Gregorio and GregorioTEX: Tools for gregorian score engraving.

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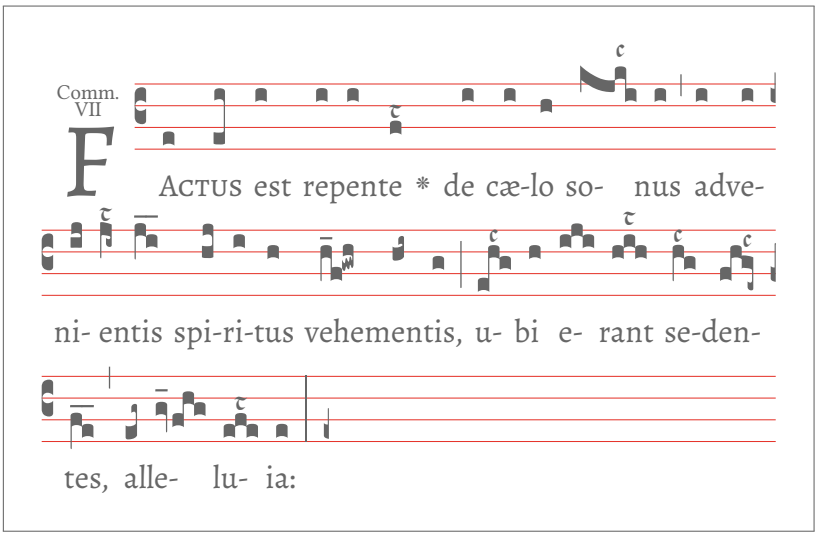

Homepage
Source code available on GitHub.

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1 GregorioTEX Macros

The following sections document the macros available in the GregorioTEX 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 TEX 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 GregorioTEX, 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`.

GregorioTEX internals These macros are used by GregorioTEX 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 GregorioTEX 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
`debug`	Debug messages will be printed to the output log. Can also be specified as `debug={<types>}`, in which case only messages of the categories (see Debug Category) listed will be printed to the output log.
`nevercompile`	Default. The classic behavior of GregorioTEX. The user is responsible for compiling gabc scores into gtex files.
`autocompile`	GregorioTEX 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 GregorioTEX will compile a new gtex file.
`forcecompile`	GregorioTEX will compile all scores from their gabc files.
`allowdeprecated=false`	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 GregorioTEX.

Note: `nevercompile`, `autocompile`, and `forcecompile` conflict with eachother. 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: GregorioTEX may require up to two passes (runs of `lualatex` or `luatex`) to compute the line heights correctly. If a second pass is required, GregorioTEX will emit the following warning:

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

GregorioTEX two-pass processing is compatible with `latexmk`.

If you only need the special symbols which GregorioTEX 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**.

2.2 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. GregorioTEX will automatically compile gabc files if necessary.
	`f`	Optional. Forces GregorioTEX 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 TEX file that exists and the file extension (normally gtex) must be given.

When called with the optional argument `[a]` GregorioTEX 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 GregorioTEX 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]` GregorioTEX will include the score without doing anything else. This is the same as the old behavior of GregorioTEX and therefore the default behavior.

When called with the optional argument `[f]` GregorioTEX 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 GregorioTEX includes scores. This is similar to using the package options [forcecompile], [autocompile], and [nevercompile], but does not necessarly apply to the entire document.

Arg	Value	Description
#1	force	all later calls of \gregorioscore will compile the gabc file into a gtex file.
	auto	all later calls of \gregorioscore will use GregorioTEX's automatic compilation of gabc files.
	never	all later calls of \gregorioscore 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} *gregoriotex-main.tex*

Converts the gabc notation specified in #1 to GregorioTEX and includes it directly in the document.

Arg	Value	Description
#1	string	The gabc to insert into the document.

For example:

```
\gabcsnippet{(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 TEX, you must also pass the `-p` option to `gregorio` when converting your gabc files to GregorioTEX for inclusion. This will automatically be done for auto- and force-compiled scores, but if an auto-compiled score was compiled without the option, GregorioTEX 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, GregorioTEX 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, GregorioTEX allows you to fine tune the spacings around and between the various elements using the following functions.

`\grecreatedim{#1}{#2}{#3}` *gregoriotex-spaces.tex*

Macro to create one of GregorioTEX'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 GregorioTEX.

Arg	Value	Description
#1	string	The name of the distance to be changed. See Distances below.
#2	string	The distance in string format. **Note**: You cannot use a length register for this argument. You *must* use a string because of the way that GregorioTEX handles spaces.
#3	`fixed`	Distance will not scale when staff size is changed.
	`scalable`	Distance will scale when staff size is changed.
	`inherited`	Distance will inherit its value from another distance. When this argument is used, then #2 should be the name of another GregorioTEX distance.

\grechangedim{#1}{#2}{#3} *gregoriotex-spaces.tex*

Macro to change one of GregorioTEX'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 Distances below.
#2	string	The distance in string format. **Note**: You cannot use a length register for this argument. You *must* use a string because of the way that GregorioTEX handles spaces.
#3	`fixed`	Distance will not scale when staff size is changed.
	`scalable`	Distance will scale when staff size is changed.
	`inherited`	Distance will inherit its value from another distance. When this argument is used, then #2 should be the name of another GregorioTEX distance.

\grechangenextscorelinedim{#1}{#2}{#3}{#4} *gregoriotex-spaces.tex*

Changes one of GregorioTEX's distances for a given line in the next included score. This works with `spaceabovelines`, `spacebeneathtext`, and `spacelinestext`.

Arg	Value	Description
#1	list of integers	A comma-separated list of line numbers in the next score to be adjusted.
#2	string	The name of the distance to be changed. See Distances below.
#3	string	The distance in string format. **Note**: You cannot use a length register for this argument. You *must* use a string because of the way that GregorioTEX handles spaces.
#4	`fixed`	Distance will not scale when staff size is changed.
	`scalable`	Distance will scale when staff size is changed.
	`inherited`	Distance will inherit its value from another distance. When this argument is used, then #3 should be the name of another GregorioTEX distance.

\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 Distances 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.

\grechangecount{#1}{#2} *gregoriotex-spaces.tex*

Macro to change one of GregorioTEX's counts or penalities (numeric values).

Arg	Value	Description
#1	string	The name of the count to be changed. See Counts and Penalties below.
#2	integer	The new value.

\grechangenextscorelinecount{#1}{#2}{#3} *gregoriotex-spaces.tex*

Changes one of GregorioTEX's counts or penalties for a given line in the next included score.

Arg	Value	Description
#1	list of integers	A comma-separated list of line numbers in the next score to be adjusted.
#2	string	The name of the count to be changed. See Counts and Penalties below.
#3	integer	The new value.

\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}
```

\greconffactor *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 GregorioTEX 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, GregorioTEX 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 GregorioTEX, `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 GregorioTEX package. This will save a little bit of time per run.

\gresetledgerlineheuristic{#1} *gregoriotex-spaces.tex*

Macro which enables or disables ledger line heuristics. Currently, ledger line heuristics allow Gregorio to reduce the space between a note and a horizontal episema that surround a line on which a ledger line may appear when the ledger line *does not* appear.

Arg	Value	Description
#1	`enable`	Ledger line heuristics will be used in placing the horizontal episema
	`disable`	Ledger line heuristics will not be used in placing the horizontal episema

Because of the complexity of computing distances exactly, the heuristic may guess incorrectly, causing the horizontal episema to be placed incorrectly. This may be overridden on a note-by-note basic by using the `[hl:`*n*`]` and `[ll:`*n*`]` gabc directives. The `hl` directive sets an explicit high ledger line (above the staff), and the `ll` directive sets an explicit low ledger line (below the staff). The *n* should be set to indicate whether the system should act as if the ledger line exists (`1`) or not (`0`).

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	`visible`	The staff lines should be printed (default)
	`invisible`	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	`visible`	The staff lines behind a punctum cavum should be printed (Plain TEX default)
	`invisible`	The staff lines behind a punctum cavum should not be printed (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 TEX default)
	`invisible`	The staff lines behind an alteration should not be printed (LATEX default)

2.2.6 Score Font

GregorioTEX 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 Grana Padano (née 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.

Note that the font will be looked up by name through luaotfload, see the documentation of luaotfload for what it implies.

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.
	granapadano	Use the Grana Padano font.

`\gresetgregoriofontscaled[#1]{#2}{#3}` *gregoriotex-main.tex*

This function is the same as above, with a third argument to scale the font. The fonts shipped with Gregorio do not need to use this function, but some custom fonts do. Note that you cannot use this to scale glyphs up or down, as they would not be placed correctly on the staff.

The two first arguments are the same as `\gresetgregoriofont`. The third argument is an integer representing the scaling factor, where the one used by `\gresetgregoriofont` is 100000.

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

If set to false, will not load the `hollow` and `hole` variants of the next font to load. Use it before loading third party fonts not having these variants (rare case).

Arg	Value	Description
#1	string	`true` or `false`.

2.2.7 Glyph Alteration

In addition to the normal glyphs loaded by the choice of font, GregorioTEX 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 GregorioTEX or import custom glyphs you have designed yourself.

\grechangeglyph{#1}{#2}{#3} *gregoriotex-main.tex*

Substitutes the given GregorioTEX score glyph with the specified glyph from the specified font.

Arg	Value	Description
#1	string	The name of the GregorioTEX 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 GregorioTEX score glyph substitution, restoring it back to its original form.

