charts for a Westron tehta mode (which does use b for *w*) and Westron full mode which are virtually identical to the charts for English tehta and orthographic modes. The full Westron mode there, like English orthographic mode, uses o for *w*, b for *u* and a for *a*. We know that the mode of Arnor uses o for *u*. It could theoretically use either b or a for *w*; it would, however, be less confusing to Westron writers if *u* and *w* just switched.

- *ch, j, sh, x, z*, silent *e*, and the *c+h* in *echo* occur in English. Thus, \mathfrak{C} cannot be *ss*, and the tengwar for the others are actually used.
- The letter \mathfrak{C} is used for soft *c* in the orthographic full mode examples. Soft *c* does not come up in any of the tehta mode examples; Tolkien never uses \mathfrak{C} for *s*, even when there are tehtar present and using a \mathfrak{C} would be convenient.
- In the mode of Gondor, \mathfrak{A} is used for *e* only when it is the second letter of a diphthong (that is, only for “*e*-glide”); in English orthographic mode, it is used for all non-silent *es*. (The Gondorians also use it for an *i* followed by a vowel at the start of a word, which is pronounced as a consonantal *y*.)
- English full modes use \mathfrak{I} and \mathfrak{J} for *i* and *y*. Obviously, these symbols are not available in any tehta mode. In English tehta mode, tehtar are available to represent *i* and vocalic *y*; some letter needs to be chosen for consonantal *y*.
- The letters \mathfrak{U} and \mathfrak{O} mean *u* and *o* in full English orthographic mode, but mean *w* and *i*-glide in the Mode of Gondor.
- The letters \mathfrak{A} and \mathfrak{O} mean *a* and *w* in full English orthographic mode. One of these probably means *u*-glide in the Mode of Gondor, and the other is probably not used. [Textbook] and [Sindarin] use \mathfrak{O} for *u*-glide, but I don’t believe that we have any attested examples.

So to construct a tehta mode, we need to decide the following:

- What tehta do we use for vocalic *y*? (I use \mathfrak{Y} , since both [LOTR] and [Brogan] do. The mode of Gondor uses \mathfrak{I} .)
- What tengwa do we use for consonantal *y*? ([Brogan] uses \mathfrak{A} , so that’s what I use.)
- Which tengwa do we want to use for *w*? (I follow [Brogan] and [LOTR] and use \mathfrak{U} .)
- Do we use \mathfrak{E} for *e* and \mathfrak{I} for *i*, or vice versa? The first one is consistent with both Quenya mode and the mode of Gondor; the second one uses some form of dots for both kinds of *e*. This is particularly useful if we want to imitate Christopher Tolkien and use other undertehtar. ([Brogan] uses \mathfrak{I} for *e*; [LOTR] and [Endorion] use \mathfrak{E} for *e*. I don’t like undertehtar, and I find that I can remember that underdot and overaccent mean the same letter fairly easily, whereas if I use \mathfrak{I} for *e*, I get confused whenever I try to read an inscription in Quenya mode or the mode of Gondor.)
- How do we write diphthongs? This is really the big one. We have three standard tengwar left: \mathfrak{A} , \mathfrak{A} , and \mathfrak{O} . (We also have \mathfrak{C} and \mathfrak{J} , \mathfrak{Z} .) We could just write out the two tehtar, with a carrier or two. Tolkien does this for *ea* and *io* in [Brogan], but had switched from \mathfrak{I} to \mathfrak{E} by the time he wrote [Endorion]; I prefer to write as he did in [Endorion].
 - [Endorion] uses \mathfrak{C} for its *a*-glide diphthong.
 - [Endorion] uses \mathfrak{A} for its *e*-glide diphthong. So does the mode of Gondor.
 - Since we’re using \mathfrak{A} for the consonantal *y* in *you*, it makes sense to use it for *y*-glide diphthongs as well. And given the relationship between *i* and *y* (e.g. *they/their, liar/lying*), it makes sense to use the same character for *i*-glide and *y*-glide, if we have to have any overlaps.
 - [Brogan] makes \mathfrak{U} do double duty as *w* and *u*-glide. [LOTR] and [Endorion] have no *u*-glides, so they cannot contradict this. On the other hand, this is ambiguous, and it makes no sense to use \mathfrak{O} or \mathfrak{A} as *y*; they are available to be *u*-glide and *o*-glide.

I have a strong personal preference for unambiguous transliteration, so I really do not like overloading **ɳ** for both *w* and *u*-glide. Also, I prefer to arrange things so that, if you happen to find yourself mentioning *Aulë* or *Sauron* in your tengwar texts, you will spell those names more or less as they were spelled in Middle-Earth. Thus, **Tehtamode** defaults to using **o** for *u*-glide. If this bothers you, use **w** to force a **ɳ**.

