

# Gregorio and GregorioT<sub>E</sub>X: Tools for gregorian score engraving.

Version 4.0.1, 28 December 2015

Comm.  
VII

**F** ACTUS est repente \* de cæ-lo so-

nus adveni-entis spi-ri-tus vehementis, u- bi

e- rant se-den-tes, alle- lu- ia:

[Homepage](#)

Source code available on [GitHub](#).

# Contents

<b>1</b>	<b>Gregorio<math>\text{\TeX}</math> Macros</b>	<b>3</b>
<b>2</b>	<b>User Controls</b>	<b>4</b>
2.1	Using the Package . . . . .	5
2.1.1	Gregorio $\text{\TeX}$ and fontspec . . . . .	6
2.2	Commands . . . . .	6
2.2.1	Including scores . . . . .	7
2.2.2	Point-and-click . . . . .	11
2.2.3	Overall Size . . . . .	12
2.2.4	Fine Tuning Dimensions . . . . .	13
2.2.5	Staff Lines . . . . .	16
2.2.6	Score Font . . . . .	17
2.2.7	Glyph Alteration . . . . .	18
2.2.8	Barred letters (A/, etc.) . . . . .	22
2.2.9	Styling . . . . .	26
2.2.10	Text Elements . . . . .	28
2.2.11	Text Alignment . . . . .	30
2.2.12	End of Line Behavior . . . . .	31
2.2.13	Hyphenation . . . . .	34
2.2.14	Clef Visibility . . . . .	35
2.2.15	Clivis Alignment . . . . .	35
2.2.16	Braces . . . . .	36
2.2.17	Ancient Notation . . . . .	36
2.3	Distances . . . . .	37
2.4	Penalties . . . . .	48
2.5	Colors . . . . .	51
<b>3</b>	<b>Gregorio Controls</b>	<b>52</b>
<b>4</b>	<b>Gregorio<math>\text{\TeX}</math> Controls</b>	<b>83</b>
4.1	Auxiliary File . . . . .	119
4.2	Fonts . . . . .	120
4.3	Character Reference Aliases . . . . .	120
4.4	Flags . . . . .	125
4.5	Boxes . . . . .	131
4.6	Distances . . . . .	133
4.7	Penalties . . . . .	139
4.8	$\text{\LaTeX}$ /Plain $\text{\TeX}$ compatibility . . . . .	142

<b>5</b>	<b>Special arguments</b>	<b>143</b>
5.1	Note Alignment Type . . . . .	143
5.2	Episema Special . . . . .	144
<b>6</b>	<b>The GABC File</b>	<b>148</b>
6.1	File Structure . . . . .	149
6.2	Header . . . . .	150
6.3	Lyric Centering . . . . .	153
	<b>Appendix A Font Glyph Tables</b>	<b>156</b>
A.1	Score Font Glyphs . . . . .	156
A.2	Dominican Score Font Glyphs . . . . .	163
A.3	Extra Glyphs . . . . .	164
	<b>Appendices</b>	<b>156</b>
	<b>Index</b>	<b>167</b>

# 1 GregorioT<sub>E</sub>X Macros

The following sections document the macros available in the GregorioT<sub>E</sub>X package. The format is as follows:

**MacroName{Args}**

*Source File*

Description of macro.

Arg	Value	Description
Arg #	Data type	Description of argument
Arg #	keyword	Description of the setting the keyword corresponds to

The source file where the macro is defined is included for developers who wish to consult it.

Some of the macros intended for inclusion in the main.tex file by the user include usage examples.

Macros are divided into three groups:

**User Commands** These macros are meant to be used by your average user in their T<sub>E</sub>X files in order to fine tune the appearance of their scores. They should have names which consist solely of lowercase letters and be prefixed with the gre. Where the name clearly identifies the function as belonging to GregorioT<sub>E</sub>X, the prefix may be omitted.

**Gregorio Controls** These macros are written by the command line tool to gtex files and should not appear outside of gtex files. They should have names which are in CamelCase and be prefixed with Gre.

**GregorioT<sub>E</sub>X internals** These macros are used by GregorioT<sub>E</sub>X to process and typeset a score and should not appear in a user's document anywhere (not even in gtex files). They should have names which are all lowercase and be prefixed with gre@.

## 2 User Controls

These functions are available to the user to customize elements of the score which cannot be controlled from the gabc file. They can be added to any .tex file. Do not add them to any .gtex or .gabc file.

## 2.1 Using the Package

To use the Gregorio $\TeX$  package in a  $\LaTeX$  document, include `\usepackage{gregoriotex}` in the document preamble. This macro has the following form:

`\usepackage[(options)]{gregoriotex}` *gregoriotex.sty*

The optional arguments are:

Argument	Description
<code>debug</code>	Debug messages will be printed to the output log. Can also be specified as <code>debug={&lt;types&gt;}</code> , in which case only messages of the types listed will be printed to the output log.
<code>nevercompile</code>	Default. The classic behavior of Gregorio $\TeX$ . The user is responsible for compiling gabc scores into gtex files.
<code>autocompile</code>	Gregorio $\TeX$ will automatically compile gtex files from gabc files when necessary. If the gabc has been modified, or the gtex has an outdated version, or the gtex file does not exist, THEN Gregorio $\TeX$ will compile a new gtex file.
<code>forcecompile</code>	Gregorio $\TeX$ will compile all scores from their gabc files.
<code>allowdeprecated=false</code>	Force all deprecated commands to raise a package error rather than a warning. This allows the user to ensure that their file is compliant with the current version of Gregorio $\TeX$ .

**Note:** `nevercompile`, `autocompile`, and `forcecompile` conflict with each other. Only one should be specified in the options list.

To use the package in a Plain  $\TeX$  document, include `\input gregoriotex.tex` near the top of the document (the area which would correspond to the preamble in  $\LaTeX$ ).

To use the `debug` option in Plain  $\TeX$ , you'll need to define `\gre@debug` manually as a string listing the kinds of messages you want printed (or as `all` if you want all messages printed).

To use the `allowdeprecated=false` option, you'll need `\gre@allowdeprecatedfalse`.

The compilation options can be set using `\gresetcompilegabc` (see below).

**Important:** Gregorio $\TeX$  may require up to two passes (runs of `lualatex` or `luatex`) to compute the line heights correctly. If a second pass is required, Gregorio $\TeX$  will emit the following warning:

```
Module gregoriotex warning: Line heights or variable brace lengths may have changed. Rerun to fix.
```

Gregorio $\TeX$  two-pass processing is compatible with `latexmk`.

If you only need the special symbols which Gregorio $\TeX$  contains, and not the ability to include scores or musical glyphs, then you can load `gregoriosyms` instead of `gregoriotex`. It supports all of the above options except those specifically related to scores. **You should not try to load both packages.**

### 2.1.1 Gregorio $\TeX$ and `fontspec`

Due to recent changes (September 2015) in the  $\TeX$  kernel and the resulting updates to `fontspec` and Gregorio $\TeX$ , these two packages must now be loaded in order: `fontspec` first and then `gregoriotex` (or `gregoriosyms`). If you attempt to load them the other way around, you will get an error about undefined control sequences and will be unable to compile your document.

Gregorio $\TeX$  does not require `fontspec`, so documents which do not use `fontspec` are not affected by these changes.

*Nota bene:* Some font packages (such as `libertine`) make use of `fontspec` internally and thus must also be loaded before `gregoriotex`.

## 2.2 Commands

Once you've included the package in your document (as explained above) the following commands allow you to insert scores and manipulate the way they appear in the document.

### 2.2.1 Including scores

`\gregorioscore[#1]{#2}`

*gregoriotex-main.tex*

Macro for including scores. Works on both gabc and tex files.

Arg	Value	Description
#1	n	Optional. #2 will be included as is.
	a	Optional. GregorioT <sub>E</sub> X will automatically compile gabc files if necessary.
	f	Optional. Forces GregorioT <sub>E</sub> X to compile the gabc file.
#2	string	Relative or absolute path to the score.

Example:

```
\gregorioscore[n]{TecumPrincipium.gtex}
\gregorioscore{Chant/VirgoVirginum.gabc}
\gregorioscore{/home/user/chant/AdTeLevavi}
\gregorioscore[a]{AveMaria}

%The following lines include the same score:
\gregorioscore{Christus}
\gregorioscore{Christus.gtex}
\gregorioscore{./Christus}
\gregorioscore{./Christus.gabc}

%With the optional arg [f], #2 must be a file usable by \TeX.
\gregorioscore[f]{TecumPrincipium.gabc} % Wrong
```

**Important:** For the sake of clarity it is recommended that the file extension be omitted from #2 unless using the nevercompile option. When the nevercompile option is in effect (either via package option [nevercompile], or `\gresetcompilegabc{never}`, or `\gregorioscore[n]`) #2 must be a T<sub>E</sub>X file that exists and the file extension (normally gtex) must be given.

When called with the optional argument [a] GregorioT<sub>E</sub>X will automatically generate a gtex file in this format: *scorename-x\_x\_x.gtex* where x\_x\_x is the gregorio version. This resulting file is not intended to be modified by the user and will be removed when the gabc file is recompiled. The rules that GregorioT<sub>E</sub>X uses to determine if a gabc file needs to be compiled are:



- If a gtex file does not exist.
- If the modification time of the gabc file is newer than its corresponding gtex file.
- If the version of the gtex file is outdated.

When called with the optional argument [n] GregorioT<sub>E</sub>X will include the score without doing anything else. This is the same as the old behavior of GregorioT<sub>E</sub>X and therefore the default behavior.

When called with the optional argument [f] GregorioT<sub>E</sub>X will compile the gabc file into a gtex file. This is similar to [a] except the gabc is compiled every time.

## **`\gresetcompilegabc{#1}`**

*gregoriotex-main.tex*

A macro to change the behavior of the way Gregorio $\TeX$  includes scores. This is similar to using the package options `[forcecompile]`, `[autocompile]`, and `[nevercompile]`, but does not necessarily apply to the entire document.

Arg	Value	Description
#1	force	all later calls of <code>\gregorioscore</code> will compile the gabc file into a gtex file.
	auto	all later calls of <code>\gregorioscore</code> will use Gregorio $\TeX$ 's automatic compilation of gabc files.
	never	all later calls of <code>\gregorioscore</code> will include the score without doing anything else.

This macro can be combined in the same document with different arguments to switch between different behaviors:

```
\usepackage{gregoriotex} % [nevercompile] is the default.
-----
\gregorioscore{TecumPrincipium} % gabc never compiled.
\gregorioscore[f]{TecumPrincipium} % gabc always compiled.
\gregorioscore[a]{TecumPrincipium} % gabc auto compiled.

\gresetcompilegabc{auto}
\gregorioscore{TecumPrincipium} % gabc auto compiled.
\gregorioscore[n]{TecumPrincipium} % gabc never compiled.
\gregorioscore[f]{TecumPrincipium} % gabc always compiled.

\gresetcompilegabc{force}
\gregorioscore{TecumPrincipium} % gabc always compiled.
\gregorioscore[n]{TecumPrincipium} % gabc never compiled.
\gregorioscore[a]{TecumPrincipium} % gabc auto compiled.
```

**`\gabcsnippet[#1]{#2}`**

*gregoriotex-main.tex*

Converts the gabc notation specified in #2 to Gregorio $\TeX$  and includes it directly in the document. The optional argument [#1] may be used to specify a gabc initial-style, which defaults to 1.

Arg	Value	Description
#1	number	Optional. The gabc initial-style value to use.
#2	string	The gabc to insert into the document.

For example:

```
\gabcsnippet[0]{(c3) Al(eg~)le(gv.fhg)lu(efe___)ia(e.) (::)}
```

### 2.2.2 Point-and-click

Gregorio can add Lilypond-like point-and-click links into the output PDF file. The URLs added to the PDF conform with Lilypond and will use the Lilypond scripts if they are enabled on your system. To configure your system for this feature, please see the documentation for Lilypond since they established the feature.

In addition to switching this feature on in  $\text{\TeX}$ , you must also pass the `-p` option to `gregorio` when converting your `gabc` files to `Gregorio $\text{\TeX}$`  for inclusion. This will automatically be done for auto- and force-compiled scores, but if an auto-compiled score was compiled without the option, `Gregorio $\text{\TeX}$`  will not realize it has changed to recompile it. In this case, remove the corresponding `.gtex` file to force it to recompile.

**Important:** As with LilyPond, you should always turn off point-and-click before producing `gtex` and/or PDF files for distribution. This feature embeds absolute filenames from your computer as links in the PDF, which can pose a security risk. This is why this feature is disabled by default.

**`\gresetpointandclick{#1}`**

*gregoriotex-syllable.tex*

Macro to enable or disable the point-and-click feature.

Arg	Value	Description
#1	on	Enable point-and-click link generation.
	off	Disable point-and-click link generation (default).

This feature may be switched on and off as desired between scores.

### 2.2.3 Overall Size

While the default size for Gregorio scores is designed to approximate that found in most liturgical books, Gregorio<sub>TeX</sub> also provides mechanisms for changing the size of your scores for use in any application.

**`\grechangestaffsize{#1}`**

*gregoriotex-main.tex*

Macro to adjust the size of the staff.

Arg	Value	Description
#1	integer	The size of the staff lines. Default value is 17. Higher numbers yield larger staves.

**`\grechangestafflinethickness{#1}`**

*gregoriotex-spaces.tex*

Macro to adjust the thickness of the staff lines.

Arg	Value	Description
#1	integer	The thickness of the staff lines. The default value is same as staff size.

### 2.2.4 Fine Tuning Dimensions

In addition to providing control over the overall size of your scores, Gregorio $\text{\TeX}$  allows you to fine tune the spacings around and between the various elements using the following functions.

**$\backslash\text{grecreatedim}\{\#1\}\{\#2\}\{\#3\}$**

*gregoriotex-spaces.tex*

Macro to create one of Gregorio $\text{\TeX}$ 's distances. Used to initialize distances in a space configuration file. For an example of such a file, please see *gsp-default.tex*, which contains the default spacing configuration for Gregorio $\text{\TeX}$ .

Arg	Value	Description
#1	string	The name of the distance to be changed. See <a href="#">Distances</a> below.
#2	string	The distance in string format. <b>Note:</b> You cannot use a length register for this argument. You <i>must</i> use a string because of the way that Gregorio $\text{\TeX}$ handles spaces.
#3	fixed	Distance will not scale when staff size is changed.
	scalable	Distance will scale when staff size is changed.

**$\backslash\text{grechangedim}\{\#1\}\{\#2\}\{\#3\}$**

*gregoriotex-spaces.tex*

Macro to change one of Gregorio $\text{\TeX}$ 's distances. This function will check to make sure the distance you are trying to change exists first.

Arg	Value	Description
#1	string	The name of the distance to be changed. See <a href="#">Distances</a> below.
#2	string	The distance in string format. <b>Note:</b> You cannot use a length register for this argument. You <i>must</i> use a string because of the way that Gregorio $\text{\TeX}$ handles spaces.
#3	fixed	Distance will not scale when staff size is changed.
	scalable	Distance will scale when staff size is changed.

**`\grescaledim{#1}{#2}`**

*gregoriotex-spaces.tex*

Macro to turn on or off scaling with the staff size for a particular distance.

Arg	Value	Description
#1	string	The name of the distance for which scaling is to changed. See <a href="#">Distances</a> below.
#2	yes/true/on/scalable	Choose just one of the given keywords. Scale the distance when changing the size of the staff.
	string not in list above	Do not scale the distance when changing the size of the staff.

**Nota bene:** This macro also can be used to change whether or not the staff line thickness scales with the staff size by specifying `stafflinefactor` for the first argument.

**`\greloadspaceconf{#1}`**

*gregoriotex-spaces.tex*

Macro to load a space configuration file. Space configuration file names have the format `gsp-identifier.tex` and must be in the same directory as your project or in your `texmf` directory.

Arg	Value	Description
#1	string	The identifier of the space configuration file.

Example:

```
% loads gsp-default.tex, the default configuration file
\greloadspaceconf{default}
% loads a custom configuration called gsp-myspaces.tex
\greloadspaceconf{myspaces}
```

**`\greconfactor`**

*gsp-default.tex*

A count which indicates the staff size that a space configuration file is designed for. Each space configuration file must have this value set as Gregorio $\TeX$  will compare it to the current staff size to determine if the configuration file being loaded needs to be rescaled.

**`\gresetlineheightexpansion{#1}`**

*gregoriotex-main.tex*

Macro to configure line height expansion behavior when notes appear above or below the staff lines.

Arg	Value	Description
#1	variable	Expand lines within a score independently of each other
	uniform	Expand all lines within a score uniformly

By default, Gregorio $\TeX$  uses *variable* line expansion. This produces output similar to modern liturgical books. However, this feature imposes a slight performance impact and typically requires a second pass (run of `lualatex`) to get the heights right.

The older behavior of Gregorio $\TeX$ , *uniform* line expansion, does not have this performance impact. However, the extra space it adds below the staff lines may look out-of-place in a section where there are no notes below the staff lines.

This behavior may be switched as needed within a  $\TeX$  document and affects all the scores which follow. However, if *variable* line expansion is enabled anywhere in the document, the second pass will be necessary.

*For experts only:*

It is possible to suppress the line height computation and just use whatever has been computed from the previous run. If you are sure that the score line heights haven't changed from the previous run, define the `\greskipheightcomputation` control sequence before including the Gregorio $\TeX$  package. This will save a little bit of time per run.



### 2.2.5 Staff Lines

**`\gresetlinecolor{#1}`**

*gregoriotex.sty and gregoriotex.tex*

Macro for changing the color of the staff lines. The two most common colors you're going to want to use are `gregoriocolor` (see [Colors](#)) and `black` (the default).

Arg	Value	Description
#1	color name	The color of the staff lines

**`\gresetlines{#1}`**

*gregoriotex-main.tex*

Macro for setting whether the staff lines should be rendered or not.

Arg	Value	Description
#1	<code>visible</code>	The staff lines should be printed (default)
	<code>invisible</code>	The staff lines should not be printed

**`\gresetlinesbehindpunctumcavum{#1}`**

*gregoriotex-signs.tex*

Macro for setting whether the staff lines behind a punctum cavum should be shown or not.

Arg	Value	Description
#1	<code>visible</code>	The staff lines behind a punctum cavum should be printed (Plain $\text{\TeX}$ default)
	<code>invisible</code>	The staff lines behind a punctum cavum should not be printed ( $\text{\LaTeX}$ default)

**\gresetlinesbehindalteration{#1}***gregoriotex-signs.tex*

Macro for setting whether the staff lines behind an alternation (i.e., an accidental) should be shown or not.

Arg	Value	Description
#1	visible	The staff lines behind an alteration should be printed (Plain T <sub>E</sub> X default)
	invisible	The staff lines behind an alteration should not be printed (L <sup>A</sup> T <sub>E</sub> X default)

**2.2.6 Score Font**

GregorioT<sub>E</sub>X currently supports 3 different fonts for the glyphs in a score (neumes, clefs, alterations, etc.): Greciliae (a customized version of Caeciliae by Fr. Matthew Spencer, OSJ), Gregorio, and Parmesan (developed for Lilypond by Juergen Reuter).

**\gresetgregoriofont[#1]{#2}***gregoriotex-main.tex*

Set the font used for the neumes. The optional argument [#1] may be used to specify an alternate font/rule set. Currently, the only available alternate font/rule set is op for Dominican neumes.

Arg	Value	Description
#1	(omitted)	Use the normal font and rule set (default).
	op	Use the alternate Dominican font/rule set.
#2	greciliae	Use the Greciliae font (default).
	gregorio	Use the Gregorio font.
	parmesan	Use the Parmesan font.

### 2.2.7 Glyph Alteration

In addition to the normal glyphs loaded by the choice of font, GregorioT<sub>E</sub>X also supports several methods for fine tuning the choice of glyphs. Using the below functions, you can choose from alternative glyphs which are already built into GregorioT<sub>E</sub>X or import custom glyphs you have designed yourself.

**`\grechangeglyph{#1}{#2}{#3}`**

*gregoriotex-main.tex*

Substitutes the given GregorioT<sub>E</sub>X score glyph with the specified glyph from the specified font.

Arg	Value	Description
#1	string	The name of the GregorioT <sub>E</sub> X glyph to replace.
#2	string	The name of the font to use.
#3	number	The code point of the glyph to use.
	.string	The name of the variant (appended to #1) to use.
	string	(any other string) The name of the glyph to use.

If #1 has a wildcard (a `*`) in it, then #3 must start with a dot and all glyphs matching #1 will be replaced with corresponding glyphs whose names have #3 appended.

If #2 is `*`, then the substitution is assumed to be available in all score fonts.

For example, to use the old glyphs (from Caeciliae) for the strophicus, use the following:

```
\grechangeglyph{Stropha}{greciliae}{.caeciliae}  
\grechangeglyph{StrophaAucta}{greciliae}{.caeciliae}
```

To replace all torculus resupinus glyphs with their alternate versions, use the following:

```
\grechangeglyph{TorculusResupinus*}{*}{.alt}
```

**`\greresetglyph{#1}`***gregoriotex-main.tex*

Removes a Gregorio $\TeX$  score glyph substitution, restoring it back to its original form.

Arg	Value	Description
#1	string	The name of the Gregorio $\TeX$ glyph to restore.

If #1 has a wildcard (a `*`) in it, then all glyphs matching #1 will be restored.

For example, to restore the strophicus back to the new glyphs, use the following:

```
\greresetglyph{Stropha}  
\greresetglyph{StrophaAucta}
```

To restore all torculus resupinus glyphs to their original form, use the following:

```
\greresetglyph{TorculusResupinus*}
```

**`\gredefsymbol{#1}{#2}{#3}`***gregoriotex-symbols.tex*

Defines (or redefines) a  $\TeX$  control sequence to be a non-score symbol. If defined this way, the symbol will scale with the text font.

Arg	Value	Description
#1	string	The name of the $\TeX$ control sequence (without leading backslash).
#2	string	The name of the font to use.
#3	number	The code point of the glyph to use.
	string	The name of the glyph to use.

**`\gredefsizedsymbol{#1}{#2}{#3}`**

*gregoriotex-symbols.tex*

Defines (or redefines) a T<sub>E</sub>X control sequence to be a non-score symbol which requires a single numeric argument (in points) to which the symbol will be scaled.

Arg	Value	Description
#1	string	The name of the T <sub>E</sub> X control sequence (without leading backslash).
#2	string	The name of the font to use.
#3	number	The code point of the glyph to use.
	string	The name of the glyph to use.

**`\gresethepisma{#1}`**

*gregoriotex-signs.tex*

Determines whether GregorioT<sub>E</sub>X should join (bridge) horizontal episemata on adjacent notes.

Arg	Value	Description
#1	bridge	Adjacent horizontal episemata are joined together (default).
	break	Adjacent horizontal episemata are not joined.

**`\gresetpunctumcavum{#1}`**

*gregoriotex-signs.tex*

A shortcut for switching to the alternative punctum cavum and back.

Arg	Value	Description
#1	alternate	use the alternate punctum cavum
	normal	use the normal punctum cavum

Using the alternate punctum cavum is the equivalent of issuing the following commands:

```
\grechangeglyph{PunctumCavum}{greciliae}{.caeciliae}%  
\grechangeglyph{LineaPunctumCavum}{greciliae}{.caeciliae}%  
\grechangeglyph{PunctumCavumHole}{greciliae}{.caeciliae}%  
\grechangeglyph{LineaPunctumCavumHole}{greciliae}{.caeciliae}%
```

**`\gresetglyphstyle{#1}`**

*gregoriotex-chars.tex*

GregorioT<sub>E</sub>X supports several glyph styles which can be changed with this macro. These style replace some non-note glyphs with alternatives.

Arg	Value	Description
#1	default	Use the default style
	medicaea	Use a Medicaea style
	hufnagel	Use the hufnagel style
	mensural	Use the mensural style

### 2.2.8 Barred letters ( $\bar{A}$ , etc.)

**`\gresimpledefbarredsymbol{#1}{#2}`** *gregoriotex-symbols.tex*

Redefines a  $\TeX$  control sequence to be a a barred symbol.

Arg	Value	Description
#1	character	must be A, R, or V.
#2	dimension	how much the bar will be shifted left.

Gregorio $\TeX$  does not have precomposed barred letters, instead, it has bars that you can use to composed barred letters in your text font. This command is the most simple version.

For example:

```
\gresimpledefbarredsymbol{A}{0.3em}
```

Will define `\Abar` to be a A with a bar shifted right of 0.3em from the beginning of the glyph. This is the default definition and fits well with the Linux Libertine font. If you use another font, you'll certainly have to change this value by calling the `\gresimpledefbarglyph` command.

**`\gredefbarredsymbol{#1}{#2}{#3}{#4}{#5}{#6}`** *gregoriotex-symbols.tex*

Redefines a  $\TeX$  control sequence to be a barred symbol.