Arg	Value	Description
#1	string	The name of the GregorioTEX 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*}
```

\grechangecavumglyph{#1}{#2}{#3}[#4][#5] *gregoriotex-main.tex*

Substitutes the given GregorioTEX score cavum glyphs with the specified glyphs from the specified font.

Arg	Value	Description
#1	string	The name of the GregorioTEX glyph to replace.
#2	string	The name of the font to use for the cavum glyph.
#3	number	The code point of the cavum glyph to use.
	.string	The name of the variant (appended to #1) to use for the cavum glyph.
	string	(any other string) The name of the cavum glyph to use.
#4	string	The name of the font to use for the glyph to fill in the cavum hole.
#5	number	The code point of the glyph to use to fill in the cavum hole.
	.string	The name of the variant (appended to #1) to use to fill in the the cavum hole.
	string	(any other string) The name of the glyph to use to fill in the cavum hole.

Nota Bene: The usage of wildcards (*s) for #1, #2, and #4 is similar to `\grechangeglyph`.

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

Removes a pair of GregorioTEX score cavum glyph substitution, restoring them back to their original form.

Arg	Value	Description
#1	string	The name of the GregorioTEX cavum glyph to restore.

Nota Bene: The usage of wildcards (*s) for #1 is similar to `\greresetcavumglyph`.

\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 TEX 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 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.

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

Determines whether GregorioTEX 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*

GregorioTEX 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 (Ⱥ, 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.

GregorioTEX 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 `gredefsizedsymbol`).
#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 **R**.

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 gredefsizedsymbol).
#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.

\gothRbar *gregoriotex-symbols.tex*

Prints 𝔑. Defined with `\gredefsymbol`.

\gothVbar *gregoriotex-symbols.tex*

Prints 𝔙. Defined with `\gredefsymbol`.

\grealtcross *gregoriotex-symbols.tex*

Prints ✢. Defined with `\gredefsymbol`.

\grecross *gregoriotex-symbols.tex*

Prints ✠. Defined with `\gredefsymbol`.

\greheightstar *gregoriotex-symbols.tex*

Prints ⁎. Defined with `\gredefsymbol`.

\gresixstar *gregoriotex-symbols.tex*

Prints *. Defined with `\gredefsymbol`.

\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 Special Characters

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

Sets a special character. Special characters are used from gabc within <sp> and </sp>.

Arg	Value	Description
#1	string	The text between <sp> and </sp>.
#2	TEX code	The TEX code to substitute when <sp>#1</sp> is used in gabc.

Nota Bene: If you need to use a character in #1 that is made special by TEX (i.e., \, %, etc.), you should instead use \string\nnn, where nnn is a three-digit, zero-padded number representing the ASCII code of the character (i.e., \ would be \string\092).

\greunsetspecial{#1} *gregoriotex-symbols.tex*

Un-sets a special character. Using an unset special character will use its text directly.

Arg	Value	Description
#1	string	The text between <sp> and </sp>.

Nota Bene: The same rules apply for #1 as in \gresetspecial.

\gretilde *gregoriotex-main.tex*

Macro to print ∼. This macro is set using the above for <sp>∼</sp>.

2.2.10 Styling

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

Element Name	Description	Default
`abovelinestext`	above line text (`<alt></alt>` in gabc, appears above the staff)	normal
`additionalstafflines`	short lines behind notes above or below the staff	special*
`annotation`	the annotation	none
`commentary`	the commentary	*footnote-size italics* (LaTeX) *italics* (Plain TeX)
`elision`	elisions (`<e></e>` in gabc)	*small-size italics* (LaTeX) *italics* (Plain TeX)
`firstsyllable`	the first syllable of the score excluding the score initial	none
`firstsyllableinitial`	the first letter of the first syllable of a score which is not the score initial	none
`firstword`	the first word of the first score excluding the score initial	none
`highchoralsign`	high choral signs	none
`initial`	Score initial (the first letter of the score, when offset from the rest of the text)	40 pt font
`lowchoralsign`	low choral signs	none
`modedifferentia`	the rendered annotation from the `mode-differentia: ;` header in the gabc file	**bold**
`modeline`	the rendered annotation from the `mode: ;` header in the gabc file	BOLD SMALL (LaTeX) CAPITALS **bold** (PlainTeX)
`modemodifier`	the rendered annotation from the `mode-modifier: ;` header in the gabc file	***bold italics***
`nabc`	ancient notation	gregoriocolor
`normalstafflines`	Full length staff lines	none
`translation`	Translation text (appears below lyrics)	*italics*

[1] *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	TEX code	the code necessary to turn on the styling
#3	TEX code	Optional. The code necessary to turn off the styling (e.g., if the code to turn on the styling contains a `\begin {environment}` then the code to turn it off must have the matching `\end {environment}`.

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{abovelinestext}{\begin{small}\begin{itshape}}%
        [\end{itshape}\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).

2.2.11 Text Elements

While the gabc headers provide support for some of the text elements commonly found on chant scores, GregorioTEX 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*]{#2} *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	distance	Optional. Additional distance to be placed between the commentary and the top staff line for the next score only.
#2	string	The text of the commentary.

Nota Bene: If your commentary is multi-lined, then the optional argument of the last line, and only the last line, will be taken into account. Further, pay attention to the fact that the optional argument is *additional* distance, i.e., it will be added to `commentaryraise` to determine the distance from the baseline of the commentary to the top line of the staff.

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

Macro to add an illuminated initial.

Arg	Value	Description
#1	TEX 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.

\gresetinitiallines{#1} *gregoriotex-syllable.tex*

Sets the number of lines the score initial requires.

Arg	Value	Description
#1	number	The number of lines required by the initial. If `0`, the score will have no separated initial.

Nota Bene: As currently implemented, you cannot set an initial which is larger than 2 lines and in order to do so you must set manual line breaks in the gabc for the first two lines.

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

Sets the number system used for the mode number.

Arg	Value	Description
#1	`roman-minuscule`	Use lower-case Roman numerals (the default in LaTeX, good for small capitals).
	`roman-majuscule`	Use upper-case Roman numerals (the default in PlainTeX).
	`arabic`	Use Arabic numerals.

\gresetlyrics{#1} *gregoriotex-syllable.tex*

Sets the visibility of the lyrics.

Arg	Value	Description
#1	`visible`	Lyrics are visible (default).
	`invisible`	Lyrics are not visible.

2.2.12 Text Alignment

GregorioTEX 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, GregorioTEX 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.

`\gresetgabcforcecenters{#1}` *gregoriotex-syllable.tex*

Macro to determine whether a forced center (i.e., one specified by curly braces ("{" and "}") in your gabc file) should influence the alignment of that syllable when `syllable` and `firstletter` alignments are in effect.

Arg	Value	Description
#1	`allow`	Forced centers in gabc are allowed to influence the syllable alignment (default).
	`prohibit`	Forced centers in gabc do not influence the syllable alignment.

`\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.

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

Macro to specify which line of the annotation should be used to determine its starting placement (i.e. before `annotationraise` is applied).

Arg	Value	Description
#1	`firstline`	Annotation placement is determined by the first line (default)
	`lastline`	annotation placement is determined by the last line

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

Macro to specify which part of the control line in the annotation should be aligned with the top line of the staff before `annotationraise` is applied.

Arg	Value	Description
#1	`top`	The top of the annotation control line will align with the top line of the staff
	`baseline`	The baseline of the control line is used (default)
	`bottom`	The bottom of the control line is used

Nota Bene: These variable refer to the actual contents of the line and not to the "hypothetical" limits for the font. As a result if the top of an annotation containing only short letters will be different from one which contains tall ones even if both use the same font. Likewise, if the annotation contains no descenders, then baseline and bottom will be the same. If this is a problem, then the use of struts within the annotation can be used to control the line height (distance from baseline to top) and depth (distance from baseline to bottom).

\gresetsyllablerewriting{#1} *gregoriotex-syllable.tex*

Sets whether the last part of a non-final syllable of a word is moved to the next syllable when there is no hyphen. The "last part" of a syllable is the part that comes after the part that is centered under the first note of the syllable. This feature may allow LuaTEX to find better opportunities for ligaturing based on TEX and font settings.

Arg	Value	Description
#1	`auto`	GregorioTEX will move the last part of a syllable to the next syllable in a word when there is no hyphen (default).
	`off`	GregorioTEX will not attempt to rewrite any syllables.

\gresetprotrusionfactor{#1}{#2} *gregoriotex-spaces.tex*

Sets a global protrusion factor. Depending on the first argument, these protrusion factors will be used for various characters as well as for `<pr>` tags with no specified protrusion factor. A protrusion factor of 0 means no protrusion and 1 means full protrusion. Any floating-point value from 0 to 1 is allowed. All of these global protrusion factors may be set in gsp-default.tex or in your own TEX files.