- *o*-glide diphthongs (as in *people*) are rare, unless you include words ending in *tion*, *cion*, *sion*, which I don’t like to since the *i* in those words goes to modifying the preceding consonant—it’s not part of the vowel. Unfortunately, we have no attested examples of *people*, and only one example of *tion*, which is in [Brogan]. There are no *o*-glide diphthongs in any Elvish language, and the full Elvish and English orthographic modes all use **ɔ** for *o*, which is taken. English phonemic inscriptions use **o** for *o*, which I want to use for *u*. I use **ɔ** for *o*-glide just because it’s the only thing left.¹⁶

APPENDIX C. VIRTUAL FONTS AND THE FONTINST PACKAGE

The way **tolkienfonts** is constructed, I need a separate virtual font for each mode/base font/color combination. For full color effects as seen in [Namárië], you’d want both a red-tehtar-black-tengwar and a black-tehtar-red-tengwar font (plus a plain font for normal use). I’ve got this package set up to allow for nine different tengwar fonts (counting the four flavors of Tengwar Annatar).

Rather than having this package come with hundreds of supporting files, I’ve decided to include one font (Tengwar Annatar normal) and one colored mode as examples, and give what you need to make the supporting files for colored tehtar and other fonts yourself.

The correct Quenya spelling of “Arda” is **ṛṛ**. In most modern tengwar fonts, you get **ṛṛ** by typing ‘CuF. The purpose of this package is to let you get **ṛṛ** by typing `\Quenyared{\textbf{arda}}`. Here’s how **L^AT_EX** does it:

- The `.sty` file defines the command `\Quenyared`, which says, “**L^AT_EX**! Switch to the font encoding T1 and the font family `tengwaragr`!”
- **L^AT_EX** finds the file `t1tengwaragr.fd`. It has a bunch of font-family commands, one of which says, “**L^AT_EX**! If you’re using this family, then tell **T_EX** to use the font `TengwarAQRb` for bold-width, normal-shaped text!”
- **T_EX** looks for the files `TengwarAQRb.tfm` and `TengwarAQRb.vf`. The `.tfm` file says, “**T_EX**! You should allocate 3.04pt for that first **a**, you should turn all **rds** into the character in Slot 245, and you should turn all **as** that come after that character into the character in Slot 205!”
- The `.vf` file says, “**T_EX**, you’re not done yet! I need you to replace all the **as** with the characters ‘**C** from the font `TengwarAb` and replace the character in Slot 245 with the character **u** from `TengwarAb`. Oh, and while you’re at it, make the **C** red.”
- **T_EX** goes and looks up the width of the ‘**C**’ in the file `TengwarAb.tfm`, so that it knows where to put the **C**.

¹⁶You could also make **ɳ** do double duty, as in [Brogan], which would free up **o** to be *o*-glide. Or you could just write *eo* as *í* no matter how it’s pronounced.

- \TeX checks to make sure there's no file `TengwarAb.vf`, and, satisfied, finishes its job. We now know that we want the sequence of glyphs ‘**CuF**’ from the font `TengwarAb`.
- Now, it's some other program's job to figure out whether `TengwarAb` means `tnganb.ttf` or `tnganb.pfb` or `TengwarAb.mf` or what, actually grab the appropriate glyphs, and place them into the PDF or PostScript file (or display them on the screen). `pdf \TeX` combines this step with the previous steps; `dvips` and so on keep them separated.

So, if you want to use Tengwar Parmaite (for example) instead of Tengwar Annatar, you need to make all those files.

C.1. Adding new fonts. I've included the files you'll need to set up for the following fonts:

- The other three Tengwar Annatar fonts
- Tengwar Parmaite
- Tengwar Eldamar
- Tengwar Noldor
- Tengwar Quenya
- Tengwar Sindarin

You can switch between fonts with the commands `\annatar`, `\eldamar`, `\noldor`, `\parmaite`, `\fontquenya`, and `\fontsindarin`. Like `\sunrune` and `\fonterebor`, these commands need to be given outside of the font commands they are to affect.

To set up these fonts, start by going to the `tolkieninst` folder. Find the file `tolkieninst.tex` and open it.

Find the lines

```

%%%%%%%% Tengwar Parmaite %%%%

\installfonts
%\installfontas{TengwarP}{T1}{tengwarP}{m}{n}{}

: : :

\endinstallfonts

```

Uncomment every line between the `\installfonts` and the `\endinstallfonts`. If for some reason you only want a few modes, uncomment just the lines for that mode. (The `\installfontas` lines make the `.fd` files for `\tengfont` and `\tengalt`.)

All the `\installfont` and `\installfontas` lines for Tengwar Annatar, Cirth Erebor and sunrunes, Sarati and Valmaric are uncommented, since this is the file I used to make the files that came with this package; you probably want to comment them out.