Arg	Value	Description
#1	string	the name of the command you want to define.
#2	string	command to typeset the text.
#3	string	symbol of the bar (must be defined through <code>gredef-sizedsymbol</code> ).
#4	number	the size of greextra to use (in pt).
#5	dimension	horizontal right shift of the bar.
#6	dimension	vertical shift of the bar glyph.

This is a more complete version of the previous command, it allows you to define barred letters with a different style. For example you can choose another bar drawing, or take a bar more adapted to small font size.

For example:

```
\gredefbarredsymbol{RBarBold}{\textbf{R}}{greRBarSmall}{13}{1.7mm}{0.1mm}
```

Will define `\RBarBold` to be a bold **R** with the bar made for small text (a bit bolder, named `RBarSmall` in greextra), at 12pt, shifted right of 1.7mm from the beginning of the glyph, and lowered down by 0.1mm. The result is that `\RBarBold` will typeset **R̄**.

See Appendix [A.3](#) for a list of bars and other symbols present in the greextra font.



**`\grelatexsimpledefbarredsymbol{#1}{#2}{#3}{#4}{#5}`***gregoriotex-symbols.tex*

Redefines a  $\TeX$  control sequence to be a barred symbol.

Only available in  $\LaTeX$ .

Arg	Value	Description
#1	character	must be A, R, or V.
#2	dimension	how much the bar will be shifted left when upright and medium weight.
#3	dimension	how much the bar will be shifted left when italic/slanted and medium weight.
#4	dimension	how much the bar will be shifted left when upright and bold.
#5	dimension	how much the bar will be shifted left when italic/slanted and bold.

This is like `\gresimpledefbarglyph`, but allows setting different shifts for different font shapes and weights. If you need something more elaborate, you will need to redefine the bar macro(s) manually. This macro is only available in  $\LaTeX$  because it depends upon the  $\LaTeX$  font system.

**`\grebarredsymbol{#1}{#2}{#3}{#4}{#5}`***gregoriotex-symbols.tex*

Generates a barred symbol. This macro does not change any barred symbol definitions. Instead, it actually generates the code that would show the barred symbol.

Arg	Value	Description
#1	string	command to typeset the text.
#2	string	symbol of the bar (must be defined through <code>gredef-sizedsymbol</code> ).
#3	number	the size of greextra to use (in pt).
#4	dimension	horizontal right shift of the bar.
#5	dimension	vertical shift of the bar glyph.

**`\greseparator{#1}{#2}`**

*gregoriotex-symbols.tex*

A macro for invoking one of the five separators (fancy lines) which are contained in the greextra font.

Arg	Value	Description
#1	1–5	Choose the number of the line desired
#2	integer	the point size at which to print the line

**`\greornamentation{#1}{#2}`**

*gregoriotex-symbols.tex*

A macro for invoking one of the ornamentation elements which are contained in the greextra font.

Arg	Value	Description
#1	1–2	Choose the number of the ornamentation desired
#2	integer	the point size at which to print the line

### 2.2.9 Styling

Different elements of an include score have different styles applied. These elements and their defaults are listed below:

Element Name	Description	Default
<code>initial</code>	Normal Initials	40 pt font
<code>biginitial</code>	Big (2-Line) Initials	80 pt font
<code>translation</code>	Translation text (appears below lyrics)	<i>italics</i>
<code>abovelinestext</code>	Above line text (<alt></alt> in gabc, appears above the staff)	normal
<code>normalstafflines</code>	Full length staff lines	none
<code>additionalstafflines</code>	short lines behind notes above or below the staff	special <sup>*</sup>
<code>lowchoralsign</code>	low choral signs	none
<code>highchoralsign</code>	high choral signs	none
<code>firstsyllableinitial</code>	the first letter of the first syllable of a score which is not the score initial	none
<code>firstsyllable</code>	the first syllable of the score excluding the score initial	none
<code>firstword</code>	the first word of the first score excluding the score initial	none
<code>modeline</code>	the rendered annotation from the mode: ; header in the gabc file	BOLD SMALL CAPITALS
<code>nabc</code>	ancient notation	gregoriocolor (L <sup>A</sup> T <sub>E</sub> X) none (Plain T <sub>E</sub> X)

<sup>1</sup>*Special:* By default, `additionalstafflines` inherits its properties from `normalstafflines`. To decouple these environments, you must manually change `additionalstafflines` using `\grechangestyle`.

`\grechangestyle{#1}{#2}[#3]`

*gregoriotex.sty* and *gregoriotex.tex*

Command to change styling of a score element.

Arg	Value	Description
#1	string	element whose styling is to be changed (see list above for options)
#2	T <sub>E</sub> X code	the code necessary to turn on the styling
#3	T <sub>E</sub> X code	Optional. The code necessary to turn off the styling (e.g., if the code to turn on the styling contains a <code>\begin {environment}</code> then the code to turn it off must have the matching <code>\end {environment}</code> ).

Examples:

```
% This one works for both PlainTeX and LaTeX this would make
% the translations bold and italic
\grechangestyle{translation}{\it\bf}

% This one is LaTeX only, and would make the above lines
% text small and italic
\grechangestyle{abovelinetext}{\begin{small}\begin{italic}}%
[\end{italic}\end{small}]

% This would make the initial print in 36pt font.
\grechangestyle{initial}{\fontsize{36}{36}\selectfont}
```

Each element will be typeset within an isolated group to prevent styling commands from leaking from one element to the next. As a result, if a styling command has an “on-switch” but no “off-switch” (like `\it` or `\bf` in the first example above) it is not necessary to encapsulate them within `\begingroup` and `\endgroup`. As a result, the third argument is only necessary for styling commands which come in pairs (like the environments in the second example).

### 2.2.10 Text Elements

While the gabc headers provide support for some of the text elements commonly found on chant scores, Gregorio<sub>T</sub><sub>E</sub><sub>X</sub> provides the following functions to allow you to enter and control those elements with a greater degree of precision than the gabc headers.

**`\greannotation[#1]{#2}`**

*gregoriotex-main.tex*

Macro to add annotations (the text which appears above the initial) to a score. While a single call of the function does not support multiple lines, successive calls to the function will be added to the annotation as a new line below what is already there.

Arg	Value	Description
#1	c	When adding a new line, align the center of the new line with the center of the existing lines
	l	When adding a new line, align the left side of the new line with the left side of the existing lines
	r	When adding a new line, align the right side of the new line with the right side of the existing lines
#2	string	the text of the annotation

**Nota Bene:** The first argument does not affect the alignment of lines already in the annotation, only the way the new line aligns with the existing lines as a whole.

**`\grecommentary{#1}`***gregoriotex-main.tex*

Macro to add commentary (the text flush right at the top, usually a scripture reference) to a score. While a single call of this function does not support multiple lines, successive calls to the function will add a new line to the commentary directly below the previous.

Arg	Value	Description
#1	string	The text of the commentary.

**Nota Bene:** This command should appear directly before `\gregorioscore` when used.

**`\grescorereference{#1}`***gregoriotex-main.tex*

Macro to hold the score reference. Currently the score reference does not print.

Arg	Value	Description
#1	string	The text of the score reference.

**`\greillumination{#1}`***gregoriotex-main.tex*

Macro to add an illuminated initial.

Arg	Value	Description
#1	T <sub>E</sub> X code	the code necessary to make the illuminated initial appear

**Nota Bene:** Usually the argument of this command should be an `\includegraphics` command, but you may use what ever you want as the illuminated initial.

### 2.2.11 Text Alignment

Gregorio $\TeX$  allows you to manipulate the global alignment behavior of some text elements using the following commands.

**`\gresetlyriccentering{#1}`**

*gregoriotex-syllable.tex*

Macro to set how the text of the lyrics aligns with the alignment point of its respective neumes. The alignment point of the neumes is determined as follows:

- If the first glyph is only one note, or is a normal pes, or is composed of three or more notes, the alignment point is the middle of the first note.
- If the first glyph is composed of two notes (other than a normal pes), the alignment point is the middle of the glyph.
- In the case of a porrectus, the alignment point is the middle of an imaginary square punctum beginning at the same point as the porrectus.

Arg	Value	Description
#1	vowel	The center of the vowel in the syllable will align with the alignment point of the neumes
	syllable	The center of the syllable will align with the alignment point of the neumes
	firstletter	The center of the first letter/character of the syllable will align with the alignment point of the neumes

**Nota Bene:** What constitutes the “vowel” of the syllable is determined by the language the lyric text is written in, as specified by the use of the language header in the gabc file. Out of the box, Gregorio $\TeX$  explicitly supports only Latin and English, but the rules for Latin have a high degree of overlap with many Romance languages, allowing them to fall back on the Latin rules with acceptable results.

You can also define your own languages in `gregorio-vowels.dat`. If you do define a language, please consider sharing your work by submitting it to the project (see `CONTRIBUTING.md` for instructions).

Finally, in cases where you want some sort of exceptional alignment, you can force Gregorio to consider a particular part of the syllable to be the “vowel” by enclosing it in curly braces (“{” and “}”) in your gabc file. Curly braces only affect alignment when using vowel centering. Syllable centering will always use the entire syllable, and firstletter centering will always use the first character of the syllable — regardless of curly braces in the gabc file.

### **`\gresettranslationcentering{#1}`**

*gregoriotex-main.tex*

Macro to specify how the translation text should be aligned with it respective syllable text.

Arg	Value	Description
#1	left	The translation text is left aligned with its respective syllable text.
	center	The translation text is centered under its respective syllable.

## **2.2.12 End of Line Behavior**

While GregorioT<sub>E</sub>X will automatically wrap scores to fit your page, there are several ways to fine tune that line breaking behavior with the following commands.

### **`\gresetbreakineuouae{#1}`**

*gregoriotex-main.tex*

Macro to determine whether line breaks are allowed inside a EUOUAE area (delimited by <eu></eu> tags in gabc).

Arg	Value	Description
#1	allow	Line breaks are allowed
	prohibit	Line breaks are prohibited, the entire EUOUAE area should appear on one line



**`\gresetbreakintranslation{#1}`***gregoriotex-main.tex*

Macro to determine whether line breaks are allowed inside a translation.

Arg	Value	Description
#1	allow	Line breaks are allowed
	prohibit	Line breaks are prohibited, the entire translation should appear on one line

**`\greseteolcustos{#1}`***gregoriotex-main.tex*

Macro to determine whether Gregorio $\TeX$  should automatically place the custos at a line break.

Arg	Value	Description
#1	auto	Custos will be automatically placed at each line break
	manual	Custos will only be placed at line breaks if they are specified in the gabc (e.g. (g+z))

**Nota Bene:** This command only effects the custos that appears at the end of a line. Custos which are placed at a key change are unaffected. Further, if custos are specified in the gabc file manually and Gregorio $\TeX$  is set to place custos automatically, you will get two custos at the line breaks.

**`\greseteolshifts{#1}`***gregoriotex-main.tex*

Macro to determine whether Gregorio $\TeX$  should apply a small shift at the end of each line which allows lyrics to stretch under the final custos.

Arg	Value	Description
#1	enable	The shifts are applied (default)
	disable	The shifts are not applied.

**\gresetbolshifts{#1}***gregoriotex-main.tex*

Macro to determine whether GregorioT<sub>E</sub>X should apply a small shift at the beginning of each line so that lines are aligned on the notes rather than the syllable text.

Arg	Value	Description
#1	enable	The shifts are applied (default)
	disable	The shifts are not applied.

**\gresetlastline{#1}***gregoriotex-main.tex*

Macro to determine whether the last line of the score should be justified or not.

Arg	Value	Description
#1	justified	Set the last line justified with the rest of the score
	ragged	Set the last line ragged (default)

### 2.2.13 Hyphenation

#### **`\gresethyphen{#1}`**

*gregoriotex-main.tex*

Tells Gregorio<sub>TeX</sub> how to place a hyphen between syllables in polysyllabic words in a score. This is done by overriding `maximumspacewithoutdash` so subsequent changes to this dimension will override this command.

Arg	Value	Description
#1	force	Hyphens will appear between all syllables in polysyllabic words.
	auto	Hyphens will appear based on the setting of <code>maximumspacewithoutdash</code> (default)

**Nota Bene:** `\gresethyphen{auto}` restores `maximumspacewithoutdash` to the value found in *gsp-default.tex*. If you have changed your score size, you may need to change this distance to a more appropriate value using `\grechangedim`.

#### **`\gresetemptyfirstsyllablehyphen{#1}`**

*gregoriotex-syllable.tex*

Tells Gregorio<sub>TeX</sub> how to place a hyphen after an empty first syllable (i.e., when the first syllable consists only of the big initial).

Arg	Value	Description
#1	force	A hyphen will appear after an empty first syllable. (default)
	auto	A hyphen will appear after an empty first syllable based on the setting of <code>maximumspacewithoutdash</code>

#### **`\greseteolhyphen{#1}`**

*gregoriotex-main.tex*

Marco to determine how much space the hyphen at the end of a line occupies for the purposes of spacing calculations (the visible appearance of the hyphen is unchanged).

Arg	Value	Description
#1	normal	The hyphen occupies its normal space
	zero	The hyphen is considered to take up no space

### 2.2.14 Clef Visibility

**`\gresetclef{#1}`**

*gregoriotex-signs.tex*

Macro to tell Gregorio<sub>TEX</sub> whether the clefs should be printed or not.

Arg	Value	Description
#1	visible	Clefs will be printed (default)
	invisible	Clefs will not be printed

### 2.2.15 Clivis Alignment

Since the center of the clivis is different from most neumes, Gregorio<sub>TEX</sub> supports several behaviors for determining how to align it with its lyrics.

**`\gresetclivisalignment{#1}`**

*gregoriotex-syllable.tex*

Macro to determine the method used for aligning the clivis with its lyrics.

Arg	Value	Description
#1	always	Align on the real center of the clivis
	never	align on the center of the first punctum in the clivis
	special	align on the real center of the clivis except when (1) notes would go left of text or (2) consonants after vowels are larger than <code>\gre @dimen@clivisalignmentmin</code> (default)

## 2.2.16 Braces

### **`\gresetbracerendering{#1}`**

*gregoriotex-signs.tex*

Macro to tell Gregorio $\TeX$  whether to use METAPOST or fonts to render braces. METAPOST braces, the default, are tailored to better maintain optical line weight when stretched. METAPOST braces are designed to harmonize (and thus match best) with greciliae, but they still look good with the other score fonts.

Arg	Value	Description
#1	metapost	METAPOST will be used to render braces (default)
	font	The score font will be used to render braces

### **`\grebarbracewidth`**

*gregoriotex-signs.tex*

Returns the em-relative width of a bar brace when braces are rendered by METAPOST (as opposed to fonts). The value is scaled by the Gregorio $\TeX$  score size factor and thus is a score-relative value with a precise (but obscure) mathematical meaning. Suffice it to say that larger numbers make the bar brace wider and smaller numbers make the brace narrower. This must be a positive number, defaults to .58879, and harmonizes with the greciliae font. This macro must be redefined should a different value be desired.

## 2.2.17 Ancient Notation

For a full description of how to make use of the ancient notation capabilities of gregorio and Gregorio $\TeX$ , look at the GregorioNabcRef documentation. The commands listed here allow the manipulation of settings related to that notation.

### **`\gresetnabcfont{#1}{#2}`**

*gregoriotex-nabc.tex*

Macro to set the font to be used for the ancient notation.

Arg	Value	Description
#1	string	the name of the font
#2	integer	point size at which the font should be loaded

## 2.3 Distances

Each of the following distances controls some aspect of the spacing of the Gregorio $\TeX$  score. They are changed using `\grechangedim`, documented above. If the distance permits a rubber value, then the default value will indicate the stretch and shrink (even if they are zero by default). Distances whose default value does not include a stretch or shrink may not take a rubber value.

While it may seem strange that many of these distances are defined to 5 decimal places in centimeters (much smaller than most people can see) this is a legacy of how these distances were originally defined in small points. Since most people don't know what small points are, the distances were converted to a unit more familiar to most people, but no rounding was applied to the conversions so that scores wouldn't change their appearance as a result of the conversion. Users should feel under no obligation to maintain this level of precision when adjusting them to suit their own tastes.

**Nota Bene:** Because of the way Gregorio $\TeX$  handles distances, these cannot be manipulated as if they were normal  $\TeX$  dimensions or skips. As a result they should only be changed using the command defined by Gregorio $\TeX$  for this purpose.

### **additionallineswidth**

*gsp-default.tex*

The additional width of the additional lines (i.e., the value added to the width of the glyph with which they're associated to get the width of the line).

Default: 0.14584 cm

### **alterationspace**

*gsp-default.tex*

Space between an alteration (flat or natural) and the next glyph.

Default: 0.07747 cm

**beforealterationspace***gsp-default.tex*

When beginning of line shifts (bolshifts) are enabled, minimum space between a clef at the beginning of the line and a leading alteration glyph. This distance should be larger than `clefflatsspace` so that a flatted clef can be distinguished from a flat which is part of the first glyph on a line, but also smaller than `spaceafterlineclef`, the distance from the clef to the first notes.

Default: 0.1 cm

**beforelowchoralsignspace***gsp-default.tex*

Space before a low choral sign.

Default: 0.04556 cm plus 0.00638 cm minus 0.00638 cm

**clefflatsspace***gsp-default.tex*

Space between a clef and a flat (for clefs with flat).

Default: 0.05469 cm plus 0.00638 cm minus 0.00638 cm

**interglyphspace***gsp-default.tex*

Space between glyphs in the same element.

Default: 0.06927 cm plus 0.00363 cm minus 0.00363 cm

**zerowidthspace***gsp-default.tex*

Null space.

Default: 0 cm plus 0 cm minus 0 cm

**interelementspace***gsp-default.tex*

Space between elements.

Default: 0.06927 cm plus 0.00182 cm minus 0.00363 cm

**largerspace***gsp-default.tex*

Larger space between elements.

Default: 0.10938 cm plus 0.01822 cm minus 0.00911 cm

**glyphspace***gsp-default.tex*

Space between elements which has the size of a note.

Default: 0.21877 cm plus 0.01822 cm minus 0.01822 cm

**intersyllablespacenotes***gsp-default.tex*

Minimum space between two notes of different syllables.

Default: 0.25523 cm plus 0.31903 cm minus 0 cm

**spacebeforeeolcustos***gsp-default.tex*

Space before custos at the end of a line.

Default: 0.1823 cm plus 0.31903 cm minus 0.0638 cm

**spacebeforeinlinecustos***gsp-default.tex*

Space before custos within a line.

Default: 0 cm plus 0 cm minus 0 cm

**spacebeforesigns***gsp-default.tex*

Space before punctum mora and augmentum duplex.

Default: 0.05469 cm plus 0.00455 cm minus 0.00455 cm



**spaceaftersigns***gsp-default.tex*

Space after punctum mora and augmentum duplex.

Default: 0.08203 cm plus 0.0082 cm minus 0.0082 cm

**spaceafterlineclef***gsp-default.tex*

Space after a clef at the beginning of a line.

Default: 0.27345 cm plus 0.14584 cm minus 0.01367 cm

**interwordspacenotes***gsp-default.tex*

Space after at the end of a word when the last written symbol is a note and the first is a note.

Default: 0.29169 cm plus 0.08751 cm minus 0.05469 cm

**interwordspacetext***gsp-default.tex*

Space after at the end of a word when the last written symbol is text and the first is text.

Default: 0.22787 cm plus 0.41019 cm minus 0.07292 cm

**interwordspacenotes@euouae***gsp-default.tex*

Space after at the end of a word when the last written symbol is a note and the first is a note in euouae blocks.

Default: 0.19 cm plus 0.1 cm minus 0.05 cm

**interwordspacetext@euouae***gsp-default.tex*

Space after at the end of a word when the last written symbol is text and the first is text in euouae blocks.

Default: 0.27 cm plus 0.1 cm minus 0.05 cm

**bitrivirspace***gsp-default.tex*

Space between notes of a bivirga or trivirga.

Default: 0.06927 cm plus 0.00182 cm minus 0.00546 cm

**bitristrospace***gsp-default.tex*

Space between notes of a bistropha or tristrophae.

Default: 0.06927 cm plus 0.00182 cm minus 0.00546 cm

**punctuminclinatumshift***gsp-default.tex*

Space between two punctum inclinatum.

Default: -0.03918 cm plus 0.0009 cm minus 0.0009 cm

**beforepunctainclinatashift***gsp-default.tex*

Space before puncta inclinata.

Default: 0.05286 cm plus 0.00728 cm minus 0.00455 cm

**punctuminclinatumanddebilisshift***gsp-default.tex*

Space between a punctum inclinatum and a punctum inclinatum deminutus.

Default: -0.02278 cm plus 0.0009 cm minus 0.0009 cm

**punctuminclinatumdebilisshift***gsp-default.tex*

Space between two punctum inclinatum deminutus.

Default: -0.00728 cm plus 0.0009 cm minus 0.0009 cm

**punctuminclinatumbigshift***gsp-default.tex*

Space between puncta inclinata, larger ambitus (range=3rd).

Default: 0.07565 cm plus 0.0009 cm minus 0.0009 cm

**punctuminclinatummaxshift***gsp-default.tex*

Space between puncta inclinata, larger ambitus (range=4th -or more?-).

Default: 0.17865 cm plus 0.0009 cm minus 0.0009 cm

**spacearoundsmallbar***gsp-default.tex*

Space around virgula and divisio minima.

Default: 0.1823 cm plus 0.22787 cm minus 0.05469 cm

**spacearoundminor***gsp-default.tex*

Space around divisio minor.

Default: 0.1823 cm plus 0.22787 cm minus 0.05469 cm

**spacearoundmaior***gsp-default.tex*

Space around divisio maior.

Default: 0.1823 cm plus 0.22787 cm minus 0.05469 cm

**spacearoundfinalis***gsp-default.tex*

Space around divisio finalis.

Default: 0.1823 cm plus 0.1823 cm minus 0.05469 cm

**spacebeforefinalfinalis***gsp-default.tex*

A special space for finalis, for when it is the last glyph.

Default: 0.29169 cm plus 0.07292 cm minus 0.27345 cm

**spacearoundclefbars***gsp-default.tex*

Additional space that will appear around bars that are preceded by a custos and followed by a key.

Default: 0.03645 cm plus 0.00455 cm minus 0.0009 cm

**textbartextspace***gsp-default.tex*

Space between the text and the text of the bar.

Default: 0.24611 cm plus 0.13672 cm minus 0.04921 cm

**notebarspace***gsp-default.tex*

Minimal space between a note and a bar.

Default: 0.31903 cm plus 0.27345 cm minus 0.02824 cm

**maximumspacewithoutdash***gsp-default.tex*

Maximal space between two syllables for which we consider a dash is not needed.

Default: 0.02005 cm

**afterclefnospace***gsp-default.tex*

An extensible space for the beginning of lines.

Default: 0 cm plus 0.27345 cm minus 0 cm

**additionalcustoslinewidth***gsp-default.tex*

Width of the additional lines, used only for the custos. The width is the one for the custos at end of lines, the line for custos in the middle of a score is the same multiplied by 2.

Default: 0.09114 cm

**afterinitialshift***gsp-default.tex*

Space between the initial and the beginning of the score.

Default: 0.2457 cm plus 0 cm minus 0 cm

**beforeinitialshift***gsp-default.tex*

Space between the initial and the beginning of the score.

Default: 0.2457 cm plus 0 cm minus 0 cm

**minimalspaceatlinebeginning***gsp-default.tex*

Minimal space in front of the lyrics at the beginning of a line when bolshifts are enabled.

Default: 1.7 cm

**manualinitialwidth***gsp-default.tex*

Space to force the initial width to. Ignored when 0.

Default: 0 cm

**annotationseparation***gsp-default.tex*

This space is the one between lines in the annotation (text above the initial).

Default: 0.85 cm

**annotationraise***gsp-default.tex*

Amount to raise (positive) or lower (negative) the annotation from it's normal position (baseline of the first line aligned with the top line of the staff).

Default: 0 cm

**nocleftspace***gsp-default.tex*

Space at the beginning of the lines if there is no clef.

Default: 0.1 cm

**choralsigndownshift***gsp-default.tex*

The distance to shift choral signs down. The following choral signs are shifted down:

- Low choral signs that are not lower than the note
- High choral signs which are in a space
- Low choral signs that are lower than the note which are in a space

Default: 0.00911 cm

**choralsignupshift***gsp-default.tex*

The distance to shift choral signs up. The following choral signs are shifted up:

- High choral signs which are on a line
- Low choral signs that are lower than the note which are on a line

Default: 0.04556 cm

**translationheight***gsp-default.tex*

The space for the translation.

Default: 0.5 cm

**spaceabovelines***gsp-default.tex*

The space above the lines.

Default: 0.45576 cm plus 0.36461 cm minus 0.09114 cm

**spacelinestext***gsp-default.tex*

The space between the lines and the bottom of the text.

Default: 0.60617 cm plus 0 cm minus 0 cm

**spacebeneathtext***gsp-default.tex*

The space beneath the text.