Arg	Value	Description
#1	`,`	Sets the automatic protrusion factor for a comma at the end of a syllable. Default is 0.
	`;`	Sets the automatic protrusion factor for a semicolon at the end of a syllable. Default is 0.
	`:`	Sets the automatic protrusion factor for a colon at the end of a syllable. Default is 0.
	`.`	Sets the automatic protrusion factor for a period at the end of a syllable. Default is 0.
	`eolhyphen`	Sets the protrusion factor for a hyphen at the end of a line. Default is 0. This protrusion factor only applies to hyphens inserted by the Lua pass), so use it with caution.
	`default`	Sets the default protrusion factor for a `<pr>` tag in gabc. Default is 1.
#2	factor	The desired protrusion factor, a floating point value from 0 (no protrusion) to 1 (full protrusion). See defaults above.

2.2.13 End of Line Behavior

While GregorioTEX will automatically wrap scores to fit your page, there are several ways to fine tune that line breaking behavior with the following commands.

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

Macro to determine whether an automatic linebreak before a EUOUAE area is justified or not.

Arg	Value	Description
#1	`justified`	Automatic line breaks before EUOUAE areas should be justified (default)
	`ragged`	Automatic line breaks before EUOUAE areas should be ragged

Important: When set to `ragged`, GregorioTEX will require a second pass (run of `lualatex` or `luatex`) to typeset the line endings correctly. When an additional pass is required, GregorioTEX will emit the following warning:

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

`\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

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

Macro for setting whether an alteration (flat, sharp, or natural) should be rendered before a custos or not.

Arg	Value	Description
#1	`visible`	The custos alteration should be printed (default)
	`invisible`	The custos alteration should not be printed

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

Macro to determine whether GregorioTEX 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 GregorioTEX is set to place custos automatically, you will get two custos at the line breaks.

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

Macro to determine whether GregorioTEX should automatically place the custos at a line break before a EUOUAE. Since the EUOUAE block is typically not a continuation of the melody but rather a reminder of the end of the tone that follows, this is set to `suppressed` (no custos) by default.

Arg	Value	Description
#1	`suppressed`	Custos will not automatically be placed at a line break before a EUOUAE block (the default)
	`auto`	Custos will behave according to `greseteolcustos` at a line break before a EUOUAE block

Nota Bene: If `\greseteolcustos` is set to `manual`, this setting is effectively ignored.

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

Macro to determine whether GregorioTEX 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 GregorioTEX 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.

\grebolshiftcleftype{#1} *gregoriotex-spaces.tex*

Macro to determine how notes should be left aligned in the case where clefs of different widths appear in the same score.

Arg	Value	Description
#1	largest	The notes are aligned as if all clefs had the width of the largest clef (default)
	current	The notes are aligned on the current clef, which leads to unaligned notes. This was the default of Gregorio < 5.0.

\grelocalbolshiftcleftype{#1} *gregoriotex-spaces.tex*

Equivalent of \grebolshiftcleftype but valid only until the next end of a score, and with more options. This can be used before a score or even inside a <v>verbatim</v> in gabc for corner cases like different alignment on a score taking two pages.

Arg	Value	Description
#1	largest	The notes are aligned as if all clefs had the width of the largest clef (default)
	current	The notes are aligned on the current clef, which leads to unaligned notes
	f	Force left alignment of notes as if all clef were f clef
	c	Idem with c clef
	fb	Idem with flatted f clef
	cb	Idem with flatted c clef

\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)

\gresetunbreakablesyllablenotes{#1}{#2}{#3} *gregoriotex-syllable.tex*

Configures how notes should be kept together on line breaks.

Arg	Value	Description
#1	integer	The minimum number of notes in the syllable before the syllable may be broken across lines. Defaults to 10.
#2	integer	The minimum number of notes at the start of a syllable that must be kept together when the syllable is broken across lines. Defaults to 4.
#3	integer	The minimum number of notes at the end of a syllable that must be kept together when the syllable is broken across lines. Defaults to 4.

2.2.14 Bar spacing

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

Macro to change the behaviour for separation between notes of two syllables when the first ends with a punctum mora. The argument changes the cases in which punctum mora are ignored in space computation:

Arg	Value	Description
#1	`always`	punctum mora are always ignored (default)
	`notesonly`	punctum mora are ignored before notes, not bars
	`barsonly`	punctum mora are ignored before bars, not notes
	`notextonly`	punctum mora are ignored only before bars inside syllables, or bars having their own syllable without text
	`insideonly`	punctum mora are ignored only before bars inside syllables
	`never`	punctum mora are never ignored

When a punctum mora is ignored, the bar will also be shifted by `moraadjustmentbar` (zero by default), see its description in the Distances section.

\gresetbarspacing{#1} *gregoriotex-syllable.tex*

Macro to activate the new bar spacing algorithm. The new algorithm attempts to place the bar line exactly midway between its surrounding notes. Any text associated with the bar is placed midway between its surrounding text. Since this might result in the bar line and the text being widely separated, there are also a limits to the distance between their respective centers: `maxbaroffsettextleft` and `maxbaroffsettextright` (when text center is respectively on the left or on the right of bar center).

Arg	Value	Description
#1	`new`	Activates the new spacing algorithm (Default)
	`old`	Activates the old behavior

2.2.15 Sign printing

\gresetnotes{#1} *gregoriotex-syllable.tex*

Sets the visibility of the notes.

Arg	Value	Description
#1	`visible`	Notes are visible (default).
	`invisible`	Notes are not visible.

Nota Bene: If the notes are set to be invisible, then bar lines, rythmic signs, and the like will also be invisible. However, the staff lines and clefs will still show up (since their visibility is controlled by other settings).

\gresetnabc{#1}{#2} *gregoriotex-nabc.tex*

Sets the visibility of a nabc voice.

Arg	Value	Description
#1	integer	The nabc voice number.
#2	`visible`	Notes are visible (default).
	`invisible`	Notes are not visible.

\greprintsigns{#1}{#2} *gregoriotex-signs.tex*

Macro to prevent rythmic signs from printing (all signs are printed by default):

Arg	Value	Description
#1	`vepisema`	sets the printing of vertical episema
	`hepisema`	sets the printing of horizontal episema
	`mora`	sets the printing of punctum mora and auctum duplex
	`all`	set the printing of all of these
#2	`enable`	enable the printing
	`disable`	disable the printing

Note that punctum mora and auctum duplex have an influence on spacings, so removing them will have an impact on that matter.

2.2.16 Hyphenation

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

Tells GregorioTEX how to place a hyphen between syllables in polysyllabic words in a score.

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

`\gresetemptyfirstsyllablehyphen{#1}` *gregoriotex-syllable.tex*

Tells GregorioTEX 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 `maximumspacewithoutdash`

`\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

2.2.17 Clef Visibility

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

Macro to tell GregorioTEX whether the clefs should be printed or not.

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

2.2.18 Clivis Alignment

Since the center of the clivis is different from most neumes, GregorioTEX 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 `\gre @dimen@clivisalignmentmin` (default)

2.2.19 Braces

\gresetbracerendering[*#1*]{#2} *gregoriotex-signs.tex*

Macro to tell GregorioTEX 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	*(omitted)*	change all braces
	`brace`	change round braces that appear over the staff
	`underbrace`	change round braces that appear under the staff
	`curlybrace`	change curly braces
	`barbrace`	change round braces that appear over divisio bars
#2	`metapost`	METAPOST will be used to render braces
	`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 GregorioTEX 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.

2.2.20 Headers

`\gresetheadercapture{#1}{#2}{#3}` *gregoriotex-main.tex*

Macro to tell GregorioTEX to capture a given header of the gabc file, passing it to a specified TEX macro. Passing an empty #2 will cancel capture of the given header.

Arg	Value	Description
#1	string	The name of the gabc header
#2	string	The name of the macro to use (without the leading backslash) or empty to stop capturing the given header
#3	string	a comma-separated list of options

The options are:

`name`	The header name should also be passed to the macro
`string`	The header value should be passed to the macro as a string

If the `name` option is not supplied, the macro is called with one argument: the value of the header.

If the `name` option is supplied, the macro is called with two arguments: the name and the value of the header (in that order).

If the `string` option is supplied, the value will be passed with catcode 12 associated with all non-space characters (and catcode 10 for all spaces). If not, the value will be evaluated as regular TEX input.

Other than the headers that define macros, which are not passed to TEX, the headers will be processed in the order they were presented in the gabc file. Headers will be processed in the TEX state at the point of the `\gregorioscore` call. This means, for example, that should the capturing macro produce something, it will be typeset within the same paragraph as the `\gregorioscore` call.

As an example, you can use