Now, run `tolkieninst.tex` through plain \TeX (not \LaTeX). This will generate a bunch of `.vpl` files. Open up a command line. The following commands will convert multiple VPL files to VF/TFM files:

```

for file in *.vpl; do vptovf $file; done (Mac OS X or UNIX)
for %A in (*.vpl) do vptovf %A %~nA.vf %~nA.tfm (Windows)

```

If this doesn't work, you'll have to type something like

```

vptovf TengwarPQQ.vpl TengwarPQQ.vf TengwarPQQ.tfm

```


for every generated `.vpl`.

This should give you a bunch of `.fd` files, a bunch of `.vf` files, and a bunch of `.tfm` files, which should be distributed to appropriate places, as described in Section 3. The `.vpl` files may be deleted.

Quenya, Noldor, and Sindarin can be dealt with in the same way. If you want to include multiple shapes of Tengwar Annatar, it's strongly recommended that you do all four shapes at once. This will automatically write all four shapes to the `.fds`, which in turn will let you pick them out with the \LaTeX commands `\emph` and `\textbf`.

C.2. Adding color. The easiest way to get odd color effects is to build them into the virtual font.

Open the file `tolkieninst.tex`. Figure out which font you want to edit.

Suppose that you decide you want `\Beleriand` after `\noldor` to produce green tehtar and punctuation. You want the line `\installfont{TengwarNSB}`: `N` for the Noldor font, `S` because `\Beleriand` is a Sindarin mode, and `B` for Beleriand. (See Table 5.) Uncomment that line.

The important line starts with:

```
\installfont{TengwarNSB} {fontNoldor,effectPunctspace,...}
```

Add `effectColor` just before `effectPunctspace`:

```
\installfont{TengwarNSB} {fontNoldor,effectColor,effectPunctspace,...}
```

Now, open the file `effectColor.mtx`. Find the lines

```
\setcommand\tehta#1% Red
\ifisglyph{#1}\then
  \setglyph{#1black}\glyph{#1}{1000}\endsetglyph
  \setleftrighthkerning{#1black}{#1}{1000}
  \resetglyph{#1}
  \glyphspecial{pdf: 0.8 0 0 rg 0.8 0 0 RG} %pdfTeX
  %\glyphspecial{color push rgb 0.8 0 0} % dvips
  \glyph{#1}{1000}
  %\glyphspecial{color pop} % dvips
  \glyphspecial{pdf: 0 g 0 G} %pdfTeX
\endresetglyph
\fi
}
```

It's the `\glyphspecial` lines that change color. Next we have to fix the color code to be green instead of red.

If I say

```
\definecolor{mygreen}{rgb}{0,0.6,0} {\color{mygreen} test}
```

I get a nice green; so I change the `0.8 0 0 rg 0.8 0 0 RG` to `0 0.6 0 rg 0 0.6 0 RG`. (It's a lot faster to fiddle with colors in \LaTeX before you start changing them in `color.mtx`.)

Now, we're ready. Run the file `tolkieninst.tex` through plain \TeX (not \LaTeX). The result should be a few generated files. Go to a command line and run `vptovf TengwarNSB`; among your newly generated files should be the file `TengwarNSB.vf`. Replace the old `TengwarNSB.vf` with this one, and you're done.

If you want to make entirely new fonts rather than replacing old ones, then you should copy the line

```
\installfont{TengwarNSB} {fontNoldor,effectPunctspace,scripttengwar}
  {modeBeleriand} {T1}{tengwarnsb} {m}{n}{}
```

and change it to

```
\installfont{TengwarNSBG} {fontNoldor,effectColor,effectPunctspace,
  scripttengwar} {modeBeleriand} {T1}{tengwarnsb} {m}{n}{}
```

This will generate a new font `TengwarNSBG` and a new font family `tengwarnsb`. See Section A to see how to use them.

C.3. Adjusting the spacing. Getting rid of the special tengwar spacing rules is even easier. Just delete the `effectPunctspace` in the `\installfont` lines:

```
\installfont{TengwarNSB}{fontNoldor,effectPunctspace,scripttengwar...
```

becomes

```
\installfont{TengwarNSB}{fontNoldor,scripttengwar...
```

Then you run `tex tolkieninst` and compile your `.vpls` as usual.

APPENDIX D. FONT TABLES

Asterisks indicate letters or letter combinations whose behavior depends on neighboring characters.

Single *s indicate word boundaries: nw means that nw produces nw *only* when they are the first two letters in the word. If for some reason you really want nw at the start of a word, use an apostrophe.

Double **s indicate that the characters that trigger the special behavior are all vowels: rs means that s produces r to accomodate tetar, li means that i produces l when used in appropriate diphthongs, and ry means that r produces y whenever the next letter is a vowel.