Default: 0 cm plus 0 cm minus 0 cm

**abovelinestextraise***gsp-default.tex*

Height of the text above the note line.

Default: 1.7 cm

**abovelinestextheight***gsp-default.tex*

Height that is added at the top of the lines if there is text above the lines (it must be bigger than the text for it to be taken into consideration).

Default: 0.3 cm

**braceshift** *gsp-default.tex*

An additional shift you can give to the brace above the bars.

Default: 0 cm

**curlybraceaccentusshift** *gsp-default.tex*

A shift you can give to the accentus above the curly brace.

Default:  $-0.05$  cm

**nabcinterelementspace** *gsp-default.tex*

Space between elements in ancient notation.

Default: 0.06927 cm plus 0.00182 cm minus 0.00363 cm

**nabclargerspace** *gsp-default.tex*

Larger space between elements in ancient notation.

Default: 0.10938 cm plus 0.01822 cm minus 0.00911 cm

**clivisalignmentmin** *gsp-default.tex*

When `\gre@clivisalignment` is 2, this distance is the maximum length of the consonants after vowels for which the clivis will be aligned on its center.

Default: 0.3 cm

**clefchangespace** *gsp-default.tex*

Space around a clef change.

Default: 0.01768 cm plus 0.00175 cm minus 0.01768 cm

**initialraise** *gsp-default.tex*

Distance the initial will be raised above its default baseline. The default baseline for the initial coincides with the baseline for the text below the staff.

Default: 0 cm



## 2.4 Penalties

Penalties are used by  $\text{\TeX}$  to determine where line and page breaks should occur. Gregorio $\text{\TeX}$  modifies or defines a few of its own to help with that process in scores.

**$\backslash\text{grebrokenpenalty}$**

*gsp-default.tex*

The vertical penalty inserted after a break on a clef change.

Default: 0

**$\backslash\text{greclubpenalty}$**

*gsp-default.tex*

The club penalty (determines how important it is to prevent orphans from occurring).

Default: 0

**$\backslash\text{grewidowpenalty}$**

*gsp-default.tex*

The widow penalty (determines how important it is to prevent widows from occurring).

Default: 0

**$\backslash\text{greemergencystretch}$**

*gsp-default.tex*

The value of the last ditch stretch for overfull boxes.

Default:  $\backslash\text{emergencystretch}$

**$\backslash\text{greendafterbarpenalty}$**

*gsp-default.tex*

The end after bar penalty.

Default:  $-200$

**`\greendafterbaraltpenalty`**

*gsp-default.tex*

The alternate end after bar penalty (used when there is no text under the bar).

Default:  $-200$

**`\greendofelementpenalty`**

*gsp-default.tex*

The end of element penalty.

Default:  $-50$

**`\greendofsyllablepenalty`**

*gsp-default.tex*

The end of element penalty.

Default:  $-50$

**`\greendofwordpenalty`**

*gsp-default.tex*

The end of element penalty.

Default:  $-100$

**`\grehyphenpenalty`**

*gsp-default.tex*

The hyphen penalty.

Default:  $-200$

**`\grenobreakpenalty`**

*gsp-default.tex*

Penalty to prevent a line break.

Default: 10001

**`\grenewlinepenalty`***gsp-default.tex*

Penalty to force a line break.

Default: `-10001`

**`\grelooseness`***gsp-default.tex*

The  $\text{\TeX}$  looseness within a score.

Default: `\looseness`

**`\gretolerance`***gsp-default.tex*

The  $\text{\TeX}$  tolerance within a score. See <https://en.wikibooks.org/wiki/TeX/tolerance> for an explanation of what tolerance is.

Default: `9000`

**`\grepretolerance`***gsp-default.tex*

The  $\text{\TeX}$  pretolerance within a score. See <https://en.wikibooks.org/wiki/TeX/pretolerance> for an explanation of what pretolerance is.

Default: `-1` (Lua $\text{\TeX}$  versions prior to 0.80) or `\pretolerance` (versions after, and including, 0.80)

*Nota bene:* For more details on why this is necessary see the comments in `gsp-default.tex`.

## 2.5 Colors

Colors are strictly a  $\text{\LaTeX}$  phenomena as currently implemented. All commands which change a color will raise a warning in Plain  $\text{\TeX}$ , but will not alter the document.

All colors can be redefined using `\definecolor`. See the `xcolor` package for documentation.

Example:

```
\definecolor{gregoriocolor}{RGB}{229,53,44}
```

### **grebackgroundcolor**

*gregoriotex.sty*

The color Gregorio $\text{\TeX}$  uses to block out elements which have been printed, but shouldn't show (e.g., the staff line going through the interior of a punctum cavum). The default is white.

### **gregoriocolor**

*gregoriotex.sty*

A red similar to that found in liturgical documents. This is the color that Gregorio $\text{\TeX}$  uses for text formatted with `<c>`/`</c>` tags in `gabc`.

### 3 Gregorio Controls

These functions are the ones written by gregorio to the gtex file. While one could, in theory, use/change them to alter the appearance of elements of the score, it is far better to make your changes in the gabc file and let gregorio make the changes to the gtex file.

**`\GreAnnotationLines#1#2`**

*gregoriotex-main.tex*

A wrapper macro for placing annotations above the initial. The arguments are provided by the gabc file in the annotation header field. This macro tests for the presence of the annotation box which means that the annotation is explicitly defined in the main.tex file. If so, this macro does nothing, respecting the annotation value in the main.tex file.

Arg	Value	Description
#1	string	First line text to place above the initial.
#2	string	Second line text to place above the initial.

**\GreBeginScore#1#2#3#4#5#6***gregoriotex-main.tex*

Macro to start a score.

Arg	Value	Description
#1	string	a unique identifier for the score (currently an SHA-1-based digest of the gabc file)
#2	integer	the height number of the top pitch of the entire score, including signs
#3	integer	the height number of the bottom pitch of the entire score, including signs
#4	0	there is no translation line in the score
	1	there is a translation line somewhere in the score
#5	0	there is no above lines text in the score
	1	there is above lines text somewhere in the score
#6	string	the absolute filename of the gabc file if point-and-click is enabled.

**\GreEndScore***gregoriotex-main.tex*

Macro to end a score.

**\GreAccentus#1#2***gregoriotex-signs.tex*

Macro for typesetting an accentus.

Arg	Value	Description
#1	integer	height number of episema
#2	string	Type of glyph the episema is attached to. See <a href="#">Episema Special</a> argument for description of options.

**\GreAdditionalLine#1#2#3***gregoriotex-signs.tex*

Macro to typeset the additional line above or below the staff.

Arg	Value	Description
#1	string	See <a href="#">Episema Special</a> .
#2	integer	The ambitus of the porrectus or porrectus flexus if the first references these glyph types; ignored otherwise.
#3	integer	Set horizontal episema (0), horizontal episema under a note (1), line at top of staff (2), line at bottom of staff (3), choral sign (4).

**\GreAdjustSecondLine***gregoriotex.tex*

Macro to call before first syllable, but after \GreSetInitialClef.

**\GreAdjustThirdLine***gregoriotex-main.tex*

Macro to call during the second line.

**\GreAugmentumDuplex#1#2#3***gregoriotex-signs.tex*

Macro for typesetting an augmentum duplex (a pair of punctum mora)

Arg	Value	Description
#1	integer	Height number for first punctum mora.
#2	integer	Height number for second punctum mora.
#3	integer	First punctum mora occurs before last note of a podatus, prorectus, or toculus resupinus (1), or not (0).

**\GreBarBrace#1***gregoriotex-signs.tex*

Macro for typesetting a bar brace.

Arg	Value	Description
#1	string	Type of glyph the episema is attached to. See <a href="#">Episema Special</a> argument for description of options.

**\GreBarSyllable#1#2#3#4#5#6#7#8#9***gregoriotex-syllable.tex*

Macro for typesetting a bar syllable.

Arg	Value	Description
#1	string	First part of syllable text associated with the bar.
#2	string	Middle part of the syllable text associated with the bar.
#3	string	End part of the syllable text associated with the bar.
#4		Not used.
#5	T <sub>E</sub> X code	Code to execute before calculating nextbegin difference.
#6		Not used.
#7	0 < integer < 19	the type of notes alignment. See <a href="#">Note Alignment Type</a> .
	20 < integer < 39	Same as below 20 except there is a flat before the notes. Subtract 20 to get the type of notes alignment.
	40 < integer < 59	Same as below 20 except there is a natural before the notes. Subtract 40 to get the type of notes alignment.
#8	T <sub>E</sub> X code	Code to execute before printing anything.
#9	T <sub>E</sub> X code	The bar line (usually a <i>writebar</i> call).



**\GreBarVEpisema#1***gregoriotex-signs.tex*

Macro to typeset a vertical episema on a bar.

Arg	Value	Description
#1	string	Type of glyph the episema is attached to. See <a href="#">Episema Special</a> argument for description of options.

**\GreBeginEUOUAE***gregoriotex-main.tex*

Macro to mark the beginning of a EUOUAE block. Alters spacings and prohibits a line break until the end of the block.

**\GreBeginNLBArea#1#2***gregoriotex-main.tex*

Macro called at beginning of a no line break area.

Arg	Value	Description
#1	0	Not in the neumes.
	1	In the neumes.
#2	0	Call didn't come from translation centering.
	1	Call came from translation centering.

**\GreBeginNotes***gregoriotex.tex*

Macro to draw the staff lines. Comes after the initial but before the clef.

**\GreBold#1***gregoriotex.sty and gregoriotex.tex*

Makes argument bold. Accesses  $\text{\texttt{\textbf{E}\TeX\ \texttt{\textbf{t}\texttt{e}\texttt{x}\texttt{t}\texttt{b}\texttt{f}}}}$  (*gregoriotex.sty*) or Plain  $\text{\texttt{\textbf{T}\TeX\ \texttt{\textbf{b}\texttt{f}}}}$  (*gregoriotex.tex*) as appropriate. Corresponds to “<b></b>” tags in gabc.

Arg	Value	Description
#1	string	Text to be typeset in bold.

**\GreChangeClef#1#2#3#4***gregoriotex-signs.tex*

Macro called when key changes

Arg	Value	Description
#1	character	Type of new clef (c or f).
#2	integer	Line of new clef.
#3	0	Print space before clef.
	1	Do not print space before clef.
#4	integer	Height number of flat in key (0 for no flat).

**\GreCirculus#1#2***gregoriotex-signs.tex*

Macro for typesetting a circulus.

Arg	Value	Description
#1	integer	Height number of circulus.
#2	string	Type of glyph the circulus is attached to. See <a href="#">Episema Special</a> argument for description of options.

**\GreColored#1***gregoriotex.sty and gregoriotex.tex*

Colors argument (a string) in `gregoriocolor`. Corresponds to “<c></c>” tags in gabc. Does nothing in Plain T<sub>E</sub>X because color is not supported there.

**\GreCPVirgaReversaAscendensOnDLine#1***gregoriotex-main.tex*

Allows the Dominican rule set to force long stems to be used for virga reversa ascendens neumes on the “d” (lowest) line. This macro is defined and re-defined by the `\gresetgregoriofont` macro.

Arg	Value	Description
#1	T <sub>E</sub> X code	The T <sub>E</sub> X code to use when long stems are not forced.

**`\GreCP...`**

*gregoriotex-main.tex*

A class of macros which point to the individual characters in a Gregorio $\TeX$  compatible font. This class of macros is dynamically mapped from the glyph names embedded in the `ttf` file via a Lua script to ensure that the code points match up with the installed font.

**`\GreCustos#1`**

*gregoriotex-signs.tex*

Typesets a custos.

Arg	Value	Description
#1	integer	Height number of custos.

**`\GreDagger`**

*gregoriotex-symbols.tex*

Macro to typeset a dagger ( $\dagger$ ).

**`\GreDiscretionary#1#2#3`**

*gregoriotex-signs.tex*

A Gregorio $\TeX$ -specific discretionary. Currently only used to avoid clef change at beginning or end of line, or even with more complex data (z0::c3 for instance). We require a special function because in the normal discretionary function you cannot use `\hspace` (but you can use `\kern`) and you cannot use `\penalty` (which is useless indeed). This macro corrects for these two limitations. The first argument allows to select the penalty assigned to the discretionary by recent version of Lua $\TeX$ .

Arg	Value	Description
#1	integer	Type of discretionary (for penalty assignment). Currently possible value is 0 for clef change discretions.
#2	$\TeX$ code	First argument of resulting <code>\discretionary</code> .
#3	$\TeX$ code	Third argument of resulting <code>\discretionary</code> .

**\GreDivisioFinalis#1***gregoriotex-signs.tex*

Macro to typeset a divisio finalis.

Arg	Value	Description
#1	T <sub>E</sub> X code	Macros which may happen before the skip but after the divisio finalis (typically \grevepisema).

**\GreDivisioMaior#1***gregoriotex-signs.tex*

Macro to typeset a divisio maior.

Arg	Value	Description
#1	T <sub>E</sub> X code	Macros which may happen before the skip but after the divisio maior (typically \grevepisema).

**\GreDivisioMinima#1***gregoriotex-signs.tex*

Macro to typeset a divisio minima.

Arg	Value	Description
#1	T <sub>E</sub> X code	Macros which may happen before the skip but after the divisio minima (typically \grevepisema).

**\GreDivisioMinor#1***gregoriotex-signs.tex*

Macro to typeset a divisio minor.

Arg	Value	Description
#1	T <sub>E</sub> X code	Macros which may happen before the skip but after the divisio minor (typically \grevepisema).

**\GreDominica#1#2***gregoriotex-signs.tex*

Macro to typeset a dominican bar.

Arg	Value	Description
#1	1–6	Type of dominican bar. Corresponds to bar types 6–11 in \grewritebar.
#2	T <sub>E</sub> X code	Macros which may happen before the skip but after the divisio dominica (typically \grevepisema).

**\GreEndEUOUAE#1***gregoriotex-main.tex*

Macro to mark the end of a EUOUAE block.

Arg	Value	Description
#1	0	ending element
	1	ending syllable
	2	ending score
	3	before bar

**\GreEndOfElement#1#2***gregoriotex-main.tex*

Macro to end elements.

Arg	Value	Description
#1	0	Default space.
	1	Larger space.
	2	Glyph space.
	3	Zero-width space.
#2	0	Space is breakable.
	1	Space is unbreakable.

**\GreEndNLBArea#1#2***gregoriotex-main.tex*

Macro to end a no line break area.

Arg	Value	Description
#1	0	ending element
	1	ending syllable
	2	ending score
	3	before bar
#2	0	??
	else	??

**\GreEndOfGlyph#1***gregoriotex-main.tex*

Macro to end a glyph without ending the element.

Arg	Value	Description
#1	0	Default space.
	1	Zero-width space.
	2	Space between flat or natural and a note.
	3	Space between two puncta inclinata.
	4	Space between bivirga or trivirga.
	5	space between bistropha or tristropha.
	6	Space after a punctum mora XXX: not used yet, not so sure it is a good idea...
	7	Space between a punctum inclinatum and a punctum inclinatum debilis.
	8	Space between two puncta inclinata debilis.
	9	Space before a punctum (or something else) and a punctum inclinatum.
	10	Space between puncta inclinata (also debilis for now), larger ambitus (range=3rd).
	11	Space between puncta inclinata (also debilis for now), larger ambitus (range=4th or more).

**\GreFinalCustos#1***gregoriotex-signs.tex*

Typesets a custos after the final bar in a score.

Arg	Value	Description
#1	integer	Height number of custos.

**\GreFinalDivisioFinalis#1***gregoriotex-signs.tex*

Macro to end a score with a divisio finalis.

Arg	Value	Description
#1	0	Something does not need to be placed after the divisio finalis.
	1	Something needs to be placed after the divisio finalis.

**\GreFinalDivisioMaior#1***gregoriotex-signs.tex*

Macro to end a score with a divisio maior.

Arg	Value	Description
#1	0	Something does not need to be placed after the divisio maior.
	1	Something needs to be placed after the divisio maior.

**\GreFirstSyllable#1***gregoriotex-syllable.tex*

A macro which is called with the text of the first syllable, excluding the initial of the score. This macro may be redefined to style the first syllable appropriately. This macro may be called up to three times: for the letters before the centered letters, for the centered letters, and for the letters after the centered letters.

Arg	Value	Description
#1	string	Text from the first syllable.

**\GreFirstSyllableInitial#1***gregoriotex-syllable.tex*

A macro which is called with the first letter of the first syllable which is not the initial of the score. If the `initial-style` is 0, the first letter of the syllable will be passed. If the `initial-style` is 1 or 2, the *second* letter will be passed. This macro may be redefined to style the first letter appropriately.

Arg	Value	Description
#1	string	The first letter of the first syllable which is not the initial of the score.

**\GreFirstWord#1***gregoriotex-syllable.tex*

A macro which is called with the text of the first word, excluding the initial of the score. This macro may be redefined to style the first word appropriately. This macro may be called multiple times, depending on how many syllables are in the word.

Arg	Value	Description
#1	string	Text from the first word.

**\GreFlat#1#2***gregoriotex-signs.tex*

Macro to typeset a flat.

Arg	Value	Description
#1	integer	Height number of the flat.
#2	0	No flat for a key change.
	1	Indicates the flat for a key change.

**\GreForceHyphen***gregoriotex-syllable.tex*

Macro that indicates that a hyphen should be forced (if enabled) after the given syllable.



**\GreFuseTwo#1#2***gregoriotex-main.tex*

Macro for fusing two glyphs to create a larger neume.

Arg	Value	Description
#1	Gregorio $\TeX$ glyph	The first glyph in the sequence.
#2	Gregorio $\TeX$ glyph	The second.

**\GreGlyph#1#2#3#4#5#6#7***gregoriotex-syllable.tex*

Macro to typeset a glyph.

Arg	Value	Description
#1	character	the character that it must call
#2	integer	The number for where the glyph is located. a in gabc is 1, b is 2, etc.
#3	integer	height number of the next note
#4	0	One-note glyph or more than two notes glyph except porrectus: i.e., we must put the aligncenter in the middle of the first note
	1	Two notes glyph (podatus is considered as a one-note glyph): i.e., we put the aligncenter in the middle of the glyph
	2	Porrectus: has a special align center.
	3	initio-debilis : same as 1 but the first note is much smaller
	4	case of a glyph starting with a quilisma
	5	case of a glyph starting with an oriscus
	6	case of a punctum inclinatum
	7	case of a strophæ
	8	flexus with an ambitus of one
	9	flexus deminutus
#5	$\TeX$ code	signs to typeset before the glyph (typically additional bars, as they must be "behind" the glyph)
#6	$\TeX$ code	signs to typeset after the glyph (almost all signs)
#7	string	the line, byte offset, and column address for textedit links when point-and-click is enabled

**\GreGlyphHeights#1#2***gregoriotex-syllable.tex*

Passes the glyph height limits.

Arg	Value	Description
#1	integer	the high height
#2	integer	the low height

**\GregorioTeXAPIVersion#1***gregoriotex-main.tex*

Checks to see if Gregorio<sub>TeX</sub> API is version specified by argument (and therefore compatible with the score.

Arg	Value	Description
#1	string	Version number for Gregorio <sub>TeX</sub> .

**\GreHEpisema#1#2#3#4#5#6***gregoriotex-signs.tex*

Macro to typeset an horizontal episema.

Arg	Value	Description
#1	integer	Height number of the episema.
#2	string	See <a href="#">Episema Special</a> .
#3	integer	The ambitus for a two note episema at the diagonal stroke of a porrectus, porrectus flexus, orculus resupinus, or torculus resupinus flexus.
#4	0	an horizontal episema
	1	an horizontal episema under a note
	2	a line at the top
	3	a line at the bottom
#5	f	a normal episema
	l	a small episema aligned left
	c	a small episema aligned center
	r	a small episema aligned right
#6	integer	Replacement for #1 if a bridge causes a height substitution.

**\GreHEpisemaBridge#1#2#3***gregoriotex-signs.tex*

Macro to typeset a bridge episema for the last note of a glyph (element, syllable) if the next episema is at the same height.

Arg	Value	Description
#1	integer	Height number of the episema.
#2	0	Episema above the note.
	1	Episema below the note.
#3	0	Default space.
	1	Zero-width space.
	2	Space between flat or natural and a note.
	3	Space between two puncta inclinata.
	4	Space between bivirga or trivirga.
	5	space between bistropha or tristropha.
	6	Space after a punctum mora XXX: not used yet, not so sure it is a good idea...
	7	Space between a punctum inclinatum and a punctum inclinatum debilis.
	8	Space between two puncta inclinata debilis.
	9	Space before a punctum (or something else) and a punctum inclinatum.
	10	Space between puncta inclinata (also debilis for now), larger ambitus (range=3rd).
	11	Space between puncta inclinata (also debilis for now), larger ambitus (range=4th or more).

**\GreHighChoralSign#1#2#3***gregoriotex-signs.tex*

Macro for typesetting high choral signs.

Arg	Value	Description
#1	integer	Height number of the sign.
#2	string	The choral sign.
#3	0	Choral sign does not occur before last note of podatus, porrectus, or torculus resupinus.
	1	Choral sign occurs before last note of podatus, porrectus, or torculus resupinus.

**\GreHyph***gregoriotex-main.tex*

Macro used for end of line hyphens. Defaults to \gre@char@normalhyph.

**\GreInDivisioFinalis#1***gregoriotex-signs.tex*

Same as \GreDivisioFinalis except inside a syllable.

**\GreInDivisioMaior#1***gregoriotex-signs.tex*

Same as \GreDivisioMaior except inside a syllable.

**\GreInDivisioMinima#1***gregoriotex-signs.tex*

Same as \GreDivisioMinima except inside a syllable.

**\GreInDivisioMinor#1***gregoriotex-signs.tex*

Same as \GreDivisioMinor except inside a syllable.

**\GreInDominica#1#2***gregoriotex-signs.tex*

Same as \GreDominica except inside a syllable.

**\GreInVirgula#1#2***gregoriotex-signs.tex*

Same as \GreVirgula except inside a syllable.

**\GreItalic#1***gregoriotex.sty or gregoriotex.tex*

Makes argument (a string) italic. Accesses  $\text{\texttt{\textit{}}}$  or Plain  $\text{\texttt{\textit{}}}$  as appropriate. Corresponds to “<i></i>” tags in gabc.

Arg	Value	Description
#1	string	Text to be typeset in italic font.

**\GreLastOfLine***gregoriotex-main.tex*

Macro to set \gre@lastoflinecount to 1 (i.e., mark that this syllable is the last of the line).

**\GreLastOfScore***gregoriotex-main.tex*

Macro to mark the syllable as the last of the score.

**\GreLinea#1#2#3***gregoriotex-signs.tex*

Macro for typesetting a linea.

Arg	Value	Description
#1	length	Argument #2 from \GreGlyph. Height to raise the glyph.
#2	length	Argument #3 from \GreGlyph. Height of the next note.
#3	integer	Argument #4 from \GreGlyph. The type of glyph.

**\GreLineaPunctumCavum#1#2#3#4#5#6***gregoriotex-signs.tex*

Macro to typeset a linea punctum cavum.

Arg	Value	Description
#1	length	Argument #2 from \GreGlyph. Height to raise the glyph.
#2	length	Argument #3 from \GreGlyph. Height of the next note.
#3	integer	Argument #4 from \GreGlyph. The type of glyph.
#4	T <sub>E</sub> X code	Macros executed before the punctum cavum is written.
#5	character	Argument #5 from \GreGlyph. The signs to typeset before the glyph.
#6	string	the line, byte offset, and column address for textedit links when point-and-click is enabled.

**\GreLowChoralSign#1#2#3***gregoriotex-signs.tex*

Macro for typesetting low choral signs.

Arg	Value	Description
#1	integer	Height number of the sign.
#2	string	The choral sign.
#3	0	Choral sign does not occur before last note of podatus, porrectus, or torculus resupinus.
	1	Choral sign occurs before last note of podatus, porrectus, or torculus resupinus.

**\GreMode#1***gregoriotex-main.tex*

If the gabc file contains a mode in the header, then this function places said mode as the first (top) annotation. If the user has manually added a first annotation in the T<sub>E</sub>X file, then this function does nothing. Also, if the annotation header field is used, then this function does nothing.

Arg	Value	Description
#1	1–8	The mode. Other values are ignored.

**\GreNatural#1#2***gregoriotex-signs.tex*

Macro to typeset a natural.

Arg	Value	Description
#1	integer	Height number of the natural.
#2	0	No flat for a key change.
	1	Indicates the flat for a key change.

**\GreNewLine***gregoriotex-main.tex*

Macro to call if you want to go to the next line.

**\GreNewParLine***gregoriotex-main.tex*

Same as \GreNewLine except line is not justified.

**\GreNextCustos#1***gregoriotex-signs.tex*

Sets the pitch to use for the next custos if it were to happen at the point where this macro is called.