```
\gresetheadercapture{commentary}{grecommentary}{string}
```

to capture the `commentary` header of gabc files and feed it to `\grecommentary`, thus automatically printing the content of the header above the score.

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

Specifies TEX code processed before the processing of the headers of a score. Defaults to nothing. If this is called multiple times, the most recent call will define the behavior at the next set of headers.

Arg	Value	Description
#1	TEX code	The code to process before a set of headers.

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

Specifies TEX code processed after the processing of the headers of a score. Defaults to nothing. If this is called multiple times, the most recent call will define the behavior at the next set of headers.

Arg	Value	Description
#1	TEX code	The code to process after a set of headers.

2.2.21 Ancient Notation

For a full description of how to make use of the ancient notation capabilities of Gregorio and GregorioTEX, 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 Counts

Each of the following counts controls some aspect of the configuration of the GregorioTEX score. They are changed using `\grechangecount`, documented above.

`additionaltopspacethreshold` *gsp-default.tex*

The threshold above which we start accounting notes above lines for additional vertical space. For instance with a threshold of `2` and four line staves, notes with a pitch of `k` and `l` will not interfere with the space above lines. Set it to a high value if you don't want high notes to interfere with space above lines.

Default: 2

`additionaltopspacealtthreshold` *gsp-default.tex*

Same as `additionaltopspacethreshold` but setting the threshold for notes taken into account with above lines text vertical placement.

Default: 0

`additionaltopspacenabcthreshold` *gsp-default.tex*

Same as `additionaltopspacethreshold` but setting the threshold for notes taken into account with above lines nabc neume vertical placement baseline.

Default: 4

`noteadditionalspacelinestextthreshold` *gsp-default.tex*

The number of low notes which will add on the `noteadditionalspacelinestext` space. For instance, with a threshold of `2`, every note below `c` will add noteadditionalspacelinestext space for each pitch needed below `c`, accounting for the various signs.

Default: 2

2.4 Distances

Each of the following distances controls some aspect of the spacing of the GregorioTEX 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 GregorioTEX 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 GregorioTEX 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 `clefflatspace` 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

clefflatspace *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

halfspace *gsp-default.tex*

Half-space between elements.

Default: 0.03463 cm plus 0.00091 cm minus 0.00182 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

spacebeforeeolcustos *gsp-default.tex*

Space before custos at the end of a line.

Default: 0.23 cm plus 0 cm minus 0 cm

spacebeforeinlinecustos *gsp-default.tex*

Space before custos within a line.

Default: 0.10938 cm plus 0.01822 cm minus 0.00911 cm

spacebeforesigns *gsp-default.tex*

Space before punctum mora and augmentum duplex.

Default: 0.050 cm plus 0.004 cm minus 0.004 cm

moraadjustment *gsp-default.tex*

When a syllable (bar or not) is shifted left because of a preceding punctum mora, this space is also added. Use it to make the syllable a bit further from the punctum mora if you want.

Default: 0.050 cm

moraadjustmentbar *gsp-default.tex*

Same as previous one but specific to cases where puntum mora precedes a bar.

Default: 0.050 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: 0.23 cm plus 0 cm minus 0.01367 cm

intersyllablespacenotes *gsp-default.tex*

Minimum space between notes of different syllables.

Default: 0.24 cm

intersyllablespacestretchhyphen *gsp-default.tex*

Stretching added in the case where the text of two syllables of the same word are separated with an automatic hyphen.

Default: 0 cm plus 0.05 cm

interwordspacenotes *gsp-default.tex*

Minimum space between notes of syllables from different words.

Default: 0.29 cm plus 0.05 cm minus 0.05 cm

interwordspacetext *gsp-default.tex*

Minimum space between texts of different words. Please keep the same `plus` and `minus` as `interwordspacenotes`.

Default: 0.17 cm plus 0.05 cm minus 0.05 cm

interwordspacenotes@alteration *gsp-default.tex*

Same as `interwordspacenotes` for the case where the second syllable starts with an alteration.

Default: 0.1 cm plus 0.07 cm minus 0.01 cm

intersyllablespacenotes@alteration *gsp-default.tex*

Same as `intersyllablespacenotes` for the case where the second syllable starts with an alteration.

Default: 0.1 cm

interwordspacenotes@euouae *gsp-default.tex*

Same as `interwordspacenotes` for `euouae` blocks.

Default: 0.23 cm plus 0.1 cm minus 0.05 cm

interwordspacetext@euouae *gsp-default.tex*

Same as `interwordspacetext` for `euouae` blocks.

Default: 0.21 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 descending puncta inclinata.

Default: -0.03918 cm plus 0.0009 cm minus 0.0009 cm

punctuminclinatumunisonshift *gsp-default.tex*

Space between two unison puncta inclinata.

Default: 0.05286 cm plus 0.00728 cm minus 0.00455 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, descending.

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

Default: 0.07565 cm plus 0.0009 cm minus 0.0009 cm

punctuminclinatummaxshift *gsp-default.tex*

Space between descending puncta inclinata, larger ambitus (range=4th or 5th).

Default: 0.17865 cm plus 0.0009 cm minus 0.0009 cm

descendingpunctuminclinatumascendingshift *gsp-default.tex*

Space between descending puncta inclinata shapes in an ascent of pitch.

Default: -0.07918 cm plus 0.0009 cm minus 0.0009 cm

ascendingpunctuminclinatumshift *gsp-default.tex*

Space between two ascending puncta inclinata.

Default: -0.03918 cm plus 0.0009 cm minus 0.0009 cm

ascendingpunctuminclinatumanddebilisshift *gsp-default.tex*

Space between a punctum inclinatum and a punctum inclinatum deminutus, ascending.

Default: -0.02278 cm plus 0.0009 cm minus 0.0009 cm

ascendingpunctuminclinatumbigshift *gsp-default.tex*

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

Default: 0.07565 cm plus 0.0009 cm minus 0.0009 cm

ascendingpunctuminclinatummaxshift *gsp-default.tex*

Space between ascending puncta inclinata, larger ambitus (range=4th or 5th).

Default: 0.17865 cm plus 0.0009 cm minus 0.0009 cm

ascendingpunctuminclinatumdescendingshift *gsp-default.tex*

Space between ascending puncta inclinata shapes in a descent of pitch.

Default: -0.07918 cm plus 0.0009 cm minus 0.0009 cm

descendinginclinatumtonobarshift *gsp-default.tex*

Space between a punctum inclinatum and a no-bar (stemless) glyph one pitch below.

Default: -0.00073 cm plus 0.00363 cm minus 0.00363 cm

descendinginclinatumtonobarbigshift *gsp-default.tex*

Space between a punctum inclinatum and a no-bar (stemless) glyph two pitches below.

Default: 0.10927 cm plus 0.00363 cm minus 0.00363 cm

descendinginclinatumtonobarmaxshift *gsp-default.tex*

Space between a punctum inclinatum and a no-bar (stemless) glyph three or four pitches below.

Default: 0.23927 cm plus 0.00363 cm minus 0.00363 cm

ascendinginclinatumtonobarshift *gsp-default.tex*

Space between a punctum inclinatum and a no-bar (stemless) glyph one pitch above.

Default: -0.02473 cm plus 0.00363 cm minus 0.00363 cm

ascendinginclinatumtonobarbigshift *gsp-default.tex*

Space between a punctum inclinatum and a no-bar (stemless) glyph two pitches above.

Default: 0.04427 cm plus 0.00363 cm minus 0.00363 cm

ascendinginclinatumtonobarmaxshift *gsp-default.tex*

Space between a punctum inclinatum and a no-bar (stemless) glyph three or four pitches above.

Default: 0.12927 cm plus 0.00363 cm minus 0.00363 cm

ascendinginclinatumtonobarmaxshift *gsp-default.tex*

Space between a punctum inclinatum and a no-bar (stemless) glyph three or four pitches above.

Default: 0.12927 cm plus 0.00363 cm minus 0.00363 cm

maximumspacewithoutdash *gsp-default.tex*

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

Default: 0 cm

afterclefnospace *gsp-default.tex*

An extensible space for the beginning of lines.

Default: 0 cm plus 0.27345 cm minus 0 cm

additionalcustoslineswidth *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: 0.2 cm

beforeinitialshift *gsp-default.tex*

Space between the initial and the beginning of the score.

Default: 0.2 cm

minimalspaceatlinebeginning *gsp-default.tex*

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

Default: 0.05 cm

manualinitialwidth *gsp-default.tex*

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

Default: 0 cm

minimalinitialwidth *gsp-default.tex*

Minimum width of the initial. Ignored when `manualinitialwidth` is non-zero.

Default: 0 cm

annotationseparation *gsp-default.tex*

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

Nota Bene: This is the absolute space. If the lower line contains only short letters then it will get moved up so only this space shows (not the space above the letters on a normal line plus this space). You should use struts to control the line height of the lower line if this is a problem.

Default: 0.05 cm

annotationraise *gsp-default.tex*

Amount to raise (positive) or lower (negative) the annotation from its normal position (set with `\gresetannotationby` and `\gresetannotationvalign`).

Default: -0.2 cm

commentaryseparation *gsp-default.tex*

This space is the one between lines in the commentary (text above the first staff line on the right).

Nota Bene: This is the absolute space. If the lower line contains only short letters then it will get moved up so only this space shows (not the space above the letters on a normal line plus this space). You should use struts to control the line height of the lower line if this is a problem.

Default: 0.05 cm

commentaryraise *gsp-default.tex*

Distance from the commentary to the top line of the staff.

Default: 0.2 cm

noclefspace *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 cm

spacelinestext *gsp-default.tex*

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

Default: 0.60617 cm

noteadditionalspacelinestext *gsp-default.tex*

The space added between the lines and the bottom of the text for every pitch below the `noteadditionalspacelinestextthreshold`.

Default: 0.14413 cm

spacebeneathtext *gsp-default.tex*

The space beneath the text.

Default: 0 cm

abovelinestextraise *gsp-default.tex*

Height of the text above the note line.

Default: -0.1 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 staff.

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: 0.27345 cm plus 0.14584 cm minus 0.01367 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

overslurshift *gsp-default.tex*

Distance an over-the-notes slur will be raised above the baseline of a note at the same height.

Default: 0.05000 cm

underslurshift *gsp-default.tex*

Distance an under-the-notes slur will be raised above the baseline of a note at the same height.

Default: 0.01000 cm

divisiofinalissep *gsp-default.tex*

Space separating the two bars of a divisio finalis.

Default: 0.1094 cm

overhepisemalowshift *gsp-default.tex*

Distance to place a a horizontal episema over a note in a low position in the space.

Default: 0.02287 cm

overhepisemahighshift *gsp-default.tex*

Distance to place a horizontal episema over a note in a high position in the space.

Default: 0.10066 cm

underhepisemalowshift *gsp-default.tex*

Distance to place a horizontal episema under a note in a low position in the space.

Default: 0.02763 cm

underhepisemahighshift *gsp-default.tex*

Distance to place a horizontal episema under a note in a high position in the space.

Default: 0.10981 cm

hepisemamiddleshift *gsp-default.tex*

Distance to place a horizontal episema in the middle of a space.

Default: 0.07206 cm

vepisemalowshift *gsp-default.tex*

Distance to place a vertical episema in a low position in the space.

Default: -0.01262 cm

vepisemahighshift *gsp-default.tex*

Distance to place a vertical episema in a high position in the space.

Default: 0.06634 cm

linepunctummorashift *gsp-default.tex*

Vertical distance to place a punctum mora for a note on a line.

Default: -0.06314 cm

spacepunctummorashift *gsp-default.tex*

Vertical distance to place a punctum mora for a note in a space.

Default: -0.02013 cm

spaceamonepespunctummorashift *gsp-default.tex*

Vertical distance to place a punctum mora for the second note (in a space) of a pes with ambitus one.

Default: 0.00183 cm

lineporrectuspunctummorashift *gsp-default.tex*

Vertical distance to place a punctum mora for the second note in a porrectus (or similar figure), on a line

Default: 0.04575 cm

spaceporrectuspunctummorashift *gsp-default.tex*

Vertical distance to place a punctum mora for the second note in a porrectus (or similar figure), in a space