TABLE 6. Quenya mode

p t	p p	c c, k	q q, qu
nd d, nd	mb b, mb	ng g, ng	ngw gw, ngw
th, S b	f, ph b	h***, ch, kh d	hw, chw, khw d
nt b	mp b	nc cd	nq, nqu cd
n m	m m	*ng, N ca	*nw, *ngw, Nw ca
r r	v, f* v	Y c	w, V c
$\text{r**}, \text{R}$ y	rd y	l C	ld, L C
s C	$\text{s**}, \text{C}$ y	ss, z C	$\text{ss**}, \text{Z}$ C
h d	Hw d	$\text{*i}, \text{I}$ C	$\text{*u}, \text{U}$ C
$\text{h***}, \text{H}$ f	x, cs, ks g	A c	y c
a i	o i	ai a	au o
e i	u i	oi a	eu o
i i		ui a	iu o

The letters shown in black are used in [Namárië]; the letters shown in blue are not used in [Namárië], but are described explicitly in [Appendix E]; the letters shown in green are probably not used in this mode; the letters and combinations shown in red are deduced or have values which changed from Age to Age.

h produces h normally, f before r/l , and d before t .

General mode

p t	p p	tj c	c, k q	q, qu q
d, nd p	b mb p	j c	g q	gw q
th b	ph, f b	sh d	ch, kh d	chw, khw d
dh b	v, f* b	zh, ssh cd	gh cd	ghw cd
n m	m m	nY, ny** ca	ng*, *ng ca	*ngw ca
r r	w v	Y, y** c	@ c	
R y	rd y	l C	ld, L C	
s C	C, s** y	z, ss C	Z, ss** C	
h d	hw d	E C	U C	
H, h*** f	x g	E p	A c	dw p

Gray characters are included for illustration; E produces just the underdot.

TABLE 7. Mode of Beleriand

p	t	p	p	cj	c, k, C	q	q, qu
þ	d, D	þ	b	cj	g, G	gw	gw, Gw
b	th	b	f, ph, F	cl	ch, kh, Ch	cl	chw, khw, Chw
þ	dh	þ	v, f*	cd	gh	ghw	ghw
n	nn, N	m	mm, M	ca	ng*, *ng, Ng	ca	\~n, *ngw, *nw
n	n	n	m	ca	o	ca	w
r	r, R	*rh	*rh	l	l	*lh, L	*lh, L
s	s	y	y	ss, z	ss, z	Z	Z
h	h	hw	hw	e	e	u	u
c, ċ	a	i	i	I, Y, y**, *i**	I, Y, y**, *i**	mh	mh
þ̇	dw, Dw	oi	oi	eu	eu	iu	iu
ë	ai	ei	ei	ui	ui	au, aw*	au, aw*

The letters shown in black are used in [Elbereth] or [Durin]; the letters shown in green are probably not used in this mode; the letters and combinations shown in red are deduced based on [Appendix E], analogy with Quenya, or analogy with the mode of Arnor or English full modes.

TABLE 8. Third Age Sindarin modes

ƿ t	ƿ p	ç tj	ç c, k, C
ƿᵅ d, D	ƿᵇ b	çç j	çç g, G
ᵇ th	ᵇ ph, f, F	ᵇ sh	ᵇ ch, kh
ᵇᵅ dh	ᵇᵇ v, f*	ᵇᵇ zh, ssh	ᵇᵇ gh
ᵇᵇ n	ᵇᵇ m	ᵇᵇ nY	ᵇᵇ ng*, *ng, Ng
	ᵇᵇ w		ᵇᵇ @
ᶜ s	ᶜ *rh, hr	ᶜ l	ᶜ *lh, hl, L
ᶜᵅ h	ᶜᵅ hw	ᶜᶜ z, ss	
ᵇᶜ mh	ᶜᵅᵇ dw, Dw	ᶜᶜ gw, Gw	ᶜᶜ chw, Chw

Mode of Arnor

ᵇ r	ç y	ᶜ o	ç Z
ᶜ R		ᶜ e	ᶜ o u
ᶜ,ç a	ᶜᵅ ae	ᶜᵅ ai	ᶜᵅ oi
ᶜᵅ i	ᶜᵅᵅ oe	ᶜᵅᵅ ei	ᶜᵅᵅ eu
ᶜᵅᵅ I, Y, y**, *i**	ᶜᵅᵅ au, aw*	ᶜᵅᵅ ui	ᶜᵅᵅ iu

Mode of Gondor

ᵇ R, r*	ç S, **s	ᶜ I, **i	ç Z, **ss	
ᶜ r		ᶜ E, Y, **e, y**, *i**	ᶜ U, **u	ç A
ᶜᵅ a	ᶜᵅ o	ᶜᵅ ae	ᶜᵅ ai	ᶜᵅ oi
ᶜᵅᵅ e	ᶜᵅᵅ u	ᶜᵅᵅ oe	ᶜᵅᵅ ei	ᶜᵅᵅ eu
ᶜᵅᵅᵅ i	ᶜᵅᵅᵅ y	ᶜᵅᵅᵅ au, aw*	ᶜᵅᵅᵅ ui	ᶜᵅᵅᵅ iu

The characters which are shown in black occur in [Letter]; the letters shown in green are probably not used in this mode; the letters or combinations shown in red have their values deduced from [Appendix E], [LOTR], similar letters or combinations, or other modes.