Arg	Value	Description
#1	integer	Height number of the custos.

**\GreNoInitial***gregoriotex-main.tex*

Macro called when no initial is being set.

**\GreOverBrace#1#2#3#4***gregoriotex-signs.tex*

Macro to typeset a round brace above the lines.

Arg	Value	Description
#1	length	The width of the brace.
#2	length	A vertical shift.
#3	length	A horizontal shift.
#4	0	Don't shift before starting the brace.
	1	Shift back a punctum's width before starting the brace.

**\GreOverCurlyBrace#1#2#3#4#5***gregoriotex-signs.tex*

Macro to typeset a curly brace above the lines.

Arg	Value	Description
#1	length	The width of the brace.
#2	length	A vertical shift.
#3	length	A horizontal shift.
#4	0	Don't shift before starting the brace.
	1	Shift back a punctum's width before starting the brace.
#5	0	No accentus above the brace.
	1	Typeset an accentus above the brace.



**\GrePunctumCavum#1#2#3#4#5#6***gregoriotex-signs.tex*

Macro to typeset a punctum cavum.

Arg	Value	Description
#1	length	Argument #2 from \GreGlyph. Height to raise the glyph.
#2	length	Argument #3 from \GreGlyph. Height of the next note.
#3	integer	Argument #4 from \GreGlyph. The type of glyph.
#4	T <sub>E</sub> X code	Macros executed before the punctum cavum is written.
#5	character	Argument #5 from \GreGlyph. The signs to typeset before the glyph.
#6	string	the line, byte offset, and column address for textedit links when point-and-click is enabled.

**\GrePunctumCavumInclinatum#1#2#3#4#5#6***gregoriotex-signs.tex*

Macro to typeset a punctum cavum inclinatus.

Arg	Value	Description
#1	length	Argument #2 from \GreGlyph. Height to raise the glyph.
#2	length	Argument #3 from \GreGlyph. Height of the next note.
#3	integer	Argument #4 from \GreGlyph. The type of glyph.
#4	T <sub>E</sub> X code	Macros executed before the punctum cavum is written.
#5	character	Argument #5 from \GreGlyph. The signs to typeset before the glyph.
#6	string	the line, byte offset, and column address for textedit links when point-and-click is enabled.

**\GrePunctumCavumInclinatumAuctus#1#2#3#4#5#6** *gregoriotex-signs.tex*

Macro to typeset a punctum cavum inclinatus auctus.

Arg	Value	Description
#1	length	Argument #2 from \GreGlyph. Height to raise the glyph.
#2	length	Argument #3 from \GreGlyph. Height of the next note.
#3	integer	Argument #4 from \GreGlyph. The type of glyph.
#4	T <sub>E</sub> X code	Macros executed before the punctum cavum is written.
#5	character	Argument #5 from \GreGlyph. The signs to typeset before the glyph.
#6	string	the line, byte offset, and column address for textedit links when point-and-click is enabled.

**\GrePunctumMora#1#2#3#4** *gregoriotex-signs.tex*

Macro for typesetting punctum mora.

Arg	Value	Description
#1	integer	Height number of punctum mora.
#2	1	Go back to end of punctum.
	2	Shift left width of 1 punctum.
	3	Shift left width of 1 punctum and ambitus of 1.
#3	0	Punctum mora does not occur before last note of podatus, porrectus, or torculus resupinus.
	1	Punctum mora occurs before last note of podatus, porrectus, or torculus resupinus.
#4	0	No punctum inclinatum.
	1	Punctum inclinatum.

**\GreReversedAccentus#1#2***gregoriotex-signs.tex*

Macro for typesetting a reversed accentus.

Arg	Value	Description
#1	integer	Height number of accentus.
#2	string	Type of glyph the accentus is attached to. See <a href="#">Episema Special</a> argument for description of options.

**\GreReversedSemicirculus#1#2***gregoriotex-signs.tex*

Macro for typesetting a reversed semicirculus.

Arg	Value	Description
#1	integer	Height number of semicirculus.
#2	string	Type of glyph the semicirculus is attached to. See <a href="#">Episema Special</a> argument for description of options.

**\GreScoreReference#1***gregoriotex-main.tex*

Currently does nothing.

**\GreSemicirculus#1#2***gregoriotex-signs.tex*

Macro for typesetting a semicirculus.

Arg	Value	Description
#1	integer	Height number of semicirculus.
#2	string	Type of glyph the semicirculus is attached to. See <a href="#">Episema Special</a> argument for description of options.

**\GreSetBigInitial***gregoriotex-main.tex*

Macro which indicates that a 2-line initial is desired.

**\GreSetFixedNextTextFormat#1***gregoriotex-syllable.tex*

Same as \GreSetFixedTextFormat except for next syllable.

**\GreSetFixedTextFormat#1***gregoriotex-syllable.tex*

Macro to specify a text which is different from #1#2#3 (of \GreSyllable). It is useful for styles, for instance with:

```
<i>ffj</i>(gh)
```

we will have

```
#1 = \textit{f}
#2 = \textit{f}
#3 = \textit{j}
```

and thus #1#2#3 will be \textit{f}\textit{f}\textit{j}, which won't type-set ligatures. In this example we should call \grefixedtext{\textit{ffj}}.

Arg	Value	Description
#1	0	nothing (normal text)
	1	italic
	2	bold
	3	small caps
	4	typewriter
	5	underline

**\GreSetInitial#1***gregoriotex-main.tex*

Macro to set the initial in the score.

Arg	Value	Description
#1	character	The initial letter of the score.

**\GreSetInitialClef#1#2#3***gregoriotex-signs.tex*

Macro for writing initial key.

Arg	Value	Description
#1	c or f	Type of clef.
#2	1–4	Line of key.
#3	integer	Height number of flat in key (0 for no flat).

**\GreSetLinesClef#1#2#3#4***gregoriotex-main.tex*

Macro to define the clef that will appear at the beginning of the lines.

Arg	Value	Description
#1	c or f	Type of clef.
#2	1–4	Line of key.
#3	0	No space after clef.
	1	Space after clef.
#4	integer	Height of flat in key (0 for no flat).

**\GreSetNextSyllable#1#2#3***gregoriotex-syllable.tex*

Macro to set the text of the next syllable for spacing purposes.

Arg	Value	Description
#1	string	the first letters of the syllable, that don't count for the alignment
#2	string	the middle letters of the syllable, we must align in the middle of them
#3	string	the end letters, they don't count for alignment

**\GreSetTextAboveLines#1***gregoriotex-main.tex*

Macro to place argument above the lines and empty \gre@currenttextabovelines when done.

Arg	Value	Description
#1	string	Text to be placed above the lines.

**\GreSetThisSyllable#1#2#3***gregoriotex-syllable.tex*

Macro to set the text of the current syllable.

Arg	Value	Description
#1	string	the first letters of the syllable, that don't count for the alignment
#2	string	the middle letters of the syllable, we must align in the middle of them
#3	string	the end letters, they don't count for alignment

**\GreSharp#1#2***gregoriotex-signs.tex*

Macro to typeset a sharp.

Arg	Value	Description
#1	integer	Height number of the sharp.
#2	0	No flat for a key change.
	1	Indicates the flat for a key change.

**\GreSmallCaps#1***gregoriotex.sty and gregoriotex.tex*

Makes argument small capitals. Accesses  $\text{\texttt{E\TeX}} \text{\texttt{\textbackslash textsc}}$  or Plain  $\text{\texttt{T\TeX}} \text{\texttt{\textbackslash sc}}$  as appropriate Corresponds to “<sc></sc>” tags in gabc.

Arg	Value	Description
#1	string	Text to be typeset in small caps font.

**\GreStar***gregoriotex-symbol.tex*

Macro to typeset an asterisk (\*).

**\GreSyllable#1#2#3#4#5#6#7#8#9***gregoriotex-syllable.tex*

Macro to typeset the syllable.

Arg	Value	Description
#1	$\text{\texttt{T\TeX}}$ code	macro setting syllable letters for the current syllable
#2	empty	reserved for future use
#3	$\text{\texttt{T\TeX}}$ control sequence	the control sequence to use for styling the hyphen
#4	0 1	this syllable is not the end of a word this syllable is the end of a word
#5	$\text{\texttt{T\TeX}}$ code	macros setting syllable letters for the next syllable
#6	string	the line, byte offset, and column address for textedit links when point-and-click is enabled
#7		alignment type of the first next glyph
#8	$\text{\texttt{T\TeX}}$ code	other macros (translation, double text, etc.) that don't fit in the limitation of the number of arguments
#9	Gregorio $\text{\texttt{T\TeX}}$ glyphs	all the notes

**\GreTilde** *gregoriotex-main.tex*

Macro to print  $\sim$ .

**\GreTranslationCenterEnd** *gregoriotex-main.tex*

Macro to end the centering of the translation text.

**\GreTypewriter#1** *gregoriotex.sty and gregoriotex.tex*

Makes argument typewriter font. Accesses  $\text{\LaTeX}$   $\text{\texttt{\texttt{tt}}}$  or Plain  $\text{\TeX}$   $\text{\texttt{tt}}$  as appropriate.

Arg	Value	Description
#1	string	Text to typeset in typewriter font.

**\GreUnderBrace#1#2#3#4** *gregoriotex-signs.tex*

Macro to typeset a round brace below the lines.

Arg	Value	Description
#1	length	The width of the brace.
#2	length	A vertical shift.
#3	length	A horizontal shift.
#4	0	Don't shift before starting the brace.
	1	Shift back a punctum's width before starting the brace.

**\GreUnderline#1** *gregoriotex.sty and gregoriotex.tex*

Makes argument underlined under  $\text{\LaTeX}$  using  $\text{\texttt{\texttt{underline}}}$ . Does nothing in Plain  $\text{\TeX}$ .

Arg	Value	Description
#1	string	Text to typeset underlined.



**\GreUnstyled#1***gregoriotex-syllable.tex*

Returns its argument as-is.

Arg	Value	Description
#1	string	Text to typeset without any extra styling.

**\GreVarBraceLength#1***gregoriotex-signs.tex*

Returns the computed length of the given brace.

Arg	Value	Description
#1	string	unique identifier for the brace within the score.

**\GreVarBraceSavePos#1#2#3***gregoriotex-signs.tex*

Records positions to compute the lengths of variable-sized braces.

Arg	Value	Description
#1	string	unique identifier for the brace within the score.
#2	0	Don't shift before recording the position.
	1	Shift back a punctum's width before recording the position.
#3	1	Position to save is the start of brace.
	2	Position to save is the end of brace.

**\GreVEpisema#1#2***gregoriotex-signs.tex*

Macro for typesetting the vertical episema.

Arg	Value	Description
#1	integer	Height number of episema.
#2	string	Type of glyph the episema is attached to. See <a href="#">Episema Special</a> argument for description of options.

**\GreVirgula#1***gregoriotex-signs.tex*

Macro to typeset a virgula.

Arg	Value	Description
#1	code	Macros which may happen before the skip but after the virgula (typically \grevepisema).

**\GreWriteTranslation#1***gregoriotex-main.tex*

Macro to typeset argument in the translation position.

Arg	Value	Description
#1	string	Text to typeset in the translation.

**\GreWriteTranslationWithCenterBeginning#1***gregoriotex-main.tex*

Macro to typeset argument (a string) in the translation position (at the beginning of a line?).

Arg	Value	Description
#1	string	Text to typeset in the translation (at the beginning of a line).

**\GreZeroHyph***gregoriotex-main.tex*

Macro to typeset a zero-width hyphen (the hyphen is visible, it is only treated as if it had 0 width when calculating spaces). Used for fine tuning spacing (especially at line endings).

**\GreForceBreak***gregoriotex-spaces.tex*

Macro used to force a line break to occur at a given position.

**\GreNoBreak** *gregoriotex-spaces.tex*

Macro used to prevent a line break from occurring at a given position.

**\GreScoreId** *gregoriotex-main.tex*

A LuaTeX attribute which designates a unique identifier for each score.

**\GreNABCNeumes#1#2** *gregoriotex-nabc.tex*

Macro to print a nabc character above the lines.

Arg	Value	Description
#1	integer	the line on which the character should appear (currently unused)
#2	string	The nabc syntax which indicates what neumes are to be printed

**\GreNABCChar#1** *gregoriotex-nabc.tex*

Macro to print a nabc character.

Arg	Value	Description
#1	string	The nabc syntax which indicates what neumes are to be printed

**\GreScoreNABCLines#1** *gregoriotex-nabc.tex*

Macro which sets the number of nabc lines in the score.

Arg	Value	Description
#1	integer	the number of nabc lines (currently only 1 is supported)

## 4 GregorioT<sub>E</sub>X Controls

These functions are the ones used by GregorioT<sub>E</sub>X internally as it process the commands listed above. They should not appear in any user document and are listed here for programmer documentation purposes only.

**\gre@error#1** *gregoriotex.sty and gregoriotex.tex*

Prints an error to the T<sub>E</sub>X output log.

Arg	Value	Description
#1	string	error message

**\gre@warning#1** *gregoriotex.sty and gregoriotex.tex*

Prints a warning to the T<sub>E</sub>X output log.

Arg	Value	Description
#1	string	warning message

**\gre@metapost#1** *gregoriotex.sty and gregoriotex.tex*

Executes METAPOST commands using luamplib.

Arg	Value	Description
#1	METAPOST commands	The METAPOST commands to execute.

**`\gre@deprecated#1#2`**

*gregoriotex-main.tex*

Macro that handles deprecation messages. By default, deprecated macros are allowed and a warning is printed. If the package option `deprecated=false` is set, then deprecated macros raise a package error, halting T<sub>E</sub>X.

Arg	Value	Description
#1	string	name of the deprecated macro
#2	string	name of the correct macro to use

**`\gre@obsolete#1#2`**

*gregoriotex-main.tex*

Macro that handles obsolescence errors.

Arg	Value	Description
#1	string	name of the obsolete macro
#2	string	name of the correct macro to use

**`\gre@loadgregoriofont`**

*gregoriotex-main.tex*

Loads the chosen font for the neumes at the correct size.

**`\gre@calculate@constantglyphraise`**

*gregoriotex-spaces.tex*

Macro to calculate `\gre@constantglyphraise`

**`\gre@addtranslationspace`**

*gregoriotex-spaces.tex*

Macro to tell Gregorio to set space for the translation.

**`\gre@removetranslationspace`**

*gregoriotexspaces.tex*

Macro to tell Gregorio to remove the space allocated to the translation.

**\gre@calculate@additionalspaces#1#2#3#4** *gregoriotex-spaces.tex*

Macro which calculates \gre@additionalbottomspace and \gre@additionaltopspace

Arg	Value	Description
#1	integer	the height number of the top pitch, including signs
#2	integer	the height number of the bottom pitch, including signs
#3	0	there is no translation line
	1	there is a translation line
#4	0	there is no above lines text
	1	there is above lines text

**\gre@calculate@textaligncenter#1#2#3** *gregoriotex-spaces.tex*

Macro for calculating \gre@textaligncenter.

Arg	Value	Description
#1	string	The first part of the syllable (any preceding consonants in Latin).
#2	string	The middle part of the syllable (the vowel in Latin, the whole syllable in English).
#3	0	Calculation is being performed for the current syllable.
	1	Calculation is being performed for the next syllable.

**\gre@calculate@annotationtrueraise** *gregoriotex-spaces.tex*

Macro to calculate \gre@dimen@annotationtrueraise.

**\gre@calculate@textlower** *gregoriotex-spaces.tex*

Calculates the value of textlower. Default is spacebeneathtext.

**`\gre@calculate@linewidth`** *gregoriotex-spaces.tex*

Calculates the line width. Default is the width of the printable space (`\hsize`).

**`\gre@calculate@stafflinewidth`** *gregoriotex-spaces.tex*

Calculates the width of the staff lines. Default is `linewidth`.

**`\gre@calculate@stafflineheight`** *gregoriotex-spaces.tex*

Calculates the height (thickness) of the staff lines. Dependent on `stafflineheightfactor` and `gre@factor`.

**`\gre@calculate@interstafflinespace`** *gregoriotex-spaces.tex*

Calculates the distance between the staff lines. Dependent on `stafflineheight` and `gre@factor`

**`\gre@calculate@stafflinediff`** *gregoriotex-spaces.tex*

Calculates a correction factor for when the staff lines are not their default thickness. Dependent on `stafflineheight` and `gre@factor`.

**`\gre@calculate@staffheight`** *gregoriotex-spaces.tex*

Calculates the total height of the staff. Dependent on `stafflineheight` and `interstafflinespace`.

**`\gre@calculate@constantglyphraise`** *gregoriotex-spaces.tex*

Calculates the baseline correction for the glyphs. Dependent on `gre@factor`, `additionalbottomspace`, `spacebeneathtext`, `spacelinestext`, `interstafflinespace`, `stafflineheight`, `currenttranslationheight`, and `stafflinediff`.

**\gre@computespaces**

*gregoriotex-spaces.tex*

Aggregates all of the global distance calculations and calls them in the order needed to respect dependencies.

**\gre@calculate@glyphraisevalue#1#2**

*gregoriotex-spaces.tex*

Calculates the raise values for a glyph (glyphraisevalue and addedraisevalue) based on where it is to be placed and what kind of a glyph it is. This is a time of use calculation.

Arg	Value	Description
#1	integer	The number for where the glyph is located. a in gabc is 1, b is 2, etc.
#2	0	no modification
	1	puts the value on the interline just above if it is on a line
	2	puts the value on the interline just beneath if it is on a line
	3	case of the vertical episema, which is not placed at the same place if the corresponding note is on a line or not
	4	case of the punctum mora, for the same reason
	5	case of the horizontal episema under a note, that must be placed a bit lower if the note is on a line
	6	case of the signs above (accentus, etc.)
	8	case of the punctum mora of the first note of a podatus or the 2nd note of a porrectus, etc.
	9	case of the horizontal episema, that must be placed a bit lower if the note is on a line
	10	case of the low choral sign
	11	case of the high choral sign
	12	case of the low choral sign which is lower than the note
	13	case of the brace above the bars

**\gre@stafflinefactor**

*gregoriotex-spaces.tex*

A number indicating the thickness of the staff lines.



**`\gre@calculate@textaligncenter#1#2#3`** *gregoriotex-spaces.tex*

Macro to calculate the distance from the beginning of the text of a syllable to its alignment point (the center of the vowel for Latin centering, the center of the syllable for English centering). This is a time of use calculation.

Arg	Value	Description
#1	string	the first part of the syllable
#2	string	the middle part of the syllable
#3	0	perform this calculation for the current syllable
	1	perform this calculation for the next syllable

**`\gre@calculate@enddifference#1#2#3#4#5`** *gregoriotex-spaces.tex*

Calculates the difference between the end of the notes and the end of the syllable text. Also stores the value for the previous syllable if needed. This is a time of use calculation.

Arg	Value	Description
#1	length	the total width of the notes
#2	length	the total width of the syllable text
#3	length	the alignment distance for the text ( <code>textaligncenter</code> )
#4	length	the alignment distance for the notes ( <code>notesaligncenter</code> )
#5	0	do not save the value for the previous syllable before calculating the new value
	1	save the value for the previous syllable before calculating the new value

**\gre@changeonedimenfactor#1#2#3**

*gregoriotex-spaces.tex*

Change the scale of a single distance from one factor to another.

Arg	Value	Description
#1	string	name of the distance to be scaled. See <a href="#">Distances</a> .
#2	integer	the factor the distance is currently in
#3	integer	the factor the distance is to be put into

**\gre@changedimenfactor#1#2**

*gregoriotex-spaces.tex*

Rescales all the distances (and stafflinefactor) which are supposed to scale with a change in staff size.

Arg	Value	Description
#1	integer	the factor the distances are currently in
#2	integer	the factor the distances are to be put into

**\gre@calculate@nextbegindifference#1#2#3#4**

*gregoriotex-spaces.tex*

Macro to calculate nextbegindifference.

Arg	Value	Description
#1	string	the first letters of the next syllable
#2	string	the middle letters of the next syllable (the vowel in Latin, the whole syllable in English)
#3	string	the end letters of the next syllable
#4	$0 \leq \text{integer} \leq 19$	the type of notes alignment. See <a href="#">Note Alignment Type</a> .
	$20 \leq \text{integer} \leq 39$	Same as below 20 except there is a flat before the notes. Subtract 20 to get the type of notes alignment.
	$40 \leq \text{integer} \leq 59$	Same as below 20 except there is a natural before the notes. Subtract 40 to get the type of notes alignment.

**\gre@makein#1**

*gregoriotex-spaces.tex*

Strips the decimals and units from a distance.

Arg	Value	Description
#1	distance	should be in the form “[0-9]+.[0-9]+pt”. (i.e. the result of applying \the to a distance register)

**\gre@makenum#1**

*gregoriotex-spaces.tex*

Strips the units from a distance.

Arg	Value	Description
#1	distance	should be in the form “[0-9]+.[0-9]+pt”. (i.e. the result of applying \the to a distance register)

**\gre@unitfactor**

*gregoriotex-spaces.tex*

Temporary count used by \gre@convertto.

**\gre@basefactor**

*gregoriotex-spaces.tex*

Temporary count used by \gre@convertto.

**\gre@count@temp@\*\***

*gregoriotex-spaces.tex*

Temporary count used in calculations. There are currently three of these.

**\gre@convertto#1#2**

*gregoriotex-spaces.tex*

Macro which converts a distance into a particular set of units. Result is placed in \gre@converted as a string.

Arg	Value	Description
#1	string	two letter abbreviation for the units. Should recognize all legal T <sub>E</sub> X units.
#2	distance	Distance to be converted.

**\gre@converted**

*gregoriotex-spaces.tex*

Macro holding result of last call to \gre@convertto.

**\gre@consistentunits#1#2**

*gregoriotex-spaces.tex*

This function takes a distance and formats it as a string so that its units conform to the pattern set by a string representation of a distance. Result is placed in \gre@stringdist.

Arg	Value	Description
#1	string	the standard whose format is to be matched.
#2	distance	the distance to be adjusted.

**\gre@stringdist**

*gregoriotex-spaces.tex*

Macro holding result of last call to \gre@consistentunits.

**`\gre@gregorioscore#1`**

*gregoriotex-main.tex*

Macro that handles `\gregorioscore` calls when they do not have an optional argument.

Arg	Value	Description
#1	string	Relative or absolute path to the score.

**`\gre@gregorioscore@option[#1]#2`**

*gregoriotex-main.tex*

Macro that handles `\gregorioscore` calls when they have an optional argument.

Arg	Value	Description
#1	n	#2 will be included as is.
	a	Gregorio $\TeX$ will automatically compile gabc files if necessary.
	f	Forces Gregorio $\TeX$ to compile the gabc file.
#2	string	Relative or absolute path to the score.

**`\gre@gabcsnippet#1`**

*gregoriotex-main.tex*

Macro that handles `\gabcsnippet` calls when they do not have an optional argument.

Arg	Value	Description
#1	string	Snippet of gabc code.

**`\gre@gabcsnippet@option[#1]#2`**

*gregoriotex-main.tex*

Macro that handles `\gabcsnippet` calls when they have an optional argument.

Arg	Value	Description
#1	int	Value of initial style to be passed to gregorio
#2	string	Snippet of gabc code.

**`\gre@writemode#1`**

*gregoriotex-main.tex*

Macro that writes its argument with `\greannotation`. The argument typically is given to this macro by `\GreMode` in the `gtex` file.

Arg	Value	Description
#1	string	Text to place above the initial of a score.

**`\gre@brace@common#1#2#3#4#5#6#7`**

*gregoriotex-signs.tex*

Common macro used internally to render braces.

Arg	Value	Description
#1	length	The width of the brace.
#2	length	A vertical shift.
#3	length	A horizontal shift.
#4	0	Don't shift before starting the brace.
	1	Shift back a punctum's width before starting the brace.
#5	0	No accentus above the brace.
	1	Typeset an accentus above the brace.
#6	integer	The height number for the brace.
#7	csname	The control sequence name representing the brace.

**`\grebracemetapostpreamble#1`**

*gregoriotex-signs.tex*

Returns the METAPOST preamble for braces. The control sequence name does not have the `@` symbol because this macro is used within METAPOST.

Arg	Value	Description
#1	string	the width of the brace; if <code>*</code> , use the bar brace width.

**`\gre@draw@curlybrace#1`**

*gregoriotex-signs.tex*

Draws a curly over-brace using METAPOST.

Arg	Value	Description
#1	length	the width of the brace.

**`\gre@draw@brace#1`**

*gregoriotex-signs.tex*

Draws a round over-brace using METAPOST.

Arg	Value	Description
#1	string	the width of the brace; if *, use the bar brace width.

**`\gre@draw@underbrace#1`**

*gregoriotex-signs.tex*

Draws a round under-brace using METAPOST.

Arg	Value	Description
#1	length	the width of the brace.

**`\gre@draw@roundbrace#1`**

*gregoriotex-signs.tex*

Draws a round over- or under-brace using METAPOST.