Default: 0.00000 cm

raresignshift *gsp-default.tex*

Distance to place a "rare" sign above the top space in a score.

Default: 0.18302 cm

bracketupshift *gsp-default.tex*

Distance to shift a bracket up when the lowest note in the brackets is on a line or below the staff.

Default: 0.03000 cm

bracketdownshift *gsp-default.tex*

Distance to shift a bracket down when the lowest note in the brackets is neither on a line nor below the staff.

Default: 0.04000 cm

parskip *gsp-default.tex*

The effective `\parskip` inside of a score.

Default: 1 pt plus 1 pt

lineskip *gsp-default.tex*

The effective `\lineskip` inside of a score.

Default: 0 pt plus 1 pt

baselineskip *gsp-default.tex*

The effective `\baselineskip` inside of a score.

Default: 55 pt plus 5 pt minus 5 pt

lineskiplimit *gsp-default.tex*

The effective `\lineskiplimit` inside of a score.

Default: 0 pt

shortspaceafterlineclef *gsp-default.tex*

Space after a clef at the beginning of a line, when the clef and first note are vertically distant.

Default: 0.18 cm plus 0 cm minus 0.01367 cm

2.4.1 Bar distances

bar@finalfinalis *gsp-default.tex*

This space is added before the final divisio final of a score (old bar spacing algorithm only).

Default: 0.29169 cm plus 0.07292 cm minus 0.27345 cm

Spaces around bars when they are typeset inside a syllable. The `@short` suffix for virgula and divisio minima indicates the space used when the notes surrounding the bar are strictly lower than `g` (in a four-line score).

bar@virgula *gsp-default.tex*

Default: 0.1823 cm plus 0.22787 cm minus 0.00469 cm

bar@virgula@short *gsp-default.tex*

Default: 0.13 cm plus 0.05 cm minus 0.00469 cm

bar@minima *gsp-default.tex*

Default: 0.1823 cm plus 0.22787 cm minus 0.00469 cm

bar@minima@short *gsp-default.tex*

Default: 0.12 cm plus 0.05 cm minus 0.00469 cm

bar@minor *gsp-default.tex*

Default: 0.1823 cm plus 0.22787 cm minus 0.00469 cm

bar@dominican *gsp-default.tex*

Default: 0.1823 cm plus 0.22787 cm minus 0.00469 cm

bar@maior *gsp-default.tex*

Default: 0.1823 cm plus 0.22787 cm minus 0.00469 cm

bar@finalis *gsp-default.tex*

Default: 0.1823 cm plus 0.22787 cm minus 0.00469 cm

Spaces around bars in standalone syllables, when these have text (new bar spacing algorithm only):

bar@virgula@standalone@text *gsp-default.tex*

Default: 0.2323 cm

bar@virgula@standalone@text@short *gsp-default.tex*

Default: 0.19 cm

bar@minima@standalone@text *gsp-default.tex*

Default: 0.2323 cm

bar@minima@standalone@text@short *gsp-default.tex*

Default: 0.19 cm

bar@minor@standalone@text *gsp-default.tex*

Default: 0.2323 cm

bar@dominican@standalone@text *gsp-default.tex*

Default: 0.2323 cm

bar@maior@standalone@text *gsp-default.tex*

Default: 0.2323 cm

bar@finalis@standalone@text *gsp-default.tex*

Default: 0.2323 cm

bar@finalfinalis@standalone@text *gsp-default.tex*

Default: 0.29169 cm

Spaces around bars in standalone syllables, when these have no text (new bar spacing algorithm only):

bar@virgula@standalone@notext *gsp-default.tex*

Default: 0.2 cm

bar@virgula@standalone@notext@short *gsp-default.tex*

Default: 0.19 cm

bar@minima@standalone@notext *gsp-default.tex*

Default: 0.2 cm

bar@minima@standalone@notext@short *gsp-default.tex*

Default: 0.19 cm

bar@minor@standalone@notext *gsp-default.tex*

Default: 0.2323 cm

bar@dominican@standalone@notext *gsp-default.tex*

Default: 0.2323 cm

bar@maior@standalone@notext *gsp-default.tex*

Default: 0.2323 cm

bar@finalis@standalone@notext *gsp-default.tex*

Default: 0.2323 cm

bar@finalfinalis@standalone@notext *gsp-default.tex*

Default: 0.29169 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

bar@rubber *gsp-default.tex*

A rubber value applied on both sides of all bars in standalone syllables, in new bar spacing algorithm only.

Nota Bene: This distance should always have a base value of 0pt.

Default: 0 cm plus 0.025 cm minus 0.025 cm

interwordspacetext@bars *gsp-default.tex*

Minimum space between texts of different words when one of the syllable contains only a bar (new bar spacing algorithm only).

Default: 0.18 cm

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

Same as `interwordspacetext@bars` for euouae blocks (so quite rare).

Default: 0.18 cm

interwordspacetext@bars@notext *gsp-default.tex*

Minimum space between texts of adjacent words when they are separated by a bar syllable which has no text associated with it (new bar spacing algorithm only).

Default: 0.19 cm

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

Same as interwordspacetext@bars@notext for euouae blocks (so quite rare).

Default: 0.18 cm

textbartextspace *gsp-default.tex*

Space between the text of previous syllable and the text associated with the bar (old bar spacing algorithm only).

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

maxbaroffsettextleft *gsp-default.tex*

Maximum distance by which the center of a bar and the center of its associated text can be separated, when the center of the text goes left of the center of the bar (new bar spacing algorithm only).

Default: 0.3 cm

maxbaroffsettextright *gsp-default.tex*

Same as maxbaroffsettextleft but when the center of the text goes right of the center of the bar.

Default: 0.15 cm

maxbaroffsettextleft@nobar *gsp-default.tex*

Maximum distance by which the center of a "no-bar" (i.e. something like `*()` in gabc) and the center of its associated text can be separated, when the center of the text goes left of the center of the no-bar (new bar spacing algorithm only).

Default: 12 cm

maxbaroffsettextright@nobar *gsp-default.tex*

Same as `maxbaroffsettextleft@nobar` but when the center of the text goes right of the center of the no-bar.

Default: 12 cm

maxbaroffsettextleft@eol *gsp-default.tex*

Maximum distance by which the center of a bar and the center of its associated text can be separated, when the center of the text goes left of the center of the bar and the bar syllable contains a manual line break (new bar spacing algorithm only).

Default: 0.0 cm

maxbaroffsettextright@eol *gsp-default.tex*

Same as `maxbaroffsettextleft@eol` but when the center of the text goes right of the center of the bar.

Default: 0 cm

alterationadjustmentbar *gsp-default.tex*

In the case of an alteration after a bar, the alteration will go a bit left of this value. This can be compared to `moraadjustmentbar`.

Default: 0.07 cm

2.5 Penalties

Penalties are used by TEX to determine where line and page breaks should occur. GregorioTEX modifies or defines a few of its own to help with that process in scores. With the exception of `emergencystretch` (which should be changed using `\grechangedim`) these should be changed using `\grechangecount`, described above.

`brokenpenalty` *gsp-default.tex*

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

Default: 0

`clubpenalty` *gsp-default.tex*

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

Default: 0

`widowpenalty` *gsp-default.tex*

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

Default: 0

`emergencystretch` *gsp-default.tex*

The value of the last ditch stretch for overfull boxes. This should be set using `\grechangedim`.

Default: `\emergencystretch`

endafterbarpenalty *gsp-default.tex*

The end after bar penalty.

Default: −200

endafterbaraltpenalty *gsp-default.tex*gsp-

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

Default: −200

endofelementpenalty *gsp-default.tex*gsp-

default.tex The end of element penalty.

Default: −50

endofsyllablepenalty *gsp-default.tex*gsp-

default.tex The end of element penalty.

Default: −50

endofwordpenalty *gsp-default.tex*gsp-

default.tex The end of element penalty.

Default: −100

hyphenpenalty *gsp-default.tex*gsp-

default.tex The hyphen penalty.

Default: −200

nobreakpenalty *gsp-default.texgsp-*

default.tex Penalty to prevent a line break.

Default: 10001

newlinepenalty *gsp-default.tex*

Penalty to force a line break.

Default: −10001

finalpenalty *gsp-default.tex*

The penalty applied after the final element of a score.

Default: 0

looseness *gsp-default.tex*

The TEX looseness within a score.

Default: `\looseness`

tolerance *gsp-default.tex*

The TEX tolerance within a score. See https://en.wikibooks.org/wiki/TeX/tolerance for an explanation of what tolerance is.

Default: 9000

pretolerance *gsp-default.tex*

The TEX pretolerance within a score. See https://en.wikibooks.org/wiki/TeX/pretolerance for an explanation of what pretolerance is.

Default: −1 (LuaTEX 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.

2.6 Colors

All colors can be redefined using `\definecolor`. See the `xcolor` (LaTeX) or `color` (PlainTeX) package for documentation.

Example:

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

grebackgroundcolor *gregoriotex.sty*

The color GregorioTeX 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 GregorioTeX 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#7#8 *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
#7	integer	the number of staff lines
#8	TEX code	macros to run before the score (e.g., setting clef extrema)

\GreEndScore *gregoriotex-main.tex*

Macro to end a score.

\GreBeginHeaders *gregoriotex-main.tex*

Macro called at the beginning of a set of gabc headers.

\GreEndHeaders *gregoriotex-main.tex*

Macro called at the end of a set of gabc headers.

\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 'Note Offset Specifier' on page 221 for a 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 'Note Offset Specifier' on page 221.
#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).

\GreAdHocSpaceEndOfElement#1#2#3 *gregoriotex-main.tex*

Macro to end an element with an ad-hoc space.

Arg	Value	Description
#1	float	The factor to scale the default space for use as an ad-hoc space.
#2	`0`	Space is breakable.
	1	Space is unbreakable.
#3	integer	The number of notes in the syllable prior to this macro.

\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 'Note Offset Specifier' on page 221 for a 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	TEX code	macro setting syllable letters for the current syllable
#2	empty	reserved for future use
#3	TEX control sequence	the control sequence to use for styling the hyphen
#4	`0`	this syllable is not the end of a word
	`1`	this syllable is the end of a word
#5	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	TEX code	other macros (translation, double text, etc.) that don't fit in the limitation of the number of arguments
#9	TEX code	The bar line (usually a *writebar* 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 'Note Offset Specifier' on page 221 for a description of options.

\GreBeginEUOUAE#1 *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.

Arg	Value	Description
#1	integer	The identifier of the EUOUAE 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.

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

Makes argument bold. Accesses LaTeX `\textbf` (*gregoriotex.sty*) or Plain TeX `\bf` (*gregoriotex.tex*) as appropriate. Corresponds to "" tags in gabc.

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

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

Typesets a bracket.

Arg	Value	Description
#1	0	Typeset a left bracket.
	1	Typeset a right bracket.
#2	integer	The height of the lowest note within the brackets.
#3	integer	The height of the highest note within the brackets.
#4	string	the line, byte offset, and column address for textedit links when point-and-click is enabled.

\GreChangeClef#1#2#3#4#5#6#7 *gregoriotex-signs.tex*

Macro called when key changes

Arg	Value	Description
#1	character	Type of new clef (c or f).
#2	1–5	Line of new clef.
#3	0	Print space before clef.
	1	Do not print space before clef.
#4	integer	Height number of flat in clef (3 for no flat).
#5	c or f	Type of secondary clef.
#6	0–5	Line of secondary clef (0 for no secondary clef).
#7	integer	Height of flat in secondary clef (3 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 'Note Offset Specifier' on page 221 for a description of options.

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

Macro indicating that the text in this syllable should not overlap any previous syllable.

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

Colors argument (a string) in `gregoriocolor.` Corresponds to "<c></c>" tags in gabc. Does nothing in Plain TEX 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	TEX code	The TEX 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 GregoiroTEX 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.

\GreHollowCP... *gregoriotex-main.tex*

A class of macros which point to the individual characters in a GregoiroTEX compatible cavum neume 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.

\GreHoleCP... *gregoriotex-main.tex*

A class of macros which point to the individual characters in a GregoiroTEX compatible cavum neume hole 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.

\GreCavum#1 *gregoriotex-signs.tex*