TABLE 9. English orthographic modes

ƨ	t, T	Ƒ	p	ɥ	ch	ɥ	k, c
ƨ	d, D	Ƒ	b, B	ɥ	j	ɥ	g, G
ƨ	th, Th	ƨ	f	ɔ	sh	ɔ	Ch, Kh
ƨ	tH, dh	ƨ	v	ɔ	zh	ɔ	gh
ƨ	n	ƨ	m	ɔ	\~n (ñ)	ɔ	ng
ƨ	r						
ɥ	r**, R	ɥ	Rh	ɥ	l	ɥ	ll, L
ɥ	s, S	ɥ	C	ɥ	z	ɥ	Z, **z
λ	h						
ƨ	tW, TW	ƨ	dW, DW	ƨ	bU, BU	ɥ	sW, SW
ɥ	q, qu	ƨ	thW, ThW	ɥ	chW	ɔ	ChW
ɥ	Ng	ɔ	ngU, ngW	ɥ	gU, gW	ɥ	NgU, NgW
ɥ	CH, KH, cH, kH	ƨ	ph	ɥ	x		

Aragorn's mode (\orthmode)

	ƨ	u	ɔ	o	ɥ	a, A	
	ɔ	wh, Wh	λ	e	o	w	
c	@	,	i	ɥ	y	ɥ	H
ɔ	ai, ay	λ	ei, ey	ɔ	oi, oy	ɔ	uI, uy
ɔ	au, aW	λ	eu, eW	ɔ	ou, ow		
ɔ	ae			ɔ	oe	ɔ	ue
ɔ	aa	λ	ee	ɔ	oo	ɔ	uu

Mode of Mazarbul: changes from \orthmode

ɥ	w, W	ɔ	wh	ɥ	Wh	ɔ	wH, WH
---	------	---	----	---	----	---	--------

The symbols shown in black are used in [Letter]; the symbols shown in green are probably not used in this mode; the symbols shown in blue are attested in [Brogan]; the symbols shown in purple are borrowed from the phonemic mode ([Leithien] or [Bombadil]). In all cases, you can use G instead of g.

English orthographic tehta mode

	ƨ	w	ɔ	Y, I	ɥ	U					
	ɔ	wh, Wh	λ	E	o	U					
í	a	c	A	λ	ae	ó	au	ɔ	ai, ay		
í	e	í	ee	ɔ	ea	ó	eu	ɔ	ei, ey		
í	i	í	ii	λ	ie			ɔ	iy		
í	o	í	oo	ɔ	oa	λ	oe	ó	ou	ɔ	oi, oy
í	u	í	uu			λ	ue			ɔ	uy
í	y			λ	ye						

There aren't really enough examples to make it worth listing everything that's attested and everything that's not. The o is debatable, and the ɥ is *spectacularly* wild guesswork.

TABLE 10. Sarati Quenya

0	1	2	3	4
5	6	7	8	9
<	>	.	.	:
p	t	ty	c, k	q, cw, kw
b, mb	d, nd	dy, ndy	g, ng	gw, ngw
f, ph	s	hy	h	hw
v	r	y, **i	l	w, **u
m	n	ny	*ng, N	*nw, Nw
mp	nt	nty	nk, nc	nq
ts	st	sty	x, cs, ks	ss
ht	hty			
a	e	i	o	u
aa	ee	ii	oo	uu
hl	hr	ly	ry	
th, S	ch, kh	chw, khw	z	
mf, mph	dh			

Symbols in red are taken from the phonemic valuation; otherwise this valuation is based on [Sarati].

TABLE 11. Valmaric Quenya

p	t	c, k	ty	q
f	s, S, th	h, H		hw
v	r, R	nc, nk	y, **i	w, **u
mp	nt	nty		nq
b, mb	d, nd	g, ng		gw, ngw
m	n, N		ny	*nw, Nw
mn	l	rd	z, ss	ld
rm	lt	ht	ry	lq
a	e	i	o	u
aa	ee	ii	oo	uu
.	-	--		

This valuation is based entirely on [Valmaric].