Arg	Value	Description
#1	length	the width of the brace.
#2	number	the height of the bounding box in em-relative units.
#3	METAPOST commands	METAPOST commands to draw the brace outline.

**`\gre@iflatex#1`**

*gregoriotex.sty and gregoriotex.tex*

Evaluates to #1 if running under  $\text{\LaTeX}$ .

Arg	Value	Description
#1	$\text{\TeX}$ code	the $\text{\TeX}$ code to use if running under $\text{\LaTeX}$ .

**`\gre@latex@barredsymbol#1#2#3#4`**

*gregoriotex-signs.tex*

Internal method used by `\grelatexsimpledefarredsymbol` to simplify the cascading of conditionals used to implement that macro.

Only available in  $\text{\LaTeX}$ .

Arg	Value	Description
#1	string	the value of <code>\f @series/\f @shape</code> to match.
#2	$\text{\TeX}$ code	the $\text{\TeX}$ for the base symbol (i.e., A, R, or V).
#3	string	the control sequence name created by <code>\gredefsize-symbol</code> to use for the bar.
#4	dimension	the amount to shift the bar to the left from the end of the base symbol.

**`\gre@additionalbottomcustoslineend`**

*gregoriotex-signs.tex*

Macro to place a bottom custos with an additional line (positions a and b) at the end of a line.

**`\gre@additionalbottomcustoslinemiddle`**

*gregoriotex-signs.tex*

Macro to place a bottom custos with an additional line (positions a and b) in the middle of a line.



**`\gre@additionaltopcustoslineend`** *gregoriotex-signs.tex*

Macro to place a top custos with an additional line (positions `l` and `m`) at the end of a line.

**`\gre@additionaltopcustoslinemiddle`** *gregoriotex-signs.tex*

Macro to place a top custos with an additional line (positions `l` and `m`) in the middle of a line.

**`\gre@pickcustos#1`** *gregoriotex-signs.tex*

Macro to pick the appropriate custos character.

Arg	Value	Description
<code>#1</code>	integer	height of the custos character to be placed

**`\gre@addspaceabove`** *gregoriotex-main.tex*

Macro to increase the space above the lines to account for above lines text.

**`\gre@removespaceabove`** *gregoriotex-main.tex*

Macro to decrease the space above the lines as there is no longer any above lines text.

**\gre@alteration#1#2#3#4**

*gregoriotex-signs.tex*

Macro to typeset an alteration.

Arg	Value	Description
#1	integer	height of the alteration
#2	character alias	the alteration
#3	character alias	the hole of the alteration
#4	1	the alteration is a flat for a key change
	0	all other cases

**\gre@calculate@clefnum#1#2**

*gregoriotex-signs.tex*

Macro calculating the \gre@clefnum from the letter and number.

Arg	Value	Description
#1	charcter	type of clef (c or f)
#2	integer	line number

**\gre@clefnum**

*gregoriotex-signs.tex*

Count holding the current clef number.

**\gre@clefflat**

*gregoriotex-signs.tex*

Macro to hold the height of the current flat for the clef (a if no flat).

**\gre@updatelinesclef**

*gregoriotex-signs.tex*

Macro redrawing a key from \gre@clefnum, useful for vertical space changes.

**\gre@currenttextabovelines**

*gregoriotex-main.tex*

Macro for storing the text which needs to be placed above the lines.

**\gre@typesettextabovelines#1** *gregoriotex-main.tex*

Macro for typesetting the text above the lines.

**\gre@dottranslationcenterend** *gregoriotex-main.tex*

Macro to typeset a centered translation.

**\gre@drawfirstlines** *gregoriotex-main.tex*

Macro to draw the first set of lines in a score (when shortened by an initial).

**\gre@generatelines** *gregoriotex-main.tex*

Macro to (re)populate the box containing the lines.

**\gre@updatelinewidth** *gregoriotex-main.tex*

Macro to shorten the lines to account for the presence of the initial.

**\gre@knownline** *gregoriotex-main.tex*

A count which keeps track of which line of the score we're on.

**\gre@lastoflinecount** *gregoriotex-main.tex*

Count to track where on the line we are. Values are 0 (we are not near the end of a line), 1 (we're at the last syllable of the line), and 2 (we just set the last syllable of the line and so are at the first syllable of a new line).

**\gre@savetlastoflinecount** *gregoriotex-main.tex*

A spot to save the \gre@lastoflinecount so we can change it temporarily and revert to the saved value later.

**\gre@newlinecommon#1**

*gregoriotex-main.tex*

The macro which needs to be called each time a new lines is started.

Arg	Value	Description
#1	0	Justifying the line being ended
	1	Do not justify the line being ended

**\gre@endafterbar#1**

*gregoriotex-main.tex*

Macro to call after ending a bar.

Arg	Value	Description
#1	0	We are at the end of a line
	1	We not at the end of a line

**\gre@endofsyllable#1#2#3**

*gregoriotex-syllable.tex*

Macro called at end of a syllable, adds a penalty and a space.

Arg	Value	Description
#1	0	to only add the penalty
	1	adds both penalty and space
#2	0	if end of syllable
	1	if end of word
#3	1	if next syllable is a bar
	0	otherwise

**\gre@exhyphencharsave**

*gregoriotex-main.tex*

Macro for saving the ex hyphen character so that it can be restored at the end of the score.

**`\gre@factor`**

*gregoriotex-main.tex*

Count which stores the current staff size.

Default: 17 (approximately the size found in graduals)

**`\gre@fillhole#1`**

*gregoriotex-signs.tex*

Macro to fill the hole in a glyph so that staff lines do not show through a hole in it.

Arg	Value	Description
#1	GregorioTeX char	character to use to fill the hole

**`\gre@calculate@notesaligncenter#1`**

*gregoriotex-syllable.tex*

Macro to find the alignment center for a group of notes. The value is the distance from the left edge of the group to the alignment point and is stored in `\gre@dimen@notesaligncenter`.

Arg	Value	Description
#1	Note alignment type	See <a href="#">5.1</a>

**`\gre@calculate@nextnotesaligncenter#1`**

*gregoriotex-syllable.tex*

Same as previous, but for the next syllable.

Arg	Value	Description
#1	Note alignment type	See <a href="#">5.1</a>

**\gre@calculate@simplenotesaligncenter#1#2** *gregoriotex-syllable.tex*

Workhorse function behind \gre@calculate@notesaligncenter and \gre@calculate@nextnotesaligncenter.

Arg	Value	Description
#1	Note alignment type	See <a href="#">5.1</a>
#2	0	this is for the current syllable
	1	this is for the next syllable

**\gre@gregoriofontname** *gregoriotex-main.tex*

Macro which stores the name of the currently selected font for the neumes.

**\gre@handleclivisspecialalignment#1#2#3** *gregoriotex-syllable.tex*

Macro for aligning clivis syllables according to the flag \gre@clivisalignment.

Arg	Value	Description
#1	Gregorio $\TeX$ glyph	Glyph to use when aligning clivis on its center
#2	Gregorio $\TeX$ glyph	Glyph to use when aligning clivis on the center of the first punctum
#3	0	this is for the current syllable
	1	this is for the next syllable

`\gre@hepisorline#1#2#3#4#5`

*gregoriotex-signs.tex*

Macro to typeset a horizontal line (either an additional staff line or an episema).

Arg	Value	Description
#1	character	The letter of the height of the episema (not the height of the note it corresponds to).
#2	0	go back to the beginning of the previous glyph; this starts the episema at the beginning of the previous glyph
	1	stay at the end of the glyph; doesn't make much sense to use this
	2	go back the width of #1; this starts the episema at the glyph from the end that starts at #1's width from the end
	3	go back to the beginning of the previous glyph and then forward the width of #1; this starts the episema at the glyph from the start that starts just after #1's width from the start
#3	integer	the ambitus for a two note episema at the diagonal stroke of a porrectus, porrectus flexus, orculus resupinus, or torculus resupinus flexus
#4	0	an horizontal episema
	1	an horizontal episema under a note
	2	a line at the top
	3	a line at the bottom
#5	f	a normal episema
	l	a small episema aligned left
	c	a small episema aligned center
	r	for a small episema aligned right

**`\gre@hepisorlineaux#1#2#3#4`**

*gregoriotex-signs.tex*

Macro that will help in the typesetting of a horizontal episema and additional lines.

Arg	Value	Description
#1	GregorioT <sub>E</sub> X glyph	an offset glyph (see #3, below)
#2	GregorioT <sub>E</sub> X glyph	the episema glyph
#3	0	go back to the beginning of the previous glyph; this starts the episema at the beginning of the previous glyph
	1	stay at the end of the glyph; doesn't make much sense to use this
	2	go back the width of #1; this starts the episema at the glyph from the end that starts at #1's width from the end
	3	go back to the beginning of the previous glyph and then forward the width of #1; this starts the episema at the glyph from the start that starts just after #1's width from the start
#4	0	an horizontal episema
	1	an horizontal episema under a note
	2	a line at the top
	3	a line at the bottom



**\gre@vepisemaorrare#1#2#3#4#5**

*gregoriotex-signs.tex*

Macro to typeset a vertical episema or a rare accent (like accentus, circulus, etc.). This function must be called after a call to \GreGlyph.

Arg	Value	Description
#1	character	the letter of the height of the episema (not the height of the note it corresponds to.
#2	integer	See <a href="#">Episema Special</a>
#3	Gregorio $\TeX$ glyph	the sign glyph
#4	1	vertical episema
	2	rare sign
	3	choral sign
	4	brace above the bar
#5	string	the choral sign, if relevant

**\gre@vepisemaorrareaux#1#2#3#4#5#6#7**

*gregoriotex-signs.tex*

Macro to help typesetting vertical episema.

Arg	Value	Description
#1	Gregorio $\TeX$ glyph	is an offset glyph (see #3 below)
#2	Gregorio $\TeX$ glyph	the glyph upon which the sign is to be centered
#3	0	go back to the beginning of the previous glyph and then forward half the width of #2; this puts the sign at the beginning of the previous glyph, whose first note is the size of #2
	1	go back half the width of #2; this puts the sign at the end of the previous glyph, whose last note is the size of #2
	2	go back the width of #1 and then forward half the width of #2; this puts the sign at the glyph from the end that starts at #1's width from the end
	3	go back to the beginning of the previous glyph and then forward the width of #1 and then back half the width of #2; this puts the sign at the glyph from the start that ends at #1's width from the start
#4	dimension	a shift that we want to get applied, useful for punctum inclinatum for example
#5	integer	is the glyph number
#6	1	vertical episema
	2	rare sign
	3	choral sign
	4	brace above the bar
#7	string	the choral sign if relevant

**\gre@newglyphcommon**

*gregoriotex-syllable.tex*

Macro called before each glyph.

**`\gre@normalinitial`** *gregoriotex-main.tex*

Macro called at the end of the score to ensure that a big initial setting doesn't carry into the next score.

**`\greoldcatcode`** *gregoriotex.tex*

Macro to store the catcode for “@” so that we can use said symbol in function names under Plain T<sub>E</sub>X and then restore the original catcode after the package is done loading.

**`\gre@reseteolcustos`** *gregoriotex-main.tex*

Alias that resets the use of automatic custos to the value set by `\greseteolcustos`. This macro is aliased to `\gre@useautoeolcustos` or `\gre@usemanualeolcustos` by `\greseteolcustos`.

**`\gre@setstylefont`** *gregoriotex-main.tex*

Macro for opening up greextra font.

**`\gre@syllablenotes#1`** *gregoriotex-syllable.tex*

Macro for populating `\gre@box@syllablenotes`.

Arg	Value	Description
#1	string	The contents to be placed in the box

**`\gre@symbolfontsize`** *gregoriotex-symbols.tex*

The font size at which symbols are to be loaded.

**`\gre@textnormal#1`** *gregoriotex-syllable.tex*

Macro which applies the default text format.

**`\gre@typekey#1#2#3#4#5`**

*gregoriotex-signs.tex*

Macro which typesets the key.

Arg	Value	Description
#1	character	the type of the key: c or f
#2	integer	the line of the key (1 is the lowest)
#3	0	no need to use small key characters (inside a line)
	1	we must use small key characters (inside a line)
#4	0	no extra space is needed after the key
	1	we must type a space after the key
#5	integer	if 3, it means that we must not put a flat after the key, otherwise it's the height of the flat

**`\gre@updateleftbox`**

*gregoriotex-main.tex*

Macro to update the box printed at the left end of every line (the one which holds the staff lines).

**`\gre@useautoeolcustos`**

*gregoriotex-main.tex*

Macro which enables automatic custos at the end of lines.

**`\gre@usemanualeolcustos`**

*gregoriotex-main.tex*

Macro which disables automatic custos at the end of lines.

**`\gre@usestylecommon`**

*gregoriotex-signs.tex*

Macro which specifies the alternate glyphs which are common to all of the styles.

**`\gre@widthof#1`**

*gregoriotex-main.tex*

Macro for calculating the width of its argument and storing it in `\gre@dimen@temp@three`.

**`\gre@writebar#1#2#3`**

*gregoriotex-signs.tex*

Macro to write a bar.

Arg	Value	Description
#1	0	virgula
	1	minima
	2	minor
	3	major
	4	finalis
	5	the last finalis
#2	0	in a syllable containing only this bar
	1	in a syllable containing other notes
#3	T <sub>E</sub> X code	macros that may happen before the skip after the bar (typically GreVEpisema)

**`\gre@@arg`**

*gregoriotex-syllable.tex*

A dummy macro which is used to store a macro which takes an argument so that it can be used in a `\ifx` comparison. The value of the argument is provided at the time this macro is created.

**`\gre@nothing`**

*gregoriotex-main.tex*

A dummy macro which has no contents. Used for `\ifx` comparisons.

**`\gre@annotation[#1]#2`**

*gregoriotex-main.tex*

Workhorse function behind `\greannotation`.

Arg	Value	Description
#1	c	center align the new line with the existing annotation content
	l	left align the new line with the existing annotation content
	r	right align the new line with the existing annotation content
#2	string	the new annotation content

**`\gre@atletter`**

*gregoriotex-main.tex*

A Lua $\TeX$  catcode table which makes sure that Lua $\TeX$  treats ‘@’ corectly.

**`\gre@baseunit`**

*gregoriotex-spaces.tex*

The units attached to base dimension in a string distance. These units are extracted as part of coercing one distance to have the same units as another (`\gre@consistentunits`).

**`\gre@stretchunit`**

*gregoriotex-spaces.tex*

The units attached to stretch dimension in a string distance. These units are extracted as part of coercing one distance to have the same units as another (`\gre@consistentunits`).

**`\gre@shrinkunit`**

*gregoriotex-spaces.tex*

The units attached to shrink dimension in a string distance. These units are extracted as part of coercing one distance to have the same units as another (`\gre@consistentunits`).

**`\gre@bug#1`**

*gregoriotex.sty* and *gregoriotex.tex*

Macro for raising a bug error when some calculation goes awry and comes up with a non-sensical result. Generally will be found in Lua code, not  $\TeX$  code.

**`\gre@changestyle#1#2[#3]`**

*gregoriotex.sty* and *gregoriotex.tex*

Workhorse function behind `\grechangestyle`. Necessary because the internals of the definition are slightly different in  $\mathbb{E}\TeX$  and Plain  $\TeX$ .

**\gre@calculate@bolshift#1#2***gregoriotex-spaces.tex*

Macro used in \GreSyllable. Sets \gre@skip@bolshift to the left kern that should appear at the beginning of a line in case of a forced linebreak. The goal of this left kern is to have all lines aligned on notes. This shift is applied to the right before every syllable and then to the left after placing an empty box. At the beginning of the line the shift to the right is ignored by T<sub>E</sub>X as leading white space, but the shift left is not because of the presence of the “character” of the empty box.

Arg	Value	Description
#1	dimension	begindifference of the syllable

**\gre@calculate@eolshift#1***gregoriotex-spaces.tex*

Macro used in \GreSyllable. Sets \gre@skip@eolshift to the left kern that should appear before an end of line. The improvement is tiny: when text go further than notes in the last syllable of a line, the idea is to allow text to go a bit further right, under the custos. This shift is applied to the left after every syllable and then to the right after setting the line break penalty. If the line break occurs after this syllable, it will occur between the two shifts, pushing the shift right to the beginning of the next line where T<sub>E</sub>X will ignore it as leading white space.

Arg	Value	Description
#1	dimension	The enddifference of the corresponding syllable

**\gre@calculate@syllablefinalskip#1#2***gregoriotex-spaces.tex*

Macro computing the skip at the end of the syllable.

Arg	Value	Description
#1	0	if end of syllable
	1	if end of word
#2	0	if next syllable is normal
	1	if it's a bar

**`\gre@convert`** *gregoriotex-spaces.tex*

Macro to hold the original distance which is to be scaled by `\gre@changeonedimenfactor`

**`\gre@debug`** *gregoriotex.sty* and *gregoriotex.tex*

Macro to hold the list of debug messages which should be designated as printing.

**`\gre@debugmsg#1#2`** *gregoriotex-main.tex*

Macro to print debugging messages.

Arg	Value	Description
#1	string	The category of the message (used in conjunction with <code>\gre @debug</code> to determine whether to print the message or not
#2	string	The debug message

**`\gre@declarefileversion#1#2`** *gregoriotex-main.tex*

Macro which checks for version consistency between Gregorio $\text{\TeX}$  files.

Arg	Value	Description
#1	string	name of the current file
#2	string	version of the current file

**`\gre@def@char@he#1#2`** *gregoriotex-chars.tex*

Macro for defining the various types of horizontal episema.

Arg	Value	Description
#1	string	name of the horizontal episema to be defined
#2	string	Camel case name of horizontal episema to be defined



**`\gre@def@char@he@porr#1#2`**

*gregoriotex-chars.tex*

Macro for defining the various types of horizontal episema porrectus.

Arg	Value	Description
#1	string	name of the horizontal episema porrectus to be defined
#2	string	Camel case name of horizontal episema porrectus to be defined

**`\gre@char@cavum#1#2#3#4#5#6#7#8`**

*gregoriotex-signs.tex*

Macro to typeset a “cavum” character.

Arg	Value	Description
#1	length	Argument #2 from <code>\GreGlyph</code> . Height to raise the glyph.
#2	length	Argument #3 from <code>\GreGlyph</code> . Height of the next note.
#3	integer	Argument #4 from <code>\GreGlyph</code> . The type of glyph.
#4	$\TeX$ code	Macros executed before the punctum cavum is written.
#5	character	Argument #5 from <code>\GreGlyph</code> . The signs to typeset before the glyph.
#6	string	the line, byte offset, and column address for <code>textedit</code> links when point-and-click is enabled.
#7	control sequence	The control sequence for the glyph.
#8	control sequence	The control sequence for the hole glyph.

**\gre@get@spaceskip#1**

*gregoriotex-signs.tex*

Loads \gre@skip@temp@four with the appropriate rubber length given the desired case.

Arg	Value	Description
#1	0	Default space.
	1	Zero-width space.
	2	Space between flat or natural and a note.
	3	Space between two puncta inclinata.
	4	Space between bivirga or trivirga.
	5	space between bistropha or tristropha.
	6	Space after a punctum mora XXX: not used yet, not so sure it is a good idea...
	7	Space between a punctum inclinatum and a punctum inclinatum debilis.
	8	Space between two puncta inclinata debilis.
	9	Space before a punctum (or something else) and a punctum inclinatum.
	10	Space between puncta inclinata (also debilis for now), larger ambitus (range=3rd).
	11	Space between puncta inclinata (also debilis for now), larger ambitus (range=4th or more).

**\gre@nabcfontname**

*gregoriotex-main.tex*

Macro which stores the name of the currently selected font for nabc.

**\gre@nabcfontsize**

*gregoriotex-main.tex*

Macro which stores the size of the currently selected font for nabc.

**\gre@endsyllablepart**

*gregoriotex-syllable.tex*

Macro which stores the end part of the current syllable (that which comes after the alignment part).

**`\gre@firstsyllablepart`** *gregoriotex-syllable.tex*

Macro which stores the first part of the current syllable (that which comes before the alignment part).

**`\gre@middlesyllablepart`** *gregoriotex-syllable.tex*

Macro which stores the middle part of the current syllable (the part which aligns with the notes).

**`\gre@nextendsyllablepart`** *gregoriotex-syllable.tex*

Macro which stores the end part of the next syllable (that which comes after the alignment part).

**`\gre@nextfirstsyllablepart`** *gregoriotex-syllable.tex*

Macro which stores the first part of the next syllable (that which comes before the alignment part).

**`\gre@nextmiddlesyllablepart`** *gregoriotex-syllable.tex*

Macro which stores the middle part of the next syllable (the part which aligns with the notes).

**`\gre@fixedtextformat#1`** *gregoriotex-syllable.tex*

A macro which applies formatting that needs to apply to the whole syllable (rather than the parts individually) for the current syllable. Necessary to preserve ligatures across parts within a syllable.

Arg	Value	Description
#1	string	The syllable (usually built as <code>\gre @firstsyllablepart\gre @middlesyllablepart\gre @endsyllablepart</code> )

**`\gre@fixednexttextformat#1`**

*gregoriotex-syllable.tex*

A macro which applies formatting that needs to apply to the whole syllable (rather than the parts individually) for the next syllable. Necessary to preserve ligatures across parts within a syllable.

Arg	Value	Description
#1	string	The syllable (usually built as <code>\gre @nextfirstsyllablepart\gre @nextmiddlesyllablepart\gre @nextendsyllablepart</code> )

**`\gre@gabcname`**

*gregoriotex-main.tex*

Macro which holds the point-and-click file name.

**`\gre@gregoriotexluaversion`**

*gregoriotex-main.tex*

Macro to hold the version number of *gregoriotex.lua* so that it can be checked for consistency.

**`\gre@gregorioversion`**

*gregoriotex-main.tex*

Macro to hold the version number of Gregorio<sub>TeX</sub> so that it can be checked for consistency.

**`\gre@leftfill`**

*gregoriotex-main.tex*

Macro set to `\hfil` or `\relax` depending on alignment choices.

**`\gre@lyriccentering`**

*gregoriotex-syllable.tex*

Macro set to 0 for full-syllable centering, 1 for vowel centering (the default), or 2 for first-letter centering.

**`\gre@rightfill`** *gregoriotex-main.tex*

Macro set to `\hfil` or `\relax` depending on alignment choices.

**`\gre@mark@abovelinestext`** *gregoriotex-main.tex*

Macro to set the point-and-click position for above lines text.

**`\gre@mark@translation`** *gregoriotex-main.tex*

Macro to set the point-and-click position for translations.

**`\gre@pitch@[a-p]`** *gregoriotex-main.tex*

Macros which map gabc pitch letters (the final part of the macro name) to the numerical value that Gregorio $\text{\TeX}$  uses in processing note placement.

**`\gre@pitch@adjust@top`** *gregoriotex-main.tex*

If any note appears above this pitch, the space above the lines must be adjusted to account for it.

**`\gre@pitch@adjust@bottom`** *gregoriotex-main.tex*

If any note appears below this pitch, the space below the lines must be adjusted to account for it.

**`\gre@pointandclick#1#2`** *gregoriotex-main.tex*

Macro to generate the point-and-click links.

Arg	Value	Description
#1	$\text{\TeX}$ code	the entity which is to contain the link
#2	link target	line:char:column for the link

**\gre@prefix** *gregoriotex-spaces.tex*

Either “skip” or “dimen” according to the distance being set or changed at the given moment.

**\gre@rubberpermit#1** *gregoriotex-spaces.tex*

Determines whether the given distance is allowed to take a rubber length.

Arg	Value	Description
#1	string	the name of the distance to check

**\gre@setgregoriofont[#1]#2** *gregoriotex-main.tex*

Workhorse function behind \gresetgregoriofont.

Arg	Value	Description
#1	(omitted)	Use the normal font and rule set (default).
	op	Use the alternate Dominican font/rule set.
#2	greciliae	Use the Greciliae font (default).
	gregorio	Use the Gregorio font.
	parmesan	Use the Parmesan font.

**\gre@syllable@end#1#2#3** *gregoriotex-syllable.tex*

Macro to make a few checks and call the right macros between \endbeforebar , \end-ofword, \endofsyllable.

Arg	Value	Description
#1		next syllable type (#7 of \GreSyllable)
#2	string	next syllable text
#3	0	this syllable is not the end of a word
	1	this syllable is the end of a word

**\gre@typeout#1** *gregoriotex.sty and gregoriotex.tex*

Macro which points to \typeout in L<sup>A</sup>T<sub>E</sub>X or \message in Plain T<sub>E</sub>X.

**\gre@unsetfixedtextformat** *gregoriotex-syllable.tex*

Macro which changes \gre@fixedtextformat back to normal text.

**\gre@unsetfixednexttextformat** *gregoriotex-syllable.tex*

Macro which changes \gre@fixednexttextformat back to normal text.