Typesets a cavum glyph.

Arg	Value	Description
#1	string	The name of the cavum glyph.

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

Typesets a custos.

Arg	Value	Description
#1	integer	Height number of custos.
#2	`Flat`	The custos should have a flat.
	`Natural`	The custos should have a natural.
	`Sharp`	The custos should have a sharp.
	empty	The custos should not have an alteration.

\GreDagger *gregoriotex-symbols.tex*

Macro to typeset a dagger (†).

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

A GregorioTEX-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 `\hskip` (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 LuaTEX.

Arg	Value	Description
#1	integer	Type of discretionary (for penalty assignment). Currently possible value is 0 for clef change discretionaries.
#2	TEX code	First argument of resulting `\discretionary`.
#3	TEX code	Third argument of resulting `\discretionary`.

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

Macro to typeset a divisio finalis.

Arg	Value	Description
#1	`0`	There is no text under the bar.
	`1`	There is text under the bar.
#2	TEX code	Macros which may happen before the skip but after the divisio finalis (typically `\grevepisema`).

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

Macro to typeset a divisio maior.

Arg	Value	Description
#1	`0`	There is no text under the bar.
	`1`	There is text under the bar.
#2	TEX code	Macros which may happen before the skip but after the divisio maior (typically `\grevepisema`).

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

Macro to typeset a divisio minima.

Arg	Value	Description
#1	0	There is no text under the bar.
	1	There is text under the bar.
#2	TEX code	Macros which may happen before the skip but after the divisio minima (typically \grevepisema).
#3	0	The notes around the bar are vertically close to the bar.
	1	The notes around the bar are far, @short versions of spaces will be used.

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

Macro to typeset a divisio minor.

Arg	Value	Description
#1	0	There is no text under the bar.
	1	There is text under the bar.
#2	TEX code	Macros which may happen before the skip but after the divisio minor (typically \grevepisema).

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

Macro to typeset a dominican bar.

Arg	Value	Description
#1	1–6	Type of dominican bar. Corresponds to bar types 6–13 in \grewritebar.
#2	0	There is no text under the bar.
	1	There is text under the bar.
#3	TEX code	Macros which may happen before the skip but after the divisio dominica (typically \grevepisema).

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

Macro to draw ledger lines.

Arg	Value	Description
#1	0	Draw an over-the-staff ledger line.
	1	Draw an under-the-staff ledger line.
#2	distance	The length of the line, with TeX units, excluding any left or right distances coming from the rest of the arguments.
#3	0	Start the line at this point.
	1	Start the line to the left of this point by gre@dimen@additionallineswidth.
	2	Start the line to the left of this point by #4.
#4	distance	The distance to move left before starting the line if #3 is 2.
#5	0	End the line exactly #2 to the right of this point.
	1	End the line gre@dimen@additionallineswidth to the right of #2 from this point.
	2	End the line #6 to the right of #2 from this point.
#6	distance	The distance to end the line after #2 from this point if #3 is 2.

\GreElision#1 *gregoriotex-syllable.tex*

Typesets #1 using the elision style.

Arg	Value	Description
#1	string	Text to be typeset in the elision style.

\GreEmptyFirstSyllableHyphen *gregoriotex-syllable.tex*

Macro that indicates the position of an empty-first-syllable hyphen, should one be desired.

\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#3 *gregoriotex-main.tex*

Macro to end elements.

Arg	Value	Description
#1	0	Default space.
	1	Larger space.
	2	Glyph space.
	3	Zero-width space.
	4	Ad-hoc space.
#2	0	Space is breakable.
	1	Space is unbreakable.
#3	integer	The number of notes in the syllable prior to this macro.

\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, descending.
	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, descending.
	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), descending.
	11	Space between puncta inclinata (also debilis for now), larger ambitus (range=4th or 5th), descending.
	12	Space between two puncta inclinata, ascending.
	13	Space between a punctum inclinatum and a punctum inclinatum debilis, ascending.
	14	Space between puncta inclinata (also debilis for now), larger ambitus (range=3rd), ascending.
	15	Space between puncta inclinata (also debilis for now), larger ambitus (range=4th or 5th), ascending.
	16	Space between a punctum inclinatum and a “no-bar” glyph one pitch below.
	17	Space between a punctum inclinatum and a “no-bar” glyph two pitches below.
	18	Space between a punctum inclinatum and a “no-bar” glyph three or four pitches below
	19	Space between a punctum inclinatum and a “no-bar” glyph one pitch above.
	20	Space between a punctum inclinatum and a “no-bar” glyph two pitches above.
	21	Space between a punctum inclinatum and a “no-bar” glyph three or four pitches above
	22	Half-space.

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

Typesets a custos after the final bar in a score.

Arg	Value	Description
#1	integer	Height number of custos.
#2	`Flat`	The custos should have a flat.
	`Natural`	The custos should have a natural.
	`Sharp`	The custos should have a sharp.
	empty	The custos should not have an alteration.

\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#3#4#5 *gregoriotex-signs.tex*

Macro to typeset a flat.

Arg	Value	Description
#1	integer	Height number of the flat.
#2	`0`	The flat is not part of the clef.
	`1`	The flat is part of the clef.
#3	TEX code	signs to typeset before the glyph (typically additional bars, as they must be ”behind” the glyph)
#4	TEX code	signs to typeset after the glyph (almost all signs)
#5	string	the line, byte offset, and column address for textedit links when point-and-click is enabled

\GreForceHyphen *gregoriotex-syllable.tex*

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

\GreFuse *gregoriotex-main.tex*

Macro used between two fused glyphs.

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

Macro for fusing two glyphs to create a larger neume.

Arg	Value	Description
#1	GregorioTEX glyph	The first glyph in the sequence.
#2	GregorioTEX 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	TEX code	code to set the next custos (using `\GreNextCustos`)
#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 stropha
	`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 GregorioTEX API is version specified by argument (and therefore compatible with the score.

Arg	Value	Description
#1	string	Version number for GregorioTEX.

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

Macro used to pass headers to TeX.

Arg	Value	Description
#1	string	The header name.
#2	string	The header value.

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

Macro to typeset an horizontal episema.

Arg	Value	Description
#1	integer	Height number of the episema.
#2	string	See 'Note Offset Specifier' on page 221.
#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.
#7	TEX code	code that sets heuristics
#8	string	a positive or negative "nudge" (dimension) for the vertical position of the horizontal episema
#9	0	for horizontal episema cases, use automatic positioning within the space
	1	for horizontal episema cases, position in the middle of the space
	2	for horizontal episema cases, position low within the space as if the episema is over the note
	3	for horizontal episema cases, position high within the space as if the episema is under the note
	4	for horizontal episema cases, position low within the space as if the episema is over the note
	5	for horizontal episema cases, position high within the space as if the episema is under the note

\GreHEpisemaBridge#1#2#3#4#5#6 *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).
#4	TEX code	code that sets heuristics
#5	string	a positive or negative ”nudge” (dimension) for the vertical position of the horizontal episema
#6	0	for horizontal episema cases, use automatic positioning within the space
	1	for horizontal episema cases, position in the middle of the space
	2	for horizontal episema cases, position low within the space as if the episema is over the note
	3	for horizontal episema cases, position high within the space as if the episema is under the note
	4	for horizontal episema cases, position low within the space as if the episema is over the note
	5	for horizontal episema cases, position high within the space as if the episema is under the note

\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#2 *gregoriotex-signs.tex*

Same as `\GreDivisioFinalis` except inside a syllable.

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

Same as `\GreDivisioMaior` except inside a syllable.

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

Same as `\GreDivisioMinima` except inside a syllable.

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

Same as `\GreDivisioMinor` except inside a syllable.

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

Same as `\GreDominica` except inside a syllable.

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

Saves the extrema of the initial clef.

Arg	Value	Description
#1	integer	the line of the primary clef (1 is the bottom line)
#2	integer	the line of the secondary clef (1 is the bottom line, 0 means no secondary clef)

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

Same as `\GreVirgula` except inside a syllable.

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

Makes argument (a string) italic. Accesses LaTeX `\textit` or Plain TeX `\it` as appropriate. Corresponds to "" 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.

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

Indicates that this syllable is the last syllable before a EUOUAE block.

Arg	Value	Description
#1	integer	The identifier of the EUOUAE block.
#2	0	There is no line break between this syllable and the EUOUAE block.
	1	There is a line break between this syllable and the beginning of the EUOUAE block.

\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#2#3 *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 TEX file, then this function does nothing. Also, if the `annotation` header field is used, then this function does nothing.

Arg	Value	Description
#1	TEX code	Mode text to place above the initial of a score in the `modeline` style.
#2	TEX code	Arbitrary code to typeset, in the `modemodifier` style, after the mode text.
#3	TEX code	Arbitrary code to typeset, in the `modedifferentia` style, after #2.

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

Macro for typesetting a musica ficta flat.

Arg	Value	Description
#1	integer	Height number of the musica ficta flat.
#2	string	Type of glyph the musica ficta flat is attached to. See 'Note Offset Specifier' on page 221 for a description of options.

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

Macro for typesetting a musica ficta natural.

Arg	Value	Description
#1	integer	Height number of the musica ficta natural.
#2	string	Type of glyph the musica ficta natural is attached to. See 'Note Offset Specifier' on page 221 for a description of options.

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

Macro for typesetting a musica ficta sharp.

Arg	Value	Description
#1	integer	Height number of the musica ficta sharp.
#2	string	Type of glyph the musica ficta sharp is attached to. See 'Note Offset Specifier' on page 221 for a description of options.

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

Macro to typeset a natural.

Arg	Value	Description
#1	integer	Height number of the natural.
#2	`0`	The natural is not part of the clef.
	`1`	The natural is part of the clef (doesn't happen).
#3	TEX code	signs to typeset before the glyph (typically additional bars, as they must be "behind" the glyph)
#4	TEX code	signs to typeset after the glyph (almost all signs)
#5	string	the line, byte offset, and column address for textedit links when point-and-click is enabled

\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.

\GreFinalNewLine *gregoriotex-main.tex*

Handles a new line after the final bar. This currently just advances `\gre@knownline` in order to prevent a potential error message with a two-line initial on a two-line score.

\GreNextCustos#1#2 *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.
#2	`Flat`	The custos should have a flat.
	`Natural`	The custos should have a natural.
	`Sharp`	The custos should have a sharp.
	empty	The custos should not have an alteration.

\GreSuppressEolCustos *gregoriotex-main.tex*

Macro which disables automatic custos at the end of lines.

\GreResetEolCustos *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 `\GreSuppressEolCustos` by `\greseteolcustos`.