TABLE 12. Cirth

	Daeron	Eregion	Moria	Erebor		Daeron	Eregion	Moria	Erebor
Ɔ	p	p	p	p	l	l	l	l	l
Ɔ	b	b	b	b	lh,h1	lh,h1	lh,h1	L	L
Ɔ	f	f	f	f	ng	ng	nd	nd	nd
Ɔ	v	v	v	v	s	s	s	s	s
Ɔ	hw	hw	hw	hw	S	S	S	S	S
Ɔ	m	m	m	m	ss,z	ss,z	Ng	ng	ng
Ɔ	mh	mh	mb	mb	Z	Z	ng	Ng	Ng
Ɔ	t	t	t	t	nd	nd	nj	oU	oU
Ɔ	d	d	d	d	nD,Nd	nD,Nd	Nj	ou	ou
Ɔ	th	th	th	th	i	i	i	i	i
Ɔ	dh	dh	dh	dh, tH	-	-	y	y	y
Ɔ	n	n	r	r	-	-	hy	hy	hy
Ɔ	tj	tj	ch	ch	u	u	u	u	u
Ɔ	j	j	-	j	uu	uu	uu	z	z
Ɔ	sh	sh	sh	sh	w	w	w	w	w
Ɔ	zh	zh	-	zh	ü	ü	ü	ü	ü
Ɔ	nj	nj	z	x	e	e	e	e	e
Ɔ	k	k	k	c, k	ee	ee	ee	ee	ee
Ɔ	g	g	g	G	a	a	a	a	a
Ɔ	ch,kh	ch,kh,h*	kh	Ch, Kh	aa	aa	aa	aa	aa
Ɔ	gh	gh	gh	gh	o	o	o	o	o
Ɔ	*ng*,Ng	*ng*,N	n	n	oo	oo	oo	oo	oo
Ɔ	q	q	q	q	ö	ö	ö	ö	ö
Ɔ	gw	gw	gw	gw	-	-	N	N	N
Ɔ	khw	khw	khw	Khw	h	h	h	h	h
Ɔ	ghw	ghw	ghw	ghw	-	-	E	E	E
Ɔ	ngw	ngw	ngw	Ngw	-	-	U	U	U
Ɔ	*ngw,Ngw	*nw,Nw	nw	nw	H	H	H	H	H
Ɔ	r	r	j	g	ı	ı	ı	ı	ı
Ɔ	*rh,hr	*rh,hr	zh	Gh	&	&	&	&	&

Mode of Erebor only							
Ɔ	ps	ñ	au	ñ	ea	Ɔ	eu
Ɔ	ts	ñ	ai	ñ	oa	Ɔ	ll

You may substitute \`a or ^a for aa in all modes.

TABLE 13. Hobbit runes

Ƒ	a	ƒ	n	þ	th
Ɔ	b	Ɔ	o	Ꝩ	ng
Ɨ	c	Ƒ	p	Ɔ	oo
Ǝ	d	ƗƑ	q	Ƨ	ea
M	e	Ƒ	r	Ǝ	ee
Ƨ	f	Ɨ	s	Z	eo
X	g	↑	t	Ƒ	oa
Ƒ	h	∏	u	Ǝ	sT
l	i	∏	v	Ƒ	\p
l	j	Ƒ	w	:	.
h	k	Ƨ	x	:	,
Γ	l	Ƒ	y		
Ǝ	m	Ɨ	z		

Most of the letters in this mode are from [Thror], except for Ƨ, Ɨ, Ƨ, Ǝ, l for j, ƗƑ for q, which are from [Foreword], and Ɔ, Ƒ, which are from [Farrer], and Z, which is from [Jacket].

Note that Ƒ, Ǝ occur in [Foreword] but not in [Thror], and so they are a bit harder to get than Ƒ, Ɨ↑.

Uppercase letters may be used instead of lowercase letters; they are identical except that NG/Ng produces þX, and St/st produces Ɨ↑.

Fonts designed for *Cirth* do not always contain all the glyphs one might like in a *runic* font. Cirth Erebor does far better than most Cirth fonts, but even it does not have Ƒ, Z, Ƒ, or Ǝ. Getting all these glyphs was the original motivation for creating the sunrune font.

APPENDIX E. REVISIONS

In Version 2, I've made some significant changes. `quenyagen` now uses the `quesse-téma` instead of the `calmatéma` for its *k*-series; this means that it is possible to render English words with it, at the expense of adding some extra `tehtar` for *qu* and *ngw*.

In general, more support has been added for writing isolated Quenya words in a nominally Sindarin mode or vice versa. This has almost (but not completely) eliminated the difference between `daeron` and `eregiön`.

The fonts have been modified to make accents work better in general. For technical reasons, this means that some of the *s*-curls have been moved.