**\gregoriotex@symbols@loaded** *gregoriotex-symbols.tex*

Empty macro which is used to determine if the symbols have been loaded and prevent loading them again if they have.

**\gre@hskip** *gregoriotex-signs.tex*

Alias for \hskip or \kern. We use this rather than those functions directly so that the same element can appear in discretionaries where \kern is allowed but \hskip is not by simply changing the assignment of this macro when we enter one.

**\gre@localleftbox** *gregoriotex-main.tex*

Alias for \luatexlocalleftbox or \localleftbox, depending on L<sup>A</sup>T<sub>E</sub>X version.

**\gre@localrightbox** *gregoriotex-main.tex*

Alias for \luatexlocalrightbox or \localrightbox, depending on L<sup>A</sup>T<sub>E</sub>X version.

**\gre@resizebox** *gregoriotex-main.tex*

Alias for \resizebox.

**`\gre@dimension`** *gregoriotex-spaces.tex*  
 Workhorse function behind `\grecreatedim` and `\grechangedim`.

## 4.1 Auxiliary File

GregorioTeX creates its own auxiliary file (extension `gaux`) which it uses to store information between successive typesetting runs. This allows for such features as the dynamic interline spacing. The following functions are used to interact with that auxiliary file.

**`\gre@gaux`** *gregoriotex-main.tex*  
 The handle for the auxiliary file.

**`\gre@open@gaux`** *gregoriotex-main.tex*  
 Macro for opening the auxiliary file.

**`\gre@close@gaux`** *gregoriotex-main.tex*  
 Macro for closing the auxiliary file.

**`\gre@write@gaux#1`** *gregoriotex-main.tex*  
 Macro for writing the auxiliary file.

Arg	Value	Description
#1	string	contents to be written to the auxiliary file



## 4.2 Fonts

Gregorio $\TeX$  loads a number of fonts which are referred to by the following macros.

**$\backslash\text{gre@font@music}$**  *gregoriotex-main.tex*

The font for the neumes and other principle score elements.

**$\backslash\text{gre@font@style}$**  *gregoriotex-main.tex*

The font for some of the extra characters, such as the bar for barred letters.

**$\backslash\text{gre@font@nabc}$**  *gregoriotex-nabc.tex*

The font for ancient notation.

**$\backslash\text{gre@font@biginitial}$**  *gregoriotex.tex*

The font for the default big initial format in Plain  $\TeX$ .

**$\backslash\text{gre@font@initial}$**  *gregoriotex.tex*

The font for the default initial format in Plain  $\TeX$ .

## 4.3 Character Reference Aliases

To make referencing and changing them easier, Gregorio $\TeX$  stores reference information for certain characters using the following macros.

**$\backslash\text{gre@fontchar@abovebarbrace}$**  *gregoriotex-chars.tex*

The above bar brace.

**\gre@fontchar@flat** *gregoriotex-chars.tex*

The flat character.

**\gre@fontchar@flathole** *gregoriotex-chars.tex*

The flat hole character (i.e., the character needed to prevent lines from showing through the center of the flat).

**\gre@fontchar@natural** *gregoriotex-chars.tex*

The natural character.

**\gre@fontchar@naturalhole** *gregoriotex-chars.tex*

The natural hole character (i.e., the character needed to prevent lines from showing through the center of the natural).

**\gre@fontchar@sharp** *gregoriotex-chars.tex*

The sharp character.

**\gre@fontchar@sharphole** *gregoriotex-chars.tex*

The sharp hole character (i.e., the character needed to prevent lines from showing through the center of the sharp).

**\gre@fontchar@punctumcavum** *gregoriotex-signs.tex*

The punctum cavum character.

**\gre@fontchar@punctumcavumhole** *gregoriotex-signs.tex*

The punctum cavum hole character (i.e., the character needed to prevent lines from showing through the center of the punctum cavum).

**`\gre@fontchar@lineapunctumcavum`** *gregoriotex-signs.tex*

The linea punctum cavum character.

**`\gre@fontchar@lineapunctumcavumhole`** *gregoriotex-signs.tex*

The linea punctum cavum hole character (i.e., the character needed to prevent lines from showing through the center of the linea punctum cavum).

**`\gre@fontchar@incclef`** *gregoriotex-chars.tex*

The c-clef which appears in the middle of a line.

**`\gre@fontchar@infclef`** *gregoriotex-chars.tex*

The f-clef which appears in the middle of a line.

**`\gre@fontchar@cclef`** *gregoriotex-chars.tex*

The c-clef which appears at the beginning of a line.

**`\gre@fontchar@fclef`** *gregoriotex-chars.tex*

The f-clef which appears at the beginning of a line.

**`\gre@fontchar@punctum`** *gregoriotex-chars.tex*

The punctum character.

**`\gre@fontchar@punctummora`** *gregoriotex-chars.tex*

The punctum mora character.

**`\gre@fontchar@underbrace`** *gregoriotex-signs.tex*

The under brace character.

**\gre@fontchar@verticalepisema** *gregoriotex-chars.tex*

The vertical episema character.

**\gre@fontchar@brace** *gregoriotex-signs.tex*

The (rounded) brace character.

**\gre@fontchar@curlybrace** *gregoriotex-signs.tex*

The curly brace character.

**\gre@fontchar@custosbottomlong** *gregoriotex-chars.tex*

The custos character with a long upwards directed vigra.

**\gre@fontchar@custosbottommiddle** *gregoriotex-chars.tex*

The custos character with a middle upwards directed vigra.

**\gre@fontchar@custosbottomshort** *gregoriotex-chars.tex*

The custos character with a short upwards directed vigra.

**\gre@fontchar@custostoplong** *gregoriotex-chars.tex*

The custos character with a long downwards directed vigra.

**\gre@fontchar@custostopmiddle** *gregoriotex-chars.tex*

The custos character with a middle downwards directed vigra.

**\gre@fontchar@custostopshort** *gregoriotex-chars.tex*

The custos character with a short downwards directed vigra.

**\gre@fontchar@divisiofinalis** *gregoriotex-signs.tex*

The divisio finalis.

**\gre@fontchar@divisiomaior** *gregoriotex-signs.tex*

The divisio maior.

**\gre@char@normalhyphen** *gregoriotex-main.tex*

A normal hyphen in the text font.

**\gre@char@fuse@debilis** *gregoriotex-chars.tex*

A fused character consisting of a leading punctum initio debilis (of ambitus one) and a regular punctum.

**\gre@char@fuse@oriscus@one** *gregoriotex-chars.tex*

A fused character consisting of a leading oriscus (of ambitus one) and a regular punctum.

**\gre@char@fuse@oriscus@two** *gregoriotex-chars.tex*

A fused character consisting of a leading oriscus (of ambitus two) and a regular punctum.

**\gre@char@fuse@punctum@one** *gregoriotex-chars.tex*

A fused character consisting of a leading punctum (of ambitus one) and a regular punctum.

**\gre@char@fuse@punctum@two** *gregoriotex-chars.tex*

A fused character consisting of a leading punctum (of ambitus two) and a regular punctum.

**`\gre@char@fuse@quilisma@one`**

*gregoriotex-chars.tex*

A fused character consisting of a leading quilisma (of ambitus one) and a regular punctum.

**`\gre@char@fuse@quilisma@two`**

*gregoriotex-chars.tex*

A fused character consisting of a leading quilisma (of ambitus two) and a regular punctum.

**`\gre@char@he@...#1`**

*gregoriotex-chars.tex*

A class of macros for the horizontal episema which populates the `\gre@box@hep` box.

## 4.4 Flags

Flags are either boolean (defined with `\newif`), Lua $\TeX$  attributes, or counts (defined with `\newcount`). They store settings and/or the current state of something so that Gregorio $\TeX$  can typeset things in the desired manner.

All distances in **Distances** and `stafflinefactor` have a boolean associated with them, of the form `\ifgre@scale@*`. This boolean indicates if the distance should scale when the staff size changes (true) or not (false).

**`\ifgre@checklength`**

*gregoriotex-spaces.tex*

Boolean used in `\gresetdim` to indicate if we are attempting to set a rubber length.

**`\ifgre@rubber`**

*gregoriotex-spaces.tex*

Boolean used in `\gre@changeonedimenfactor` to indicate if we are dealing with one of the distances which can accept a rubber length.

**\ifgre@stretch**

*gregoriotex-spaces.tex*

Boolean used in \gre@changeonedimenfactor as we test for the presence of a stretch.

**\ifgre@shrink**

*gregoriotex-spaces.tex*

Boolean used in \gre@changeonedimenfactor as we test for the presence of a shrink.

**\ifgre@translationcentering**

*gregoriotex-main.tex*

Boolean used to specify whether the translation text should be centered below its respective syllable.

**\ifgre@showlines**

*gregoriotex-main.tex*

Boolean used to specify whether the staff lines should be shown or not.

**\ifgre@hidepclines**

*gregoriotex-signs.tex*

Boolean used to specify whether the staff lines behind a punctum cavum should be hidden.

**\ifgre@hidealtlines**

*gregoriotex-signs.tex*

Boolean used to specify whether the staff lines behind an alteration should be hidden.

**\ifgre@hepsemabridge**

*gregoriotex-signs.tex*

Boolean used to specify whether adjacent horizontal episemata should be joined together.

**`\ifgre@drawbraces`** *gregoriotex-signs.tex*

Boolean used to specify whether braces should be drawn by METAPOST as opposed to rendered via the score font.

**`\gre@biginitial`** *gregoriotex-main.tex*

Count to track whether the initial is big (2-lines) or normal (1-line).

**`\ifgre@boxing`** *gregoriotex-syllable.tex*

Boolean to track whether we're placing the contents of syllable notes into their box or actually printing that box (helps prevent spurious spaces from occurring when the box is being filled but not printed).

**`\ifgre@mustdotranslationcenterend`** *gregoriotex-main.tex*

Boolean to track whether we must do translation centering.

**`\ifgre@beginningofscore`** *gregoriotex-main.tex*

Boolean to mark the first syllable of the score (set to true until we start work on the first syllable, false afterwards).

**`\ifgre@endofscore`** *gregoriotex-syllable.tex*

Boolean to mark the last syllable of the score.

**`\ifgre@firstglyph`** *gregoriotex-syllable.tex*

Boolean that tells us if the current glyph is the first glyph or not.

**`\gre@attr@dash`** *gregoriotex-main.tex*

A Lua<sub>T</sub><sub>E</sub>X attribute which indicates whether a syllable takes a dash if it ends a line.



**`\gre@attr@center`** *gregoriotex-main.tex*

A Lua<sub>TeX</sub> attribute which indicates the type of translation centering.

**`\gre@attr@glyph@id`** *gregoriotex-main.tex*

A Lua<sub>TeX</sub> attribute which identifies the glyph we are at. Used for dynamic line spacing.

**`\gre@attr@glyph@top`** *gregoriotex-main.tex*

A Lua<sub>TeX</sub> attribute which identifies the high point of the glyph. Used for dynamic line spacing.

**`\gre@attr@glyph@bottom`** *gregoriotex-main.tex*

A Lua<sub>TeX</sub> attribute which identifies the low point of the glyph. Used for dynamic line spacing.

**`\gre@clivisalignment`** *gregoriotex-syllable.tex*

Count to indicate how the clivis is to be aligned with its respective syllable text. Values: 0) always align clivis on its center; 1) align clivis on first punctum; 2) align clivis on its center, except if notes would go left of text or consonants after vowels are larger than `\gre@dimen@clivisalignmentmin`.

**`\gre@insidediscretionary`** *gregoriotex-signs.tex*

Macro which indicates whether we are currently inside a discretionary (1) or not (0). Cannot be converted to a <sub>TeX</sub> boolean because it's value needs to be passed to Lua.

**`\ifgre@isonaline`** *gregoriotex-syllable.tex*

Boolean which indicates whether the current note is on a line or not (used to adjust the height of some symbols so they won't print on a line).

**\ifgre@lastispunctum** *gregoriotex-syllable.tex*

Boolean which indicates if the most recent note was a punctum mora.

**\ifgre@lastispunctumsave** *gregoriotex-signs.tex*

Boolean for storing \ifgre@lastispunctum so that it can be restored later.

**\gre@nlbstate** *gregoriotex-main.tex*

Macro which indicates if we are in a no line break area due to translation centering (1), an explicit no line break designation in the gabc (2), or not at all (0).

**\gre@nlbinitialstate** *gregoriotex-main.tex*

Macro to store \gre@nlbstate as we initialize or end a no line break area so that we can manipulate said flag as part of the process.

**\ifgre@usestylefont** *gregoriotex-main.tex*

Boolean which specifies whether the style font should be loaded or not.

**\ifgre@keeprightbox** *gregoriotex-signs.tex*

Boolean which specifies if we have to keep the localrightbox until the end.

**\gre@compilegabc** *gregoriotex-main.tex*

Macro which specifies the default compilation behavior: never compile (0), auto compile (1), or always compile (2).

**\ifgre@nabcfontloaded** *gregoriotex-nabc.tex*

Boolean which indicates whether the nabc font has been loaded.

**\gre@generate@pointandclick** *gregoriotex-syllable.tex*

Count which indicates whether the point-and-click functionality should be implemented (1) or not (0). Not a boolean because it needs to be readable by Lua.

**\gre@variableheightexpansion** *gregoriotex-main.tex*

Count to indicated if the spacing between lines should be variable (1) or fixed (0). Not a boolean because it needs to be readable by Lua.

**\ifgre@blockeolcustos** *gregoriotex-main.tex*

Boolean which indicates whether the custos at the end of the line should be blocked.

**\ifgre@breakintranslation** *gregoriotex-main.tex*

Boolean which indicates if line breaks are allowed inside a translation.

**\ifgre@bolshiftsenabled** *gregoriotex-main.tex*

Boolean which indicates if the left shift for the first syllables of lines is enabled.

**\ifgre@eolshiftsenabled** *gregoriotex-main.tex*

Boolean which indicates if the left shift for the last syllables of lines is enabled.

**\ifgre@euouae@implies@nlba** *gregoriotex-main.tex*

Boolean which indicates if line breaks are prohibited in an euouae area.

**\ifgre@in@euouae** *gregoriotex-main.tex*

Boolean which indicates that we are in an euouae area.

**\ifgre@justifylastline** *gregoriotex-main.tex*

Boolean which indicates that the last line of the score should be justified.

**\ifgre@showclef** *gregoriotex-main.tex*

Boolean which indicates that the clef should be visible.

**\ifgre@forceemptyfirstsyllablehyphen** *gregoriotex-syllable.tex*

Boolean which indicates that a hyphen after an empty first syllable should be forced.

**\ifgre@showhyphenafterthissyllable** *gregoriotex-syllable.tex*

Boolean used by \GreSyllable to decide if a hyphen should be shown after the syllable.

**\ifgre@scale@stafflinefactor** *gregoriotex-spaces.tex*

Boolean indicating whether the stafflinefactor should scale with changes of grefactor, or not.

## 4.5 Boxes

Boxes are used to store elements of the score before they are printed for the purposes of reusing them and/or measuring them in order to determine their appropriate placement.

**\gre@box@hep** *gregoriotex-chars.tex*

Box for horizontal episemi.

**\gre@box@temp@width** *gregoriotex-main.tex*

Box for holding an element in order to determine its width.

**\gre@box@initial** *gregoriotex-main.tex*

Box which holds the initial of the score.

**\gre@box@annotation** *gregoriotex-main.tex*

Box holding the annotation which goes above the initial.

**\gre@box@annotation@add** *gregoriotex-main.tex*

Box used for the new line to be added to the annotation.

**\gre@box@annotation@old** *gregoriotex-main.tex*

Box used for the existing lines in the annotation when a new line is being added.

**\gre@box@lines** *gregoriotex-main.tex*

Box holding the staff lines.

**\gre@box@temp@sign** *gregoriotex-signs.tex*

Box to hold a sign so we can measure it for placement.

**\gre@box@syllablenotes** *gregoriotex-syllable.tex*

Box holding the notes associated with a syllable.

**\gre@box@syllabletext** *gregoriotex-syllable.tex*

Box holding the text associated with a syllable.

**\gre@box@hep** *gregoriotex-chars.tex*

Box holding the horizontal episema.

## 4.6 Distances

All of the distances listed in [Distances](#) have an internal associated with them, of the form of `\gre@*@*`, which stores the value of the distance (in string representation). The first wildcard is either `skip` or `dimen` according to the distance type, while the second is the name of the distance.

These additional distances are calculated by Gregorio based on the values for the user customizable distances and what may be going on in the score at the time of their use.

**`\gre@dimen@clefwidth`** *gregoriotex-spaces.tex*

Width of the clef.

**`\gre@dimen@constantglyphraise`** *gregoriotex-spaces.tex*

Dimension representing the space between the 0 of the gregorian fonts and the effective 0 of the TeX score.

**`\gre@dimen@currenttranslationheight`** *gregoriotex-spaces.tex*

Dimension representing the space for the translation beneath the text.

**`\gre@dimen@stafflinewidth`** *gregoriotex-spaces.tex*

Dimension representing the width of a line of staff. Can vary, for example, at the first line.

**`\gre@dimen@linewidth`** *gregoriotex-spaces.tex*

Dimension representing the width of the score (including initial).

**`\gre@dimen@additionalbottomspace`** *gregoriotex-spaces.tex*

Dimension representing extra space below the staff needed for low notes.

**`\gre@dimen@additionaltopspace`** *gregoriotex-spaces.tex*

Dimension representing extra space above the staff needed for high notes.

**`\gre@dimen@textlower`** *gregoriotex-spaces.tex*

Dimension representing the height of the separation between the 0th line (which is invisible except for notes in the a or b position) and the bottom of the text.

**`\gre@dimen@textaligncenter`** *gregoriotex-spaces.tex*

Dimension representing the width from the beginning of the letters in a syllable to the middle of the middle letters. Used for lining up neumes and syllables.

**`\gre@dimen@additionalleftspace`** *gregoriotex-spaces.tex*

Dimension representing the additional space that has to be added to the localleft-box for a big initial (one taking two lines).

**`\gre@dimen@initialwidth`** *gregoriotex-spaces.tex*

Dimension representing the width of the initial (and the space after).

**`\gre@dimen@currentabovelinestextheight`** *gregoriotex-spaces.tex*

Dimension representing the space allocated above the lines for text.

**`\gre@dimen@staffheight`** *gregoriotex-spaces.tex*

The total height of the staff including the width of the lines and the spaces between them.

**`\gre@dimen@stafflinediff`** *gregoriotex-spaces.tex*

Distance representing the difference between the actual size of the staff lines and the “standard” size.

**`\gre@dimen@stafflineheight`** *gregoriotex-spaces.tex*

The height of the staff line.

**`\gre@dimen@interstafflinespace`** *gregoriotex-spaces.tex*

The space between the lines.

**`\gre@dimen@glyphraisevalue`** *gregoriotex-spaces.tex*

The value that a particular glyph must be raised to be set in the correct position.

**`\gre@dimen@addedraisevalue`** *gregoriotex-spaces.tex*

The additional raise needed for the vertical episema and the puncta.

**`\gre@dimen@enddifference`** *gregoriotex-spaces.tex*

Distance from the end of the notes to the end of the text for the previous syllable. Positive values when notes go further than text, negative in the other case.

**`\gre@dimen@previousenddifference`** *gregoriotex-spaces.tex*

Stored value of enddifference prior to the current one.

**`\gre@skip@nextbegindifference`** *gregoriotex-spaces.tex*

The difference between the start of the notes and the start of the text for the next syllable. Positive when when text begins first, negative in other case.

**`\gre@dimen@begindifference`** *gregoriotex-spaces.tex*

The difference between the start of the notes and the start of the text for the current syllable. Positive when when text begins first, negative in other case.



**\gre@dimen@lastglyphwidth** *gregoriotex-spaces.tex*

The width of the last glyph.

**\gre@dimen@notesaligncenter** *gregoriotex-spaces.tex*

Distance from beginning of notes to their point of alignment.

**\gre@dimen@temp@\*\*** *gregoriotex-spaces.tex*

Temporary dimensions used in calculations. There are currently five of these.

**\gre@skip@temp@\*\*** *gregoriotex-spaces.tex*

Temporary skips used in calculations. There are currently four of these.

**\gre@unit** *gregoriotex-spaces.tex*

Temporary dimension used by \gre@convertto.

**\gre@base** *gregoriotex-spaces.tex*

Temporary dimension used by \gre@convertto.

**\gre@maxlen** *gregoriotex-spaces.tex*

Distance holding the maximum legal length in TeX.

**\gre@dimen@saveditglyphraise** *gregoriotex-signs.tex*

Macro to hold the value of the glyph raise so that it can be restored after some calculations which may change it are performed.

**\gre@skip@eolshift** *gregoriotex-spaces.tex*

The left kern that should appear before an end of line.

**`\gre@dimen@bolshift`** *gregoriotex-spaces.tex*

The left kern that should appear at the beginning of line in case of a forced line break.

**`\gre@dimen@bolextra`** *gregoriotex-spaces.tex*

An extra space that is added to `\gre@dimen@bolshift` when the first glyph is a flat or a natural.

**`\gre@dimen@annotationtrueraise`** *gregoriotex-spaces.tex*

The distance from the baseline of the initial to the baseline of the annotation.

**`\gre@minTextDistance`** *gregoriotex-spaces.tex*

Minimum distance between text (meaningful alias for `\gre@skip@temp@one` inside `\gre@calculate@syllablefinalskip`).

**`\gre@minNotesDistance`** *gregoriotex-spaces.tex*

Minimum distance between notes (meaningful alias for `\gre@skip@temp@two` inside `\gre@calculate@syllablefinalskip`).

**`\gre@curTextDistance`** *gregoriotex-spaces.tex*

Current distance between text (meaningful alias for `\gre@dimen@temp@three` inside `\gre@calculate@syllablefinalskip`).

**`\gre@curNotesDistance`** *gregoriotex-spaces.tex*

Current distance between notes (meaningful alias for `\gre@dimen@temp@four` inside `\gre@calculate@syllablefinalskip`).

**\gre@minShiftText**

*gregoriotex-spaces.tex*

Minimum shift required for the text (meaningful alias for \gre@skip@temp@three inside \gre@calculate@syllablefinalskip).

**\gre@minShiftNotes**

*gregoriotex-spaces.tex*

Minimum shift required for the notes (meaningful alias for \gre@skip@temp@four inside \gre@calculate@syllablefinalskip).

**\gre@save@parfillskip**

*gregoriotex-main.tex*

Macro to store \parfillskip value so that we can restore it at the end of the score (needed to force the last line of a score to be justified).

**\gre@scaledist**

*gregoriotex-spaces.tex*

Working alias for \gre@skip@temp@one or \gre@dimen@temp@one, as appropriate, used when rescaling a distance due to a change in \gre@factor.

**\gre@skip@syllablefinalskip**

*gregoriotex-spaces.tex*

The final distance to skip at the end of a syllable.

## 4.7 Penalties

These are the macros that Gregorio<sub>T</sub><sub>E</sub>X uses to manipulate the penalties in order to control line and page breaks within a score without affect the surrounding text.

**`\gre@penalty#1`**

*gregoriotex-signs.tex*

Top level function that aliases `\gre@truepenalty` or `\gre@falsepenalty` according to whether penalties should be in play or not.

Arg	Value	Description
#1	integer	The penalty to be applied or gobbled

**`\gre@truepenalty#1`**

*gregoriotex-signs.tex*

Alias for `\penalty`.

Arg	Value	Description
#1	integer	The penalty to be applied

**`\gre@falsepenalty#1`**

*gregoriotex-signs.tex*

Macro to gobble (suppress) its argument.

Arg	Value	Description
#1	integer	The penalty to be gobbled

**`\gre@cancelpenalties`**

*gregoriotex-spaces.tex*

Macro called at the beginning of the score to swap text penalties for score penalties.

**`\gre@restorepenalties`** *gregoriotex-spaces.tex*

Macro called at the end of the score to restore the text penalties.

**`\gre@brokenpenaltysave`** *gregoriotex-spaces.tex*

A place to save the current value of the broken penalty so that we can change it temporarily and then restore it later.

**`\gre@clubpenaltysave`** *gregoriotex-spaces.tex*

A place to save the current value of the club penalty so that we can change it temporarily and then restore it later.

**`\gre@widowpenaltysave`** *gregoriotex-spaces.tex*

A place to save the current value of the widow penalty so that we can change it temporarily and then restore it later.

**`\gre@emergencystretchsave`** *gregoriotex-spaces.tex*

A place to save the current value of the emergency stretch so that we can change it temporarily and then restore it later.

**`\gre@endafterbarpenaltysave`** *gregoriotex-main.tex*

A place to save the current value of the end after bar penalty so that we can change it temporarily and then restore it later.

**`\gre@endafterbaraltpenaltysave`** *gregoriotex-main.tex*

A place to save the current value of the alternate end after bar penalty so that we can change it temporarily and then restore it later.