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

Indicates that the syllable which follows begins a EUOUAE block.

Arg	Value	Description
#1	integer	The identifier of the EUOUAE block.
#2	0	There is no line break between this syllable and the EUOUAE block.
	1	There is a line break between this syllable and the beginning of the EUOUAE block.

\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.

\GreProtrusion#1#2 *gregoriotex-spaces.tex*

Typesets a protrusion.

Arg	Value	Description
#1	float	The protrusion factor. May be a call to `\GreProtrusionFactor`
#2	TEX code	The content of the protrusion.

\GreProtrusionFactor#1 *gregoriotex-spaces.tex*

Returns a automatic protrusion factor. The argument is character whose automatic protrusion factor is desired.

Arg	Value	Description
#1	,	The comma protrusion factor.
	;	The semicolon protrusion factor.
	:	The colon protrusion factor.
	.	The period protrusion factor.

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

Macro for typesetting punctum mora.

Arg	Value	Description
#1	integer	Height number of punctum mora.
#2	0	General case.
	1	Make the punctum mora zero width.
	2	Shift left width of 1 punctum.
	3	Shift left width of 1 punctum if last ambitus is 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 'Note Offset Specifier' on page 221 for a 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 'Note Offset Specifier' on page 221 for a description of options.

\GreScoreOpening#1#2#3#4#5 *gregoriotex-syllable.tex*

Opens the score.

Arg	Value	Description
#1	TEX code	Macros rendering the things after the initial but before the notes.
#2	TEX code	Macros rendering the things after starting notes but before the syllable.
#3	TEX code	Macros rendering the things before the initial.
#4	TEX control sequence	Control sequence for the syllable.
#5	TEX code	Macros rendering the first syllable; should emit the initial and populate `\gre @opening@syllabletext`.

\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 'Note Offset Specifier' on page 221 for a description of options.

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

Sets the first syllable text.

Arg	Value	Description
#1	TEX code	Initial.
#2	TEX code	First letter after the initial.
#3	TEX code	Everything else in the syllable.
#4	TEX code	Three syllable parts when there is a separated initial.
#5	TEX code	Three syllable parts where there is no separated initial.
#6	TEX code	Extra macros to run if there is an initial.

\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 typeset 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

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

\GreSetInitialClef#1#2#3#4#5#6#7 *gregoriotex-signs.tex*

Macro for writing initial clef.

Arg	Value	Description
#1	c or f	Type of clef.
#2	1–5	Line of clef.
#3	integer	Height number of flat in clef (3 for no flat).
#4	c or f	Type of secondary clef.
#5	0–5	Line of secondary clef (0 for no secondary clef).
#6	integer	Height of flat in secondary clef (3 for no flat).
#7	integer	0 if clef and first note are far enough to use a shorter space, 1 otherwise.

\GreSetLinesClef#1#2#3#4#5#6#7 *gregoriotex-signs.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	1–5	Line of clef.
#3	0	No space after clef.
	1	Space after clef.
#4	integer	Height of flat in clef (3 for no flat).
#5	c or f	Type of secondary clef.
#6	0–5	Line of secondary clef (0 for no secondary clef).
#7	integer	Height of flat in secondary clef (3 for no flat).

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

Macro defining the largest clef of the score (for notes left alignment). The arguments are the same as \GreSetInitialClef without the #7th one, which is always considered to be 1.

\GreSetNabcAboveLines#1 *gregoriotex-main.tex*

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

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

\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

\GreSetNoFirstSyllableText *gregoriotex-syllable.tex*

Macro that indicates there is no next in the first syllable.

\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#3#4#5 *gregoriotex-signs.tex*

Macro to typeset a sharp.

Arg	Value	Description
#1	integer	Height number of the sharp.
#2	`0`	The sharp is not part of the clef.
	1	The sharp is part of the clef (doesn't happen).
#3	TEX code	signs to typeset before the glyph (typically additional bars, as they must be "behind" the glyph)
#4	TEX code	signs to typeset after the glyph (almost all signs)
#5	string	the line, byte offset, and column address for textedit links when point-and-click is enabled

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

Makes argument small capitals. Accesses LATEX `\textsc` or Plain TEX `\sc` as appropriate Corresponds to "<sc></sc>" tags in gabc.

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

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

Typesets a slur.

Arg	Value	Description
#1	integer	Height number of the pitch.
#2	-1	The slur should appear under the note.
	1	The slur should appear over the note.
#3	0	The slur should start at the right end of the note.
	1	The slur should start at one punctum's width to the left of the right end of the note.
	2	The slur should start at one-half punctum's width to the left of the right end of the note.
#4	string	The horizontal dimension of the slur.
#5	string	The vertical dimension of the slur.
#6	integer	Height number of the pitch.

\GreSpecial#1 *gregoriotex-symbols.tex*

Typesets a special character. If the #1 special character wasn't defined by `\gresetspecial`, the text of #1 will be output directly.

Arg	Value	Description
#1	string	The text between <sp> and </sp>.

\GreStar *gregoriotex-symbol.tex*

Macro to typeset an asterisk (*).

\GreSupposeHighLedgerLine *gregoriotex-spaces.tex*

Indicates that the system should act as if a ledger line exists above the staff.

\GreSupposeLowLedgerLine *gregoriotex-spaces.tex*

Indicates that the system should act as if a ledger line exists below the staff.

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

Macro to typeset the syllable.

Arg	Value	Description
#1	TEX code	macro setting syllable letters for the current syllable
#2	empty	reserved for future use
#3	TEX control sequence	the control sequence to use for styling the hyphen
#4	`0`	this syllable is not the end of a word
	1	this syllable is the end of a word
#5	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	TEX code	other macros (translation, double text, etc.) that don't fit in the limitation of the number of arguments
#9	GregorioTEX glyphs	all the notes

\GreSyllableNoteCount#1 *gregoriotex-syllable.tex*

Indicates the number of notes in the current syllable.

Arg	Value	Description
#1	integer	The number of notes in the current syllable.

\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 LaTeX `\texttt` or Plain TeX `\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 LaTeX using `\underline`. Does nothing in Plain 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.

\GreUpcomingNewLineForcesCustos#1 *gregoriotex-syllable.tex*

Indicates that the new line in the next syllable forces a custos.

Arg	Value	Description
#1	0	The custos is forced off.
	1	The custos is forced on.

\GreVarBraceLength#1 *gregoriotex-signs.tex*

Returns the computed length of the given brace or ledger line.

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 and ledger lines.

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.
	2	Shift back one-half 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 'Note Offset Specifier' on page 221 for a description of options.

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

Macro to typeset a virgula.

Arg	Value	Description
#1	`0`	There is no text under the bar.
	1	There is text under the bar.
#2	code	Macros which may happen before the skip but after the virgula (typically `\grevepisema`).
#3	`0`	The notes around the bar are vertically close to the bar.
	1	The notes around the bar are far, `@short` versions of spaces will be used.

\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).

\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#3#4 *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
#3	integer	The high pitch of the notes covered by the nabc character(s).
#4	integer	The low pitch of the notes covered by the nabc character(s).

\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)

\GreModeNumber#1 *gregoriotex-main.tex*

Macro which formats the mode in roman or arabic numerals according to the appropriate setting.

Arg	Value	Description
#1	1–8	The mode to be formated

\GreNoNoteSyllable *gregoriotex-syllable.tex*

Alias for `\GreSyllable` or `\GreBarSyllable` depending on whether the old or new bar spacing algorithm (respectively) is active. This is used only for syllables which have no notes.

\GreGABCForceCenters *gregoriotex-syllable.tex*

Macro inserted into `\GreSyllable` and `\GreBarSyllable` to indicate that the center of the of the current syllable was forced in the gabc with curly braces ("{" and "}").

\GreGABCNextForceCenters *gregoriotex-syllable.tex*

Macro inserted into `\GreSyllable` and `\GreBarSyllable` to indicate that the center of the of the next syllable was forced in the gabc with curly braces ("{" and "}").

4 GregorioTEX Controls

These functions are the ones used by GregorioTEX 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 TEX output log.

Arg	Value	Description
#1	string	error message

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

Prints a warning to the TEX 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-common.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 TEX.

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

\gre@obsolete#1#2 *gregoriotex-common.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@allowdeprecated@asboolean *gregoriotex-main.tex*

Macro that evaluates `true` or `false` depending on whether deprecated usage is allowed. This is used to pass the value of `\ifgre@allowdeprecated` to Lua.

\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#4 *gregoriotex-spaces.tex*

Macro for calculating \gre@textaligncenter.

Arg	Value	Description
#1	string	The carry-over letters from the previous syllable that should be moved to the current.
#2	string	The first part of the syllable (any preceding consonants in Latin).
#3	string	The middle part of the syllable (the vowel in Latin, the whole syllable in English).
#4	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@commentarytrueraise *gregoriotex-spaces.tex*

Macro to calculate \gre@dimen@commentarytrueraise.

\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#3 *gregoriotex-spaces.tex*

Calculates the raise value for a glyph (glyphraisevalue) 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
	14	case of the punctum mora in a space with a note on the line below it
	15	case of the over-the-notes slur
	16	case of the under-the-notes slur
	17	case of the bracket
#3	0	for horizontal episema cases, use automatic positioning within the space
	1	for horizontal episema cases, position in the middle of the space
	2	for horizontal episema cases, position low within the space as if the episema is over the note
	3	for horizontal episema cases, position high within the space as if the episema is under the note
	4	for horizontal episema cases, position low within the space as if the episema is over the note
	5	for horizontal episema cases, position high within the space as if the episema is under the note

\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 (`textaligncenter`)
#4	length	the alignment distance for the notes (`notesaligncenter`)
#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

The formula used is `#1 - #2 + #3 - #4` or (more sensibly) `(#1 - #4) - (#2 - #3)`. This is also equivalent to `-#4 - \gre@dimen@begindifference + #3`, a fact we take advantage of when calculating the end difference for a bar syllable under the new bar spacing algorithm.

\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 'Distances' on page 53.
#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#5 *gregoriotex-spaces.tex*

Macro to calculate `nextbegindifference`.

Arg	Value	Description
#1	string	the carry-over letters for the next syllable
#2	string	the first letters of the next syllable
#3	string	the middle letters of the next syllable (the vowel in Latin, the whole syllable in English)
#4	string	the end letters of the next syllable
#5	$0 \leq$ integer ≤ 19	the type of notes alignment. See 'Note Alignment Type' on page 220.
	$20 \leq$ integer ≤ 39	Same as below 20 except there is a flat before the notes. Subtract 20 to get the type of notes alignment.
	$40 \leq$ integer ≤ 59	Same as below 20 except there is a natural before the notes. Subtract 40 to get the type of notes alignment.

\gre@strip@pt#1 *gregoriotex.sty* and *gregoriotex.tex*

Strips the units from a distance. Under LaTeX, this is an alias to `\strip@pt`.

Arg	Value	Description
#1	control sequence	should be the control sequence for the the distance register (including the leading backslash)