`Phonemic` has been edited to have better support for writing in the modes of `[Thorin]` and `[Treebeard]`; these texts can now be copied without using `\tengfont` (although some of the things you do have to type are nonintuitive).

Full support for the Sunrune font has been added.

A number of miscellaneous bug fixes and minor font improvements have also been made.

APPENDIX F. FILES IN THIS PACKAGE

This is a list of all files that are considered part of the `tolkienfonts` package. They should be organized as follows:

- CHANGES
- `tolkienfontsdoc.pdf`
- `tolkienfontsdoc.tex`
- `example.tex`
- `example.pdf`
- README

`tolkieninst/`

- `effectColor.mtx`
- `effectPunctspace.mtx`
- `effectSuppressKerns.mtx`
- `effectUnderdots.mtx`
- `fancykernsDM.mtx`
- `fancykernsEE.mtx`
- `fancykernsEH.mtx`
- `fancykernsSD.mtx`
- `fancykernssetup.mtx`
- `fontAnnatar.mtx`
- `fontAnnatarb.mtx`
- `fontAnnatarbi.mtx`
- `fontAnnatari.mtx`
- `fontEldamar.mtx`
- `fontErebor.mtx`
- `fontNoldor.mtx`
- `fontParmaite.mtx`
- `fontQuenya.mtx`
- `fontSaratiE.mtx`
- `fontSaratiEBar.mtx`
- `fontSindarin.mtx`

- fontSunrune.mtx
- fontValmaricE.mtx
- modeArnor.etx
- modeBeleriand.etx
- modeCirthDaeron.etx
- modeCirthErebor.etx
- modeCirthMoria.etx
- modeEmazarbul.etx
- modeEphonemic.etx
- modeEtehta.etx
- modeGondor.etx
- modeQuenya.etx
- modeQuenyaGeneral.etx
- modeRuneHobbit.etx
- modeSaratiQuenya.etx
- modeValmaricQuenya.etx
- scriptcirth.mtx
- scriptsarati.mtx
- scripttengwar.mtx
- scriptvalmaric.mtx
- TengwarModeStartingPoint.etx
- tolkieninst.tex
- tolkienmetrics.mtx

tex/latex/

- tolkienfonts.sty
- boustr.sty

tex/latex/fd/cirth/

- t1cirthedm.fd
- t1cirtheee.fd
- t1cirtheeh.fd
- t1cirtheqe.fd
- t1cirthesd.fd
- t1cirthexx.fd
- t1cirthsdm.fd
- t1cirthsee.fd
- t1cirthseh.fd
- t1cirthsqe.fd
- t1cirthssd.fd
- t1cirthsxx.fd

tex/latex/fd/tengwar/

- t1tengwara.fd
- t1tengwaraa.fd
- t1tengwaraem.fd
- t1tengwaraeo.fd
- t1tengwaraep.fd
- t1tengwaraet.fd
- t1tengwaraqa.fd

- tltengwaraqg.fd
- tltengwaraqq.fd
- tltengwaraqr.fd
- tltengwarasa.fd
- tltengwarasb.fd
- tltengwarasg.fd

tex/latex/fd/valmar/

- t1saratib.fd
- t1saratibqa.fd
- t1saratibqq.fd
- t1saratie.fd
- t1saratieqa.fd
- t1saratieqq.fd
- t1valmaric.fd
- t1valmariceqa.fd
- t1valmariceqq.fd

fonts/afm/

- sunrune.afm

fonts/map

- tolkien.map

fonts/source/

- sunrune.mf

fonts/tfm/raw/

- CirthEXX.tfm
- CirthSXX.tfm
- SaratiB.tfm
- SaratiE.tfm
- TengwarA.tfm
- TengwarAA.tfm
- TengwarAAb.tfm
- TengwarAAbi.tfm
- TengwarAAi.tfm
- TengwarAb.tfm
- TengwarAbi.tfm
- TengwarAi.tfm
- TengwarE.tfm
- TengwarEA.tfm
- TengwarN.tfm
- TengwarNA.tfm
- TengwarP.tfm
- TengwarPA.tfm
- TengwarQ.tfm
- TengwarQA.tfm
- TengwarS.tfm
- TengwarSA.tfm
- Valmaric.tfm

fonts/tfm/cirth/

- CirthEDM.tfm
- CirthEEE.tfm
- CirthEEH.tfm
- CirthEQE.tfm
- CirthESD.tfm
- CirthSDM.tfm
- CirthSEE.tfm
- CirthSEH.tfm
- CirthSQE.tfm
- CirthSSD.tfm

fonts/tfm/tengwar/

- TengwarAEM.tfm
- TengwarAEO.tfm
- TengwarAEP.tfm
- TengwarAET.tfm
- TengwarAQA.tfm
- TengwarAQQ.tfm
- TengwarAQQ.tfm
- TengwarAQR.tfm
- TengwarASA.tfm
- TengwarASB.tfm
- TengwarASG.tfm