**\gre@endofelementpenaltysave**

*gregoriotex-main.tex*

A place to save the current value of the end of element penalty so that we can change it temporarily and then restore it later.

**\gre@endofsyllablepenaltysave**

*gregoriotex-main.tex*

A place to save the current value of the end of syllable penalty so that we can change it temporarily and then restore it later.

**\gre@endofwordpenaltysave**

*gregoriotex-main.tex*

A place to save the current value of the end of word penalty so that we can change it temporarily and then restore it later.

**\gre@exhyphenpenaltysave**

*gregoriotex-spaces.tex*

A place to save the current value of the ex hyphen penalty so that we can change it temporarily and then restore it later.

**\gre@hyphenpenaltysave**

*gregoriotex-main.tex* and *gregoriotex-spaces.tex*

A place to save the current value of the hyphen penalty so that we can change it temporarily and then restore it later.

**\gre@nobreakpenaltysave**

*gregoriotex-main.tex*

A place to save the current value of the no break penalty so that we can change it temporarily and then restore it later.

**\gre@doublehyphendemeritssave**

*gregoriotex-spaces.tex*

A place to save the current value of the double hyphen demerits so that we can change it temporarily and then restore it later.

**`\gre@finalhyphendemeritssave`**

*gregoriotex-spaces.tex*

A place to save the current value of the final hyphen demerits so that we can change it temporarily and then restore it later.

**`\gre@loosenesssave`**

*gregoriotex-spaces.tex*

A place to save the current value of the looseness so that we can change it temporarily and then restore it later.

**`\gre@tolerancesave`**

*gregoriotex-spaces.tex*

A place to save the current value of the tolerance so that we can change it temporarily and then restore it later.

**`\gre@pretolerancesave`**

*gregoriotex-spaces.tex*

A place to save the current value of the pretolerance so that we can change it temporarily and then restore it later.

## 4.8 $\text{\LaTeX}$ /Plain $\text{\TeX}$ compatibility

While every effort has been made to use only primitives which are compatible with both  $\text{\LaTeX}$  and Plain  $\text{\TeX}$ , it is sometimes necessary to use primitives which are defined for one but not the other (usually its  $\text{\LaTeX}$  that has what we need built in). In these cases we have to provide an equivalent macro to the  $\text{\TeX}$  version which is lacking.

**`\MessageBreak`**

*gregoriotex.tex*

Creates a line break in typeout, warning, bug, and error messages. Copied from  $\text{\LaTeX}$  source.

**`\protect`**

*gregoriotex.tex*

Prints the name of the macro, rather than its contents in typeout, warning, bug, and error messages. Copied from L<sup>A</sup>T<sub>E</sub>X source.

**`\f@size`**

*gregoriotex.tex*

Macro which stores the current font size.

## 5 Special arguments

These arguments are used by multiple functions and take a lot of space to describe so we describe them once here and refer to this section rather than have multiple definitions.

### 5.1 Note Alignment Type

Integer with the following possibilities:	
0	one-note glyph or more than two notes glyph except porrectus : here we must put the aligncenter in the middle of the first note
1	two notes glyph (podatus is considered as a one-note glyph) : here we put the aligncenter in the middle of the glyph
2	porrectus : has a special align center
3	initio-debilis : same as 1 but the first note is much smaller
4	case of a glyph starting with a quilisma
5	case of a glyph starting with an oriscus
6	case of a punctum inclinatum
7	case of a strophæ
8	flexus with an ambitus of one
9	flexus deminutus
10	virgula
11	divisio minima, minor and maior
12	divisio finalis



## 5.2 Episema Special

---

String with the following possibilities:

---

**FinalPunctum** Last note, which is a standard punctum (works with pes).

**FinalDeminutus** Same, but the last note is a deminutus.

**PenultBeforePunctumWide** The note before the last note, which is a standard punctum.

**PenultBeforeDeminutus** Idem, but the note is the note preceding a deminutus.

**AntepenultBeforePunctum** The note before the note before the last note (for correctus flexus).

**AntepenultBeforeDeminutus** Idem, but when the two last notes are a deminutus.

**InitialPunctum** The first note, if it is a standard punctum.

**InitioDebilis** The first note, if it is an initio debilis.

**PorrNonAuctusInitialWide** first note of a non-auctus porrectus with a second ambitus of at least two.

**PorrNonAuctusInitialOne** first note of a non-auctus porrectus with a second ambitus of one

**PorrAuctusInitialAny** first note of an auctus porrectus, regardless of second ambitus

**FinalInclinatum** punctum inclinatum as last note

**FinalInclinatumDeminutus** punctum inclinatum deminutus as last note

**FinalStropha** stropha as last note

**FinalQuilisma** quilisma as last note

**FinalOriscus** oriscus as last note

**PenultBeforePunctumOne** second-to-last note, with a second ambitus of one, when last note is a standard punctum (like the second note of ghg)

**FinalUpperPunctum** “upper smaller punctum” as last note (concerning simple podatus, podatus, and torculus resupinus)

**InitialOriscus** oriscus as first note, disconnected from next note

**InitialQuilisma** quilisma as first note, disconnected from next note

**TorcResNonAuctusSecondWideWide** second note of a non-auctus torculus resupinus starting with a punctum, with a first and second ambitus of at least two

**TorcResNonAuctusSecondOneWide** second note of a non-auctus torculus resupinus starting with a punctum, with a first ambitus of one and a second ambitus of at least two

**TorcResDebilisNonAuctusSecondAnyWide** second note of a non-auctus torculus resupinus initio debilis with any first ambitus and a second ambitus of at least two

**FinalLineaPunctum** linea punctum (cavum) as last note

**BarStandard** standard bar

**BarVirgula** virgula

**BarDivisioFinalis** divisio finalis

**TorcResQuilismaNonAuctusSecondWideWide** second note of a non-auctus torculus resupinus starting with a quilisma, with a first and second ambitus of at least two

**TorcResOriscusNonAuctusSecondWideWide** second note of a non-auctus torculus resupinus starting with an oriscus, with a first and second ambitus of at least two

**TorcResQuilismaNonAuctusSecondOneWide** second note of a non-auctus torculus resupinus starting with a quilisma, with a first ambitus of one and and second ambitus of at least two

**TorcResOriscusNonAuctusSecondOneWide** second note of a non-auctus torculus resupinus starting with an oriscus, with a first ambitus of one and and second ambitus of at least two

**TorcResNonAuctusSecondWideOne** second note of a non-auctus torculus resupinus starting with a punctum, with a first ambitus of at least two and a second ambitus of one

**TorcResDebilisNonAuctusSecondAnyOne** second note of a non-auctus torculus resupinus initio debilis with any first ambitus and a second ambitus of one

**TorcResQuilismaNonAuctusSecondWideOne** second note of a non-auctus torculus resupinus starting with a quilisma, with a first ambitus of at least two and a second ambitus of one

**TorcResOriscusNonAuctusSecondWideOne** second note of a non-auctus torculus resupinus starting with an oriscus, with a first ambitus of at least two and a second ambitus of one

**TorcResNonAuctusSecondOneOne** second note of a non-auctus torculus resupinus starting with a punctum, with a first and second ambitus of one

**TorcResQuilismaNonAuctusSecondOneOne** second note of a non-auctus torculus resupinus starting with a quilisma, with a first and second ambitus of one

**TorcResOriscusNonAuctusSecondOneOne** second note of a non-auctus torculus resupinus starting with an oriscus, with a first and second ambitus of one

**TorcResAuctusSecondWideAny** second note of an auctus torculus resupinus starting with a punctum, with a first ambitus of at least two and any second ambitus

**TorcResDebilisAuctusSecondAnyAny** second note of an auctus torculus resupinus initio debilis with any first and second ambitus

**TorcResQuilismaAuctusSecondWideAny** second note of an auctus torculus resupinus starting with a quilisma, with a first ambitus of at least two and any second ambitus

**TorcResOriscusAuctusSecondWideAny** second note of an auctus torculus resupinus starting with an oriscus, with a first ambitus of at least two and any second ambitus

**TorcResAuctusSecondOneAny** second note of an auctus torculus resupinus starting with a punctum, with a first ambitus of one and any second ambitus

**TorcResQuilismaAuctusSecondOneAny** second note of an auctus torculus resupinus starting with a quilisma, with a first ambitus of one and any second ambitus

**TorcResOriscusAuctusSecondOneAny** second note of an auctus torculus resupinus starting with an oriscus, with a first ambitus of one and any second ambitus

**ConnectedPenultBeforePunctumWide** second-to-last note connected to prior note, with a second ambitus of at least two, when last note is a standard punctum (like the second note of *gig*)

**ConnectedPenultBeforePunctumOne** second-to-last note connected to prior note, with a second ambitus of one, when last note is a standard punctum (like the second note of *gih*)

**InitialConnectedPunctum** standard punctum as first note, connected to next higher note

**InitialConnectedVirga** “virga” as first note, connected to next lower note

**InitialConnectedQuilisma** quilisma as first note, connected to next higher note

**InitialConnectedOriscus** oriscus as first note, connected to next higher note

**FinalConnectedPunctum** punctum as last note, connected to prior higher note

**FinalConnectedAuctus** auctus as last note, connected to prior lower note

**FinalVirgaAuctus** virga aucta as last note

**FinalConnectedVirga** “virga” as last note, connected to prior lower note

**InitialVirga** “virga” as first note, disconnected from next note

## 6 The GABC File

`gabc` is a simple notation based exclusively on ASCII characters that enables the user to describe Gregorian chant scores. The name *gabc* was given in reference to the `ABC` notation for modern music.

The `gabc` notation was developed by a monk of the `Abbey of Sainte Madeleine du Barroux` and has been improved by Élie Roux and by other monks of the same abbey to produce the best possible notation.

This section will cover the elements of a `gabc` file.

## 6.1 File Structure

Files written in gabc have the extension .gabc and have the following structure:

```
1 name: incipit;
2 gabc-copyright: copyright on this gabc file;
3 score-copyright: copyright on the source score;
4 office-part: introitus/...;
5 occasion: in church calendar;
6 meter: for metrical hymns;
7 commentary: source of words;
8 arranger: name of arranger;
9 author: if known;
10 date: xi c;
11 manuscript: ms name;
12 manuscript-reference: e.g. CAO reference;
13 manuscript-storage-place: library/monastery;
14 book: from which score taken;
15 transcriber: writer of gabc;
16 transcription-date: 2009;
17 language: latin;
18 initial-style: 1;
19 user-notes: whatever other comments you wish to make;
20 mode: 6;
21 annotation: IN.;
22 annotation: 6;
23 %%
24 (clef) text(notes)
```

In each case, replace whatever is between the colon and semi-colon (: . . . ;) with the appropriate character string. Of these attributes, only name is mandatory. Descriptions of how these header fields are intended to be used are below. If you wish to write a value over several lines, omit the semicolon at the end of the first line, and end the attribute value with ; ; (two semicolons).

## 6.2 Header

Here is a detailed description of each header field:

**name** This is the name of the piece, in almost all cases the incipit, the first few words. In the case of the mass ordinary, the form as Kyrie X Alme Pater or Sanctus XI is recommended where appropriate. **This field is required.**

**gabc-copyright** This license is the copyright notice (in English) of the gabc file, as chosen by the person named in the transcriber field. As well as the notice itself, it may include a brief description of the license, such as public domain, CC-by-sa; for a list of commonly found open source licenses and exceptions, please see <https://spdx.org/licenses/>. A separate text file will be necessary for the complete legal license. For the legal issues about Gregorian chant scores, please see <http://gregorio-project.github.io/legalissues>. An example of this field would be:

```
1 gabc-copyright: CC0-1.0 by Elie Roux , 2009 <http://creativecommons.org/
```

**score-copyright** This license is the copyright notice (in English) of the score itself from which the gabc was transcribed. Like the gabc-copyright, there may be a brief description of the license too. In unclear or complex cases it may be omitted; it is most suitable for use when the transcriber is the copyright holder and licensor of the score as well. One again, reading the page on legal issues (linked above) is recommended. An example of this field would be:

```
1 score-copyright: (C) Abbaye de Solesmes , 1934;
```

**office-part** The office-part is the category of chant (in Latin), according to its liturgical rôle. Examples are: antiphona, hymnus, responsorium brevium, responsorium prolixum, introitus, graduale, tractus, offertorium, communio, kyrie, gloria, credo, sanctus, benedictus, agnus dei.

**occasion** The occasion is the liturgical occasion, in Latin. For example, Dominica II Adventus, Commune doctorum, Feria secunda.

**meter** For hymns and anything else with repetitive stanzas, the meter, the numbers of syllables in each line of a stanza. For example, 8.8.8.8 for typical Ambrosian-style hymns: 4 lines each of 8 syllables.

**commentary** This is intended for notes about the source of the text, such as references to the Bible.

- arranger** The name of a modern arranger, when a traditional chant melody has been adapted for new words, or when a manuscript is transcribed into square notation. This may be a corporate name, like Solesmes.
- author** The author of the piece, if known; of course, the author of most traditional chant is not known.
- date** The date of composition, or the date of earliest attestation. With most traditional chant, this will only be approximate; e.g. XI. s. for eleventh century. The convention is to put it with the latin style, like the previous examples (capital letters, roman numerals, s for seculum and the dots).
- manuscript** For transcriptions direct from a manuscript, the text normally used to identify the manuscript, for example Montpellier H.159
- manuscript-reference** A unique reference for the piece, according to some well-known system. For example, the reference beginning *cao* in the *Cantus* database of office chants. If the reference is unclear as to which system it uses, it should be prefixed by the name of the system. Note that this should be a reference identifying the piece, not the manuscript as a whole; anything identifying the manuscript as a whole should be put in the manuscript field.
- manuscript-storage-place** For transcriptions direct from a manuscript, where the manuscript is held; e.g. Bibliothèque Nationale, Paris.
- book** For transcriptions from a modern book (such as Solesmes editions; modern goes back at least to the 19th century revival), the name of the book; e.g. *Liber Usualis*.
- transcriber** The name of the transcriber into gabc.
- transcription-date** The date the gabc was written, with the following convention *yyyymmdd*, like 20090129 for january the 29th 2009.
- language** The language of the lyrics.
- initial-style** The style of the initial letter. 0 means no initial letter, 1 a normal one, and 2 a large one, on two lines. Note that if you want to use the initial on two lines, you have to specify at least the two first line breaks.
- user-notes** This may contain any text in addition to the other headers – any notes the transcriber may wish. However, it is recommended to use the specific header fields where they are suitable, so that it is easier to find particular information.



**mode** The mode of the piece. This should normally be an arabic number between 1 and 8, but may be any text required for unusual cases. The mode number will be converted to roman numerals and placed above the initial unless one of the following conditions are met:

- There is a `\greannotation` defined immediatly prior to `\gregorioscore`.
- The annotation header field is defined.

**annotation** The annotation is the text to appear above the initial letter. Usually this is an abbreviation of the office-part in the upper line, and an indication of the mode (and differentia for antiphons) in the lower. Either one or two annotation fields may be used; if two are used, the first is the upper line, the second the lower. Example:

```
1 annotation:Ad Magnif.;  
2 annotation:VIII G;
```

Full  $\text{\TeX}$  markup is accepted:

```
1 annotation:{\color{red}Ad Magnif.};  
2 annotation:{\color{red}VIII G};
```

If the user already defined annotation(s) in the main  $\text{\TeX}$  file via `\greannotation` then the annotation header field will not overwrite that definition.

### 6.3 Lyric Centering

Gregorio centers the text of each syllable around the first note of each syllable. There are three basic modes: `syllable`, `vowel`, and `firstletter`, which are selected with the command `\gresetlyriccentering{<mode>}`. In `syllable` mode, the entire syllable is centered around the first note. This is common in modern music. In `vowel` mode, the vowel sound of the syllable is centered around the first note. This is common in most Gregorian chant books with text in Latin. In `firstletter` mode, the first letter of the syllable is centered around the first note. While not a common choice, this was explicitly requested by a user and we try to be responsive to our user base.

The default rules built into Gregorio for `vowel` mode are for Ecclesiastical Latin and work fairly well (though not perfectly) for other languages (especially Romance languages). However, Gregorio provides a `gabc` language header which allows the language of the lyrics to be set. Gregorio will look for a file named `gregorio-vowels.dat` in your working directory or amongst the GregorioTeX files. If it finds the requested language (matched in a *case-sensitive* fashion) in one of these files (henceforth called vowel files), Gregorio will use the rules contained within for vowel centering. If it cannot find the requested language in any of the vowel files or is unable to parse the rules, Gregorio will fall back on the Latin rules. If multiple vowel files have the desired language, Gregorio will use the first matching language section in the first matching file, according to Kpathsea order. You may wish to enable verbose output (by passing the `-v` argument to `gregorio`), if there is a problem, for more information.

The vowel file is a list of statements, each starting with a keyword and ending with a semicolon (;). Multiple statements with the same keyword are allowed, and all will apply. Comments start with a hash symbol (#) and end at the end of the line.

In general, Gregorio does no case folding, so the keywords and language names are case-sensitive and both upper- and lower-case characters should be listed after the keywords if they should both be considered in their given categories.

The keywords are:

**alias** The `alias` keyword indicates that a given name is an alias for a given language. The `alias` keyword must be followed by the name of the alias (enclosed in square brackets), the `to` keyword, the name of the target language (enclosed in square brackets), and a semicolon. Since `gregorio` reads

the vowel files sequentially, aliases should precede the language they are aliasing, for best performance.

**language** The language keyword indicates that the rules which follow are for the specified language. It must be followed by the language name, enclosed in square brackets, and a semicolon. The language specified applies until the next language statement.

**vowel** The vowel keyword indicates that the characters which follow, until the next semicolon, should be considered vowels.

**prefix** The prefix keyword lists strings of characters which end in a vowel, but when followed by a sequence of vowels, *should not* be considered part of the vowel sound. These strings follow the keyword and must be separated by space and end with a semicolon. Examples of prefixes include *i* and *u* in Latin and *qu* in English.

**suffix** The suffix keyword lists strings of characters which don't start with a vowel, but when appearing after a sequence of vowels, *should* be considered part of the vowel sound. These strings follow the keyword and must be separated by space and end with a semicolon. Examples of suffixes include *w* and *we* in English and *y* in Spanish.

**secondary** The "secondary" keyword lists strings of characters which do not contain vowels, but for which, when there are no vowels present in a syllable, define the center of the syllable. These strings follow the keyword and must be separated by space and end with a semicolon. Examples of secondary sequences include *w* from Welsh loanwords in English and the syllabic consonants *l* and *r* in Czech.

By way of example, here is a vowel file that works for English:

```
1 alias [english] to [English];
2
3 language [English];
4
5 vowel aàáAÀÁ;
6 vowel eèéëEÈÉË;
7 vowel iìíIÎÍ;
8 vowel oòóOÏÓ;
9 vowel uùúUÛÚ;
10 vowel yýYÝ;
11 vowel æÆ;
```

```
12 vowel æE;  
13  
14 prefix qu Qu qU QU;  
15 prefix y Y;  
16  
17 suffix w W;  
18 suffix we We wE WE;  
19  
20 secondary w W;
```

# Appendix A    Font Glyph Tables

## A.1    Score Font Glyphs

The following table lists all of the score glyphs available in the greciliae, gregorio, and parmesan fonts, and any variant glyphs contained within. If a variant glyph is unavailable in a given font, it will be listed as *N/A* under the appropriate column. Some of the glyphs listed are representative of sets of glyphs differentiated by the ambitus of the component notes. These are listed with English words for the numbers in italics, such as *TwoTwo*. The gabc column lists a gabc sequence that uses the given glyph. If there are small, slanted characters, such as *gege* in this column, they produce glyphs additional to the given glyph, but are necessary for the given glyph to appear. Note: glyphs for the horizontal episema (activated using *\_* in gabc) are excluded from this table.

156





































































Table A1: Score Glyphs								
Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan
Accentus	(gr1)	,	,	,				
AccentusReversus	(gr2)	\	\	\				
AncusTwoTwoDeminutus	(gec~)							
AncusLongqueueTwoTwoDeminutus	(hfd~)							
AuctumMora	(g.)	.	.	.				
BarBrace	(,_)	(	(	(				
CClef	(c3)							
CClefChange	(c3)							
Circulus	(gr3)	o	o	o				

Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan
CurlyBrace	([ocb:1;6mm])							
CustosDownLong	(j+)	↓	↓	↓				
CustosDownMedium	(m+)	↓	↓	↓				
CustosDownShort	(k+)	↓	↓	↓				
CustosUpLong	(f+)	↓	↓	↓				
CustosUpMedium	(a+)	↓	↓	↓				
CustosUpShort	(g+)	↓	↓	↓				
DivisioDominican	(, 3)							
DivisioDominicanAlt	(, 4)							
DivisioMaior	(:)							
DivisioMinima	(, )							
DivisioMinor	(;)							
FClef	(f3)	✠	✠	✠				
FClefChange	(f3)	✠	✠	✠				
Flat	(gx)	♭	♭	♭				
FlatHole	( <i>gx</i> )	˘	˘	˘				
FlexusTwoAscendens	(ge<)	↗	↗	↗				
FlexusTwoDeminutus	(ge~)	↗	↗	↗				
FlexusTwoDescendens	(ge>)	↘	↘	↘				
FlexusTwoNothing	(ge)	↗	↗	↗				
FlexusLongqueueTwoAscendens	(hf<)	↗	↗	↗				
FlexusLongqueueTwoDeminutus	(hf~)	↗	↗	↗				
FlexusLongqueueTwoDescendens	(hf>)	↘	↘	↘				

Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan
FlexusLongqueue <i>Two</i> Nothing	(hf)							
FlexusOriscus <i>Two</i> Ascendens	(goe<)							
FlexusOriscus <i>Two</i> Deminutus	(goe~)							
FlexusOriscus <i>Two</i> Descendens	(goe>)							
FlexusOriscus <i>Two</i> Nothing	(goe)							
FlexusOriscusScapus <i>Two</i> Ascendens	(g0e<)							
FlexusOriscusScapus <i>Two</i> Descendens	(g0e>)							
FlexusOriscusScapus <i>Two</i> Nothing	(g0e)							
FlexusOriscusScapusLongqueue <i>Two</i> Ascendens	(h0f<)							
FlexusOriscusScapusLongqueue <i>Two</i> Descendens	(h0f>)							
FlexusOriscusScapusLongqueue <i>Two</i> Nothing	(h0f)							
LeadingOriscus <i>Two</i>	(go <sub>igig</sub> )							
LeadingPunctum <i>Two</i>	(g <sub>igig</sub> )							
LeadingPunctum <i>Two</i> InitioDebilis	(-g <sub>igig</sub> )							
LeadingQuilisma <i>Two</i>	(gw <sub>igig</sub> )							
Linea	(g=)							
LineaPunctum	(gR)							
LineaPunctumCavum	(gr $\emptyset$ )				.caeciliae		N/A	N/A
LineaPunctumCavumHole	(gr $\emptyset$ )				.caeciliae		N/A	N/A
Natural	(gy)							
NaturalHole	(g <sub>y</sub> )							
Oriscus	(go)							

Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan
OriscusDeminutus	(go~)	𐌵	𐌵	𐌵	.caeciliae	𐌵	N/A	N/A
OriscusReversus	(go<)	𐌵	𐌵	𐌵				
OriscusScapus	(g0)	𐌵	𐌵	𐌵				
OriscusScapusLongqueue	(h0)	𐌵	𐌵	𐌵				
PesTwoDeminutus	(gi~)	𐌶	𐌶	𐌶				
PesTwoNothing	(gi)	𐌶	𐌶	𐌶				
PesTwoInitioDebilis	(-gi)	𐌶	𐌶	𐌶				
PesTwoInitioDebilisDeminutus	(-gi~)	𐌶	𐌶	𐌶				
PesQuadratumTwoAscendens	(gqi<)	𐌷	𐌷	𐌷				
PesQuadratumTwoDescendens	(gqi>)	𐌷	𐌷	𐌷				
PesQuadratumTwoNothing	(gqi)	𐌷	𐌷	𐌷				
PesQuadratumTwoInitioDebilisAscendens	(-gqi<)	𐌷	𐌷	𐌷				
PesQuadratumTwoInitioDebilisDescendens	(-gqi>)	𐌷	𐌷	𐌷				
PesQuadratumLongqueueTwoNothing	(hqj)	𐌷	𐌷	𐌷				
PesQuassusTwoAscendens	(goi<)	𐌸	𐌸	𐌸				
PesQuassusTwoDeminutus	(goi~)	𐌸	𐌸	𐌸				
PesQuassusTwoDescendens	(goi>)	𐌸	𐌸	𐌸				
PesQuassusTwoNothing	(goi)	𐌸	𐌸	𐌸				
PesQuassusLongqueueTwoNothing	(hoj)	𐌸	𐌸	𐌸				
PesQuilismaTwoDeminutus	(gwi~)	𐌹	𐌹	𐌹				
PesQuilismaTwoNothing	(gwi)	𐌹	𐌹	𐌹				
PesQuilismaQuadratumTwoAscendens	(gWi<)	𐌹	𐌹	𐌹				
PesQuilismaQuadratumTwoDescendens	(gWi>)	𐌹	𐌹	𐌹				
PesQuilismaQuadratumTwoNothing	(gWi)	𐌹	𐌹	𐌹				



Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan
PesQuilismaQuadratumLongqueueTwoNothing	(hWj)							
PorrectusTwoTwoAscendens	(geg<)							
PorrectusTwoTwoDeminutus	(geg~)				.alt		N/A	N/A
PorrectusTwoTwoDescendens	(geg>)							
PorrectusTwoTwoNothing	(geg)							
PorrectusFlexusTwoTwoTwoAscendens	(gege<)							
PorrectusFlexusTwoTwoTwoDeminutus	(gege~)							
PorrectusFlexusTwoTwoTwoDescendens	(gege>)							
PorrectusFlexusTwoTwoTwoNothing	(gege)							
PorrectusFlexusNobarTwoTwoTwoAscendens	(egege<)							
PorrectusFlexusNobarTwoTwoTwoDeminutus	(egege~)							
PorrectusFlexusNobarTwoTwoTwoDescendens	(egege>)							
PorrectusFlexusNobarTwoTwoTwoNothing	(egege)							
PorrectusNobarTwoTwoAscendens	(eogeg<)							
PorrectusNobarTwoTwoDeminutus	(eogeg~)							
PorrectusNobarTwoTwoDescendens	(eogeg>)							
PorrectusNobarTwoTwoNothing	(eogeg)							
Punctum	(g)							
PunctumAscendens	(g<)							
PunctumDeminutus	(g~)							
PunctumDescendens	(g>)							
PunctumCavum	(gr)				.caeciliae		N/A	N/A

Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan
PunctumCavumHole	( <i>gr</i> )	▪	▪	▪	.caeciliae	•	N/A	N/A
PunctumCavumInclinatum		◊	◊	◊				
PunctumCavumInclinatumAuctus		◊	◊	◊				
PunctumCavumInclinatumAuctusHole		•	•	•				
PunctumCavumInclinatumHole		•	•	•				
PunctumInclinatum	(G)	◆	◆	◆				
PunctumInclinatumDeminutus	(G~)	◆	•	•				
PunctumInclinatumAuctus	(G>)	◆	◆	◆	.caeciliae	◆	N/A	N/A
Quilisma	(gw)	#	#	#				
RoundBrace	([ob:1;6mm])	(	(	(				
RoundBraceDown	([ub:1;6mm])	)	)	)				
Salicus <i>TwoTwo</i> Ascendens	(gi0k<)	↗	↗	↗				
Salicus <i>TwoTwo</i> Deminutus	(gi0k~)	↗	↗	↗				
Salicus <i>TwoTwo</i> Descendens	(gi0k>)	↘	↘	↘				
Salicus <i>TwoTwo</i> Nothing	(gi0k)	↗	↗	↗				
SalicusLongqueue <i>TwoTwo</i> Nothing	(hj0l)	↗	↗	↗				
Scandicus <i>TwoTwo</i> Deminutus	(gik~)	↗	↗	↗				
Scandicus <i>TwoTwo</i> Nothing	(gik)	↗	↗	↗				
Semicirculus	( <i>gr</i> 4)	˘	˘	˘				
SemicirculusReversus	( <i>gr</i> 5)	˘	˘	˘				
Sharp	(g#)	✕	✕	✕				
SharpHole	( <i>gr</i> #)	˘	˘	˘				

Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan
Strophæ	(gs)	ꝰ	ꝰ	ꝰ	.caeciliae	ꝰ	N/A	N/A
StrophæAucta	(gs>)	ꝰ	ꝰ	ꝰ	.caeciliae	ꝰ	N/A	N/A
Torculus <i>TwoTwo</i> Ascendens	(gig<)	ꝰ	ꝰ	ꝰ				
Torculus <i>TwoTwo</i> Deminutus	(gig~)	ꝰ	ꝰ	ꝰ				
Torculus <i>TwoTwo</i> Descendens	(gig>)	ꝰ	ꝰ	ꝰ				
Torculus <i>TwoTwo</i> Nothing	(gig)	ꝰ	ꝰ	ꝰ				
Torculus <i>TwoTwo</i> InitioDebilis	(-gig)	ꝰ	ꝰ	ꝰ				
Torculus <i>TwoTwo</i> InitioDebilisAscendens	(-gig<)	ꝰ	ꝰ	ꝰ				
Torculus <i>TwoTwo</i> InitioDebilisDeminutus	(-gig~)	ꝰ	ꝰ	ꝰ				
Torculus <i>TwoTwo</i> InitioDebilisDescendens	(-gig>)	ꝰ	ꝰ	ꝰ				
TorculusLiquescens <i>TwoTwoTwo</i> Deminutus	(gige~)	ꝰ	ꝰ	ꝰ				
TorculusLiquescensQuilisma <i>TwoTwoTwo</i> Deminutus	(gwig~)	ꝰ	ꝰ	ꝰ				
TorculusQuilisma <i>TwoTwo</i> Ascendens	(gwig<)	ꝰ	ꝰ	ꝰ				
TorculusQuilisma <i>TwoTwo</i> Deminutus	(gwig~)	ꝰ	ꝰ	ꝰ				
TorculusQuilisma <i>TwoTwo</i> Descendens	(gwig>)	ꝰ	ꝰ	ꝰ				
TorculusQuilisma <i>TwoTwo</i> Nothing	(gwig)	ꝰ	ꝰ	ꝰ				
TorculusResupinus <i>TwoTwoTwo</i> Ascendens	(gigi<)	ꝰ	ꝰ	ꝰ				
TorculusResupinus <i>TwoTwoTwo</i> Deminutus	(gigi~)	ꝰ	ꝰ	ꝰ	.alt	ꝰ	N/A	N/A
TorculusResupinus <i>TwoTwoTwo</i> Descendens	(gigi>)	ꝰ	ꝰ	ꝰ				
TorculusResupinus <i>TwoTwoTwo</i> Nothing	(gigi)	ꝰ	ꝰ	ꝰ				
TorculusResupinus <i>TwoTwoTwo</i> InitioDebilis	(-gigi)	ꝰ	ꝰ	ꝰ				
TorculusResupinus <i>TwoTwoTwo</i> InitioDebilisAscendens	(-gigi<)	ꝰ	ꝰ	ꝰ				
TorculusResupinus <i>TwoTwoTwo</i> InitioDebilisDeminutus	(-gigi~)	ꝰ	ꝰ	ꝰ	.alt	ꝰ	N/A	N/A
TorculusResupinus <i>TwoTwoTwo</i> InitioDebilisDescendens	(-gigi>)	ꝰ	ꝰ	ꝰ				

Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan
TorculusResupinusQuilismaTwoTwoTwoAscendens	(gwiki<)							
TorculusResupinusQuilismaTwoTwoTwoDeminutus	(gwiki~)				.alt		N/A	N/A
TorculusResupinusQuilismaTwoTwoTwoDescendens	(gwiki>)							
TorculusResupinusQuilismaTwoTwoTwoNothing	(gwiki)							
VEpisema	(g')	,	,	,	.circumflexus	^	N/A	N/A
Virga	(gv)							
VirgaLongqueue	(hv)							
VirgaReversa	(gV)							
VirgaReversaAscendens	(gV<)							
VirgaReversaDescendens	(gV>)							
VirgaReversaLongqueue	(hV)							
VirgaReversaLongqueueAscendens	(hV<)							
VirgaReversaLongqueueDescendens	(hV>)							
VirgaStrataTwoNothing	(gi0)							
Virgula	(')	,	,	,				























## A.2 Dominican Score Font Glyphs




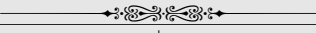

The following table lists all of the score glyphs available in the Dominican versions of the greciliae, gregorio, and parmesan fonts in the same vein as the prior table.

A.3 Extra Glyphs

The following table lists the glyphs available in the greextra font. There are score glyphs which may be substituted into the score, text glyphs meant to be used in the verses or in the  $\text{\TeX}$  document, and miscellaneous glyphs like decorative lines for more specialized use.

Table A2: Score Glyphs								
Glyph Name	gabc	greciliae	gregorio	parmesan	Variants			
					Name	greciliae	gregorio	parmesan

Table A3: Extra Glyphs			
Glyph Name	Glyph	Glyph Name	Glyph
ABar		ABarCaption	
ABarCaptionSC		ABarCaptionSlant	
ABarSC		ABarSlant	
ABarSmall		ABarSmallSC	
ABarSmallSlant		Bar.alt	
Cross		Cross.alt	
Dagger		Drawing1	
Drawing2		HufnagelCClef	
HufnagelCClefChange		HufnagelCFClefChange	
HufnagelCustosDownLong		HufnagelCustosDownMedium	
HufnagelCustosDownShort		HufnagelCustosUpLong	

Glyph Name	Glyph	Glyph Name	Glyph
HufnagelCustosUpMedium	✓	HufnagelCustosUpShort	✓
HufnagelFClef	<b>f</b>	HufnagelFClefChange	<b>f</b>
HufnagelFlat	♭	HufnagelFlatHole	.
HugnagelCFClef	<b>f</b>	Line1	
Line2		Line3	
Line4		Line5	
MedicaeaCClef	<b>z</b>	MedicaeaCClefChange	<b>z</b>
MedicaeaCustosDownLong	⋈	MedicaeaCustosDownMedium	⋈
MedicaeaCustosDownShort	⋈	MedicaeaCustosUpLong	⋈
MedicaeaCustosUpMedium	⋈	MedicaeaCustosUpShort	⋈
MedicaeaFClef	<b>z</b>	MedicaeaFClefChange	<b>z</b>
MedicaeaFlat	♭	MedicaeaFlatHole	.
MensuralCustosDownLong	⋈	MensuralCustosDownMedium	⋈
MensuralCustosDownShort	⋈	MensuralCustosUpLong	⋈
MensuralCustosUpMedium	⋈	MensuralCustosUpShort	⋈
MensuralFlat	♭	MensuralFlatHole	.
RBar	⋈	RBar.alt	⋈
RBar.alt2	⋈	RBarCaption	⋈
RBarCaptionSC	⋈	RBarCaptionSlant	⋈
RBarSC	⋈	RBarSlant	⋈
RBarSmall	⋈	RBarSmallSC	⋈
RBarSmallSlant	⋈	RWithBarGoth	<b>z</b>
StarHeight	*	StarSix	*
VBar	⋈	VBar.alt	⋈
VBar.alt2	⋈	VBarCaption	⋈

Glyph Name	Glyph	Glyph Name	Glyph
VBarCaptionSC	/	VBarCaptionSlant	/
VBarSC	/	VBarSlant	/
VBarSmall	/	VBarSmallSC	/
VBarSmallSlant	/	VWithBarGoth	Œ

## Index

\GreAccentus, 53  
\GreAdditionalLine, 54  
\GreAdjustSecondLine, 54  
\GreAdjustThirdLine, 54  
\GreAnnotationLines, 52  
\GreAugmentumDuplex, 54  
\GreBarBrace, 55  
\GreBarSyllable, 55  
\GreBarVEpisema, 56  
\GreBeginEUOUAE, 56  
\GreBeginNLBArea, 56  
\GreBeginNotes, 56  
\GreBeginScore, 53  
\GreBold, 56  
\GreCP..., 58  
\GreCPVirgaReversaAscendensOnDLine, 57  
\GreChangeClef, 57  
\GreCirculus, 57  
\GreColored, 57  
\GreCustos, 58  
\GreDagger, 58  
\GreDiscretionary, 58  
\GreDivisioFinalis, 59  
\GreDivisioMaior, 59  
\GreDivisioMinima, 59  
\GreDivisioMinor, 59  
\GreDominica, 60  
\GreEndEUOUAE, 60  
\GreEndNLBArea, 61  
\GreEndOfElement, 60  
\GreEndOfGlyph, 61  
\GreEndScore, 53  
\GreFinalCustos, 62  
\GreFinalDivisioFinalis, 62  
\GreFinalDivisioMaior, 62  
\GreFirstSyllable, 62  
\GreFirstSyllableInitial, 63  
\GreFirstWord, 63  
\GreFlat, 63  
\GreForceBreak, 81  
\GreForceHyphen, 63  
\GreFuseTwo, 64  
\GreGlyph, 64  
\GreGlyphHeights, 65  
\GreHEpisema, 65  
\GreHEpisemaBridge, 66  
\GreHighChoralSign, 67  
\GreHyph, 67  
\GreInDivisioFinalis, 67  
\GreInDivisioMaior, 67  
\GreInDivisioMinima, 67  
\GreInDivisioMinor, 67  
\GreInDominica, 67  
\GreInVirgula, 68  
\GreItalic, 68  
\GreLastOfLine, 68  
\GreLastOfScore, 68  
\GreLinea, 68  
\GreLineaPunctumCavum, 69  
\GreLowChoralSign, 69  
\GreMode, 69  
\GreNABCChar, 82  
\GreNABCNeumes, 82  
\GreNatural, 70  
\GreNewLine, 70  
\GreNewParLine, 70  
\GreNextCustos, 70  
\GreNoBreak, 82  
\GreNoInitial, 70  
\GreOverBrace, 71  
\GreOverCurlyBrace, 71  
\GrePunctumCavum, 72  
\GrePunctumCavumInclinatum, 72  
\GrePunctumCavumInclinatumAuctus, 73



`\GrePunctumMora`, 73  
`\GreReversedAccentus`, 74  
`\GreReversedSemicirculus`, 74  
`\GreScoreId`, 82  
`\GreScoreNABCLines`, 82  
`\GreScoreReference`, 74  
`\GreSemicirculus`, 74  
`\GreSetBigInitial`, 74  
`\GreSetFixedNextTextFormat`, 75  
`\GreSetFixedTextFormat`, 75  
`\GreSetInitial`, 75  
`\GreSetInitialClef`, 76  
`\GreSetLinesClef`, 76  
`\GreSetNextSyllable`, 76  
`\GreSetTextAboveLines`, 77  
`\GreSetThisSyllable`, 77  
`\GreSharp`, 77  
`\GreSmallCaps`, 78  
`\GreStar`, 78  
`\GreSyllable`, 78  
`\GreTilde`, 79  
`\GreTranslationCenterEnd`, 79  
`\GreTypewriter`, 79  
`\GreUnderBrace`, 79  
`\GreUnderline`, 79  
`\GreUnstyled`, 80  
`\GreVEpisema`, 80  
`\GreVarBraceLength`, 80  
`\GreVarBraceSavePos`, 80  
`\GreVirgula`, 81  
`\GreWriteTranslation`, 81  
`\GreWriteTranslationWithCenterBeginning`, 81  
`\GreZeroHyph`, 81  
`\GregorioTeXAPIVersion`, 65  
`\MessageBreak`, 142  
size, 143  
`\gabcsnippet`, 10  
additionalbottomcustoslineend, 95  
additionalbottomcustoslinemiddle, 95  
additionaltopcustoslineend, 96  
additionaltopcustoslinemiddle, 96  
addspaceabove, 96  
addtranslationspace, 84  
alteration, 97  
annotation, 108  
atletter, 109  
base, 136  
basefactor, 90  
baseunit, 109  
biginitial, 127  
brokenpenaltysave, 140  
bug, 109  
cancelpenalties, 139  
changedimenfactor, 89  
changeonedimenfactor, 89  
changestyle, 109  
clefflat, 97  
clefnum, 97  
clivisalignment, 128  
clubpenaltysave, 140  
compilegabc, 129  
computespaces, 87  
consistentunits, 91  
convert, 111  
converted, 91  
convertto, 91  
curNotesDistance, 137  
currenttextabovelines, 97  
curTextDistance, 137  
debug, 111  
debugmsg, 111  
declarefileversion, 111  
deprecated, 84  
dimension, 119  
dottranslationcenterend, 98  
doublehyphendemeritssave, 141  
drawfirstlines, 98  
emergencystretchesave, 140  
endafterbar, 99  
endafterbaraltpenaltysave, 140  
endafterbarpenaltysave, 140

endofelementpenaltysave, 141  
 endofsyllable, 99  
 endofsyllablepenaltysave, 141  
 endofwordpenaltysave, 141  
 endsyllablepart, 113  
 error, 83  
 exhyphencharsave, 99  
 exhyphenpenaltysave, 141  
 factor, 100  
 falsepenalty, 139  
 fillhole, 100  
 finalhyphendemeritssave, 142  
 firstsyllablepart, 114  
 fixednexttextformat, 115  
 fixedtextformat, 114  
 gabcname, 115  
 gabcsnippet, 92  
 gaux, 119  
 generatelines, 98  
 gregoriofontname, 101  
 gregorioscore, 92  
 gregoriotexluaversion, 115  
 gregorioversion, 115  
 handleclivisspecialalignment, 101  
 hepisorline, 102  
 hepisorlineaux, 103  
 hskip, 118  
 hyphenpenaltysave, 141  
 iflatex, 95  
 insidediscretionary, 128  
 knownline, 98  
 lastofflinecount, 98  
 leftfill, 115  
 loadgregoriofont, 84  
 localleftbox, 118  
 localrightbox, 118  
 loosenesssave, 142  
 lyriccentering, 115  
 makein, 90  
 makenum, 90  
 maxlen, 136  
 metapost, 83  
 middlesyllablepart, 114  
 minNotesDistance, 137  
 minShiftNotes, 138  
 minShiftText, 138  
 minTextDistance, 137  
 nabcfontname, 113  
 nabcfontsize, 113  
 newglyphcommon, 105  
 newlinecommon, 99  
 nextendsyllablepart, 114  
 nextfirstsyllablepart, 114  
 nextmiddlesyllablepart, 114  
 nlbinitialstate, 129  
 nlbstate, 129  
 nobreakpenaltysave, 141  
 normalinitial, 106  
 nothing, 108  
 obsolete, 84  
 penalty, 139  
 pickcustos, 96  
 pointandclick, 116  
 prefix, 117  
 pretolerancesave, 142  
 removespaceabove, 96  
 removetranslationspace, 84  
 reseteolcustos, 106  
 resizebox, 118  
 restorepenalties, 140  
 rightfill, 116  
 rubberpermit, 117  
 savedlastofflinecount, 98  
 scaledist, 138  
 setgregoriofont, 117  
 setstylefont, 106  
 shrinkunit, 109  
 stafflinefactor, 87  
 stretchunit, 109  
 stringdist, 91  
 syllablenotes, 106  
 symbolfontsize, 106

textnormal, 106  
 tolerancesave, 142  
 truepenalty, 139  
 typekey, 107  
 typeout, 118  
 typesettextabovelines, 98  
 unit, 136  
 unitfactor, 90  
 unsetfixednexttextformat, 118  
 unsetfixedtextformat, 118  
 updateleftbox, 107  
 updatelinesclef, 97  
 updatelinewidth, 98  
 useautoeolcustos, 107  
 usemanualeolcustos, 107  
 usestylecommon, 107  
 variableheightexpansion, 130  
 vepisemaorrare, 104  
 vepisemaorrareaux, 105  
 warning, 83  
 widowpenaltysave, 140  
 widthof, 107  
 writebar, 108  
 writemode, 93  
 \greannotation, 28  
 \grebarbracewidth, 36  
 \grebarredsymbol, 24  
 \grebracemetapostpreamble, 93  
 \grebrokenpenalty, 48  
 \grechangedim, 13  
 \grechangeglyph, 18  
 \grechangestafflinethickness, 12  
 \grechangestaffsize, 12  
 \grechangestyle, 27  
 \greclubpenalty, 48  
 \grecommentary, 29  
 \greconffactor, 15  
 \grecreatedim, 13  
 \gredefbarredsymbol, 23  
 \gredefsizedsymbol, 20  
 \gredefsymbold, 19  
 \greemergencystretch, 48  
 \greendafterbaraltpenalty, 49  
 \greendafterbarpenalty, 48  
 \greendofelementpenalty, 49  
 \greendofsyllablepenalty, 49  
 \greendofwordpenalty, 49  
 \gregorioscore, 7  
 \grehyphenpenalty, 49  
 \greillumination, 29  
 \grelatexsimpledefbarredsymbol, 24  
 \greloadspaceconf, 14  
 \grelooseness, 50  
 \grenewlinepenalty, 50  
 \grenobreakpenalty, 49  
 \greoldcatcode, 106  
 \greornamentation, 25  
 \grepretolerance, 50  
 \gresetglyph, 19  
 \grescaledim, 14  
 \grescorereference, 29  
 \greseparator, 25  
 \gresetbolshifts, 33  
 \gresetbracerendering, 36  
 \gresetbreakineuouae, 31  
 \gresetbreakintranslation, 32  
 \gresetclef, 35  
 \gresetclivisalignment, 35  
 \gresetcompilegabc, 9  
 \gresetemptyfirstsyllablehyphen, 34  
 \greseteolcustos, 32  
 \greseteolhyphen, 34  
 \greseteolshifts, 32  
 \gresetglyphstyle, 21  
 \gresetgregoriofont, 17  
 \gresethepisema, 20  
 \gresethyphen, 34  
 \gresetlastline, 33  
 \gresetlinecolor, 16  
 \gresetlineheightexpansion, 15  
 \gresetlines, 16  
 \gresetlinesbehindalteration, 17

`\gresetlinesbehindpunctumcavum`, 16  
`\gresetlyriccentering`, 30  
`\gresetnabcfont`, 36  
`\gresetpointandclick`, 11  
`\gresetpunctumcavum`, 21  
`\gresettranslationcentering`, 31  
`\gresetpledefbarredsymbol`, 22  
`\gretolerance`, 50  
`\grewidowpenalty`, 48  
`beginningofscore`, 127  
`blockeolcustos`, 130  
`bolshiftsenabled`, 130  
`boxing`, 127  
`breakintranslation`, 130  
`checklength`, 125  
`drawbraces`, 127  
`endofscore`, 127  
`eolshiftsenabled`, 130  
`firstglyph`, 127  
`forceemptyfirstsyllablehyphen`, 131  
`hepiseabridge`, 126  
`hidealtlines`, 126  
`hidepclines`, 126  
`isonaline`, 128  
`justifylastline`, 131  
`keeprightbox`, 129  
`lastispunctum`, 129  
`lastispunctumsave`, 129  
`mustdotranslationcenterend`, 127  
`nabcfontloaded`, 129  
`rubber`, 125  
`showclef`, 131  
`showhyphenafterthissyllable`, 131  
`showlines`, 126  
`shrink`, 126  
`stretch`, 126  
`translationcentering`, 126  
`usestylefont`, 129  
`\protect`, 143  
`\usepackage`, 5  
`abovelinestextheight`, 46  
`abovelinestextraise`, 46  
`additionalcustoslineswidth`, 44  
`additionallineswidth`, 37  
`afterclefnospace`, 43  
`afterinitialshift`, 44  
`alterationspace`, 37  
`annotationraise`, 45  
`annotationseparation`, 44  
`beforealterationspace`, 38  
`beforeinitialshift`, 44  
`beforelowchoralsignspace`, 38  
`beforepunctainclinatashift`, 41  
`bitristospace`, 41  
`bitrivirspace`, 41  
`braceshift`, 47  
`choralsigndownshift`, 45  
`choralsignupshift`, 45  
`clefchangespace`, 47  
`clefflatSPACE`, 38  
`clivisalignmentmin`, 47  
`curlybraceaccentusshift`, 47  
`glyphspace`, 39  
`grebackgroundcolor`, 51  
`gregoriocolor`, 51  
`initialraise`, 47  
`interelementsSPACE`, 38  
`interglyphspace`, 38  
`intersyllablespaceNotes`, 39  
`interwordspacenotes`, 40  
`euouae`, 40  
`interwordspacetext`, 40  
`euouae`, 40  
`largerspace`, 39  
`MacroName`, 3  
`manualinitialwidth`, 44  
`maximumspacewithoutdash`, 43

minimalspaceatlinebeginning, 44  
 nabcinterelementsapace, 47  
 nabclargerspace, 47  
 nocleftspace, 45  
 notebarspace, 43  
 punctuminclinatmanddebilisshift, 41  
 punctuminclinatumbigshift, 42  
 punctuminclinatumbilisshift, 41  
 punctuminclinatumbaxshift, 42  
 punctuminclinatumbshift, 41  
 spaceabovelines, 46  
 spaceafterlineclef, 40  
 spaceaftersigns, 40  
 spacearoundclefbars, 43  
 spacearoundfinalis, 42  
 spacearoundmaior, 42  
 spacearoundminor, 42  
 spacearoundsmallbar, 42  
 spacebeforeeolcustos, 39  
 spacebeforefinalfinalis, 43  
 spacebeforeinlinecustos, 39  
 spacebeforesigns, 39  
 spacebeneathtext, 46  
 spacelinestext, 46  
 textbartextspace, 43  
 translationheight, 46  
 zerowidthspace, 38