fonts/tfm/valmar/

- SaratiBQA.tfm
- SaratiBQQ.tfm
- SaratiEQA.tfm
- SaratiEQQ.tfm
- ValmaricEQA.tfm
- ValmaricEQQ.tfm

fonts/type1/

- sunrune.pfb

fonts/vf/cirth/

- CirthEDM.vf
- CirthEEE.vf
- CirthEEH.vf
- CirthEQE.vf
- CirthESD.vf
- CirthSDM.vf
- CirthSEE.vf
- CirthSEH.vf
- CirthSQE.vf
- CirthSSD.vf

fonts/vf/tengwar/

- TengwarAEM.vf
- TengwarAEO.vf

- [Thorin] DTS 71: A transcription of Thorin’s letter to Bilbo in *The Hobbit*, published as the frontispiece of *The History of The Hobbit, Vol. II: Return to Bag-End*, by John D. Rateliff. English phonemic mode (different from that of [Bombadil], [Errantry] and [Leithien]).
- [Treebeard] DTS 24: A page describing Tolkien’s original conception of Treebeard, published in *Return of the Shadow*. English phonemic mode (different from that of [Errantry] or [Thorin]).
- [Namárië] DTS 20: Transcription of Galadriel’s “Namárië” lament in Lórien, *The Road Goes Ever On*. Quenya mode.
- [Elbereth] DTS 21: Transcription of the elvish hymn to Elbereth Gilthoniel, *The Road Goes Ever On*. Mode of Beleriand.
- [Durin] DTS 8: The illustration of the Doors of Durin, in *The Lord of the Rings*, Chapter II.4. Mode of Beleriand.
- [Balin] DCS 6: Balin’s tomb inscription from *The Lord of the Rings*, II.4. The text is in both Dwarvish and English; the Dwarvish text (*Balin Fundinul uzbud Khazad-dûmu*) is definitely in the mode of Moria, but the English text (*Balin son of Fundin lord of Moria*) could be either the mode of Moria or the mode of Erebor.
- [Thror] Thror’s map, published in *The Hobbit*. Anglo-Saxon runes.
- [Jacket] The dust jacket to the original edition of *The Hobbit*, also *Artist and Illustrator* 144. Anglo-Saxon runes.
- [Farrer] Letter to Katherine Farrer, *The Letters of J.R.R. Tolkien* 112, containing a few paragraphs written with Anglo-Saxon runes.
- [Appendix E] “Writing and Spelling”, Appendix E to *The Lord of the Rings*.
- [Foreword] Foreword entitled $\text{þ M N\textcircled{B}B\textcircled{B}IT \textcircled{R} \textcircled{M}RM \textcircled{F}M \textcircled{B}Fk \textcircled{F}X\textcircled{F}k}$, present in most newer hardcover editions of *The Hobbit*.
- [Shibboleth] “The Shibboleth of Fëanor”, published in *The Peoples of Middle-Earth*.
- [Road] *The Road Goes Ever On*.
- [Quenyanna] Helge Kåre Fauskanger, *Quettaparma Quenyanna* (the *Ardalambion* Quenya wordlist),
<http://www.uib.no/people/hnohf/wordlists.htm>
- [Parviphith] *Parviphith Edhellen* (the *Ardalambion* Sindarin wordlist),
<http://www.uib.no/people/hnohf/parviphith.doc>
- [History] Gildor Inglorion, çñò íççççççççç : *A brief history of Elvish writing*,
http://www.elvish.org/gwaith/pdf/history_of_writing.pdf
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<http://www.geocities.com/tengwar2001/>
- [Numbers] Per Lindberg, *Writing Numbers with Tengwar*,
http://www.forodrim.org/daeron/md_teng_primers.html
- [Sindarin] Per Lindberg, ççç ççç ççççççççç : *Writing Sindarin with Tengwar*,
http://www.forodrim.org/daeron/md_teng_primers.html
- [Quenya] Per Lindberg, ççç ççççççççç : *Writing Quenya with Tengwar*,
http://www.forodrim.org/daeron/md_teng_primers.html
- [Runes] Per Lindberg, Tolkien’s English Runes,
http://www.forodrim.org/daeron/md_teng_primers.html
- [FTMME] Ronald Kyrmse, *J.R.R. Tolkien’s Full Tengwar Modes for Modern English: an Analysis*, formerly available at
<http://www.geocities.com/otsoandor/FTMME.htm>
- [Sarati] Måns Björkman, *The Sarati—Quenya Usage*,
http://at.mansbjorkman.net/sarati_quenya.htm
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<http://at.mansbjorkman.net/valmariceldamar.htm>
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<http://www.tug.org/applications/fontinst/>