\gre@rem@pt#1 *gregoriotex.tex*

Strips the units from a distance. Used internally by `\gre@strip@pt`. Under LaTeX, this is not defined.

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@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 TEX 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	GregorioTEX will automatically compile gabc files if necessary.
	f	Forces GregorioTEX to compile the gabc file.
#2	string	Relative or absolute path to the score.

\gre@writemode#1#2#3 *gregoriotex-main.tex*

Macro that writes its arguments with \greannotation. This macro is typically called by \GreMode in the gtex file.

Arg	Value	Description
#1	TEX code	Mode text to place above the initial of a score in the modeline style.
#2	TEX code	Arbitrary code to typeset, in the modemodifier style, after the mode text.
#3	TEX code	Arbitrary code to typeset, in the modedifferentia style, after #2.

\gre@setallbracerendering#1 *gregoriotex-signs.tex*

Macro used by \gresetbracerendering to change all braces.

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

\gre@setbracerendering[#1]#2 *gregoriotex-signs.tex*

Macro used by \gresetbracerendering to change a single type of brace.

Arg	Value	Description
#1	brace	change round braces that appear over the staff
	underbrace	change round braces that appear under the staff
	curlybrace	change curly braces
	barbrace	change round braces that appear over divisio bars
#2	metapost	METAPOST will be used to render braces
	font	The score font will be used to render braces

\gre@@setbracerendering#1#2 *gregoriotex-signs.tex*

Secondary macro used by \gre@setallbracerendering and \gre@setbracerendering to change a single type of brace. As a secondary macro, it doesn't check its first argument.

Arg	Value	Description
#1	brace	change round braces that appear over the staff
	underbrace	change round braces that appear under the staff
	curlybrace	change curly braces
	barbrace	change round braces that appear over divisio bars
#2	metapost	METAPOST will be used to render braces
	font	The score font will be used to render braces

\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.

\gre@render@barbrace *gregoriotex-signs.tex*

Draws a divisio 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 *, 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@fontbrace#1#2 *gregoriotex-signs.tex*

Draws a brace using the score font.

Arg	Value	Description
#1	string	the width of the brace.
#2	TEX code	TEX code that renders the brace using the score font.

\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#2#3 *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@draw@slur#1#2#3 *gregoriotex-signs.tex*

Draws a slur using METAPOST.

Arg	Value	Description
#1	length	the x-dimension of the slur.
#2	length	the y-dimension of the slur.
#3	-1	draw an under-the-notes slur.
	1	draw an over-the-notes slur.

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

Evaluates to #1 if running under LaTeX.

Arg	Value	Description
#1	TeX code	the TeX code to use if running under LaTeX.

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

Evaluates to #1 if not running under LaTeX.

Arg	Value	Description
#1	TeX code	the TeX code to use if not running under 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 LaTeX.

Arg	Value	Description
#1	string	the value of \f @series/\f @shape to match.
#2	TeX code	the TeX for the base symbol (i.e., A, R, or V).
#3	string	the control sequence name created by \gredefsizedsymbol 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
#1	integer	height of the custos character to be placed

\gre@nextcustospitch *gregoriotex-signs.tex*

Macro that saves the next custos pitch (height).

\gre@nextcustosalteration *gregoriotex-signs.tex*

Macro that saves the next custos alteration.

\gre@custosalteration#1#2 *gregoriotex-signs.tex*

Typesets the alteration for a custos, if enabled.

Arg	Value	Description
#1	integer	The pitch (height number) of the custos.
#2	`Flat`	The custos should have a flat.
	`Natural`	The custos should have a natural.
	`Sharp`	The custos should have a sharp.
	empty	The custos should not have an alteration.

\gre@beginnotes *gregoriotex-main.tex*

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

\gre@noinitial *gregoriotex-main.tex*

Macro called when no initial is being set.

\gre@setbiginitial *gregoriotex-main.tex*

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

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

Macro to set the initial in the score.

\gre@adjustsecondline *gregoriotex.tex*

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

\gre@adjustthirdline *gregoriotex-main.tex*

Macro to call during the second line.

\gre@adjustlineifnecessary *gregoriotex-main.tex*

Macro that calls `\gre@adjustthirdline` if indicated by `\ifgre@thirdlineadjustmentnecessary`.

\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#5#6#7 *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 part of the clef
	0	the alteration is not part of the clef
#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

\gre@clef *gregoriotex-signs.tex*

Macro holding the current clef type.

\gre@clefheight *gregoriotex-signs.tex*

Macro holding the current clef line.

\gre@clefflatheight *gregoriotex-signs.tex*

Macro to hold the height of the current flat for the clef (3 if no flat).

\gre@cleftwo *gregoriotex-signs.tex*

Macro holding the current secondary clef type.

\gre@cleftwoheight *gregoriotex-signs.tex*

Macro holding the current secondary clef line (or 0 for no secondary clef).

\gre@cleftwoflatheight *gregoriotex-signs.tex*

Macro to hold the height of the current flat for the secondary clef (3 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#2 *gregoriotex-main.tex*

Macro for typesetting the text or nabc neumes above the lines.

Arg	Value	Description
#1	string	Text to be typeset
#2	0	Use alt text above the lines vertical spacing
	1	Use nabc neumes above the lines vertical spacing

\gre@dotranslationcenterend *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@savedlastoflinecount *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#2 *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
#2	`0`	Take care of eolshift
	1	Do not adjust end of line (when already done by the new spacing algorithm)

\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@endofglyphcommon *gregoriotex-syllable.tex*

Macro called at the end of every glyph. Checks to see if glyph being ended is the last of the score and does some clean-up if it is.

\gre@setfirstsyllabletext#1#2#3#4#5#6 *gregoriotex-syllable.tex*

Internal macro to set the first syllable text after all parts are known.

Arg	Value	Description
#1	TEX code	First part of the syllable (before the vowel)
#2	TEX code	Middle part of the syllable (the vowel)
#3	TEX code	Last part of the syllable (after the vowel)
#4	TEX code	First letter of the syllable
#5	TEX code	Everything after the first letter of the syllable
#6	TEX code	Macros to run after the text is emitted

\gre@opening@syllabletext *gregoriotex-syllable.tex*

Macro that stores the computed TEX code for rendering the text of the first syllable.

\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#2 *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
#1	`0`	the hole is being filled for an alteration
#1	`1`	the hole is being filled for a cavum glyph

\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 5.1

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

Same as previous, but for the next syllable.

Arg	Value	Description
#1	Note alignment type	See 5.1

\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 5.1
#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	GregorioTEX glyph	Glyph to use when aligning clivis on its center
#2	GregorioTEX 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#6#7 *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
	4	go back to the beginning of the previous glyph and then forward the width of #1, then back the width of #2; this ends the episema at the end of #1
#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
#6	string	a positive or negative "nudge" (dimension) for the vertical position of the horizontal episema
#7	0	for horizontal episema cases, use automatic positioning within the space
	1	for horizontal episema cases, position in the middle of the space
	2	for horizontal episema cases, position low within the space as if the episema is over the note
	3	for horizontal episema cases, position high within the space as if the episema is under the note
	4	for horizontal episema cases, position low within the space as if the episema is over the note
	5	for horizontal episema cases, position high within the space as if the episema is under the note

\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	GregorioTEX glyph	an offset glyph (see #3, below)
#2	GregorioTEX 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	string	See 'Note Offset Specifier' on page 221.
#3	GregorioTEX 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	GregorioTEX glyph	is an offset glyph (see #3 below)
#2	GregorioTEXglyph	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 TEX and then restore the original catcode after the package is done loading.

\gre@prephepisemaledgerlineheuristics *gregoriotex-spaces.tex*

Prepares the system to accept ledger line heuristics for the horizontal episema.

\gre@resetledgerlineheuristics *gregoriotex-spaces.tex*

Resets the ledger line heuristic flags.

\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@save@clef#1#2#3#4#5#6 *gregoriotex-signs.tex*

Saves clef information for use in `gre@updatelinesclef`.

Arg	Value	Description
#1	character	the type of the clef: c or f
#2	integer	the line of the clef (1 is the lowest)
#3	integer	if 3, it means that we must not put a flat after the clef, otherwise it's the height of the flat
#4	character	the type of the secondary clef: c or f
#5	integer	the line of the secondary clef (1 is the lowest, 0 for no secondary clef)
#6	integer	if 3, it means that we must not put a flat after the secondary clef, otherwise it's the height of the flat

\gre@typeclef#1#2#3#4#5#6#7#8#9 *gregoriotex-signs.tex*

Macro which typesets the clef.

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

\gre@boxclef#1#2#3#4#5#6#7#8#9 *gregoriotex-signs.tex*

Macro filling `\gre@box@temp@width` with a clef. The arguments are the same as `gre@typeclef`.

\gre@typesingleclef#1#2#3#4 *gregoriotex-signs.tex*

Macro which typesets a single clef.

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

\gre@updateleftbox *gregoriotex-main.tex*

Macro to update the box printed a 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@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#4#5 *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	0	if there is no text underneath the bar
	1	if there is text underneath the bar
#4	TEX code	macros that may happen before the skip after the bar (typically GreVEpisema)
#5	0	The notes around the bar are vertically close to the bar.
	1	The notes around the bar are far, `@short` versions of spaces will be used.

\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 not 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@commentary[#1]#2 *gregoriotex-main.tex*

Workhorse function behind \grecommentary.

Arg	Value	Description
#1	distance	Additional distance to be placed between the commentary and the top staff line for the next score only.
#2	string	the new commentary content

\gre@printcommentary *gregoriotex-main.tex*

Computes the true "raise" and prints the commentary contained in \gre@box@commentary.

\gre@atletter *gregoriotex-main.tex*

A LuaTEX catcode table which makes sure that LuaTEX 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 LATEX and Plain TEX.

\gre@bolshiftcleftypeglobal *gregoriotex-spaces.tex*

Takes on the value 1, 2, or 3 depending on whether to calculate the beginning-of-line shift based on the largest, current, or forced clef width (i.e., directly use the value stored in \gre@dimen@clefwidth@bol), respectively. This is the "global" value, used to initialize \gre@bolshiftcleftypelocal at the start of a score.

\gre@bolshiftcleftypelocal *gregoriotex-spaces.tex*

Takes on the value 1, 2, or 3 depending on whether to calculate the beginning-of-line shift based on the largest, current, or forced clef width (i.e., directly use the value stored in \gre@dimen@clefwidth@bol), respectively. This is the "local" value, used in the actual computation.

\gre@update@clefwidth@largest#1 *gregoriotex-spaces.tex*

Updates the "largest" clef width, used when \gre@bolshiftcleftypelocal is 1.

Arg	Value	Description
#1	distance	The new value to use for the "largest" clef width.

\gre@update@clefwidth@current#1 *gregoriotex-spaces.tex*

Updates the "current" clef width, used when \gre@bolshiftcleftypelocal is 2.

Arg	Value	Description
#1	distance	The new value to use for the "current" clef width.

\gre@update@clefwidth@forced#1 *gregoriotex-spaces.tex*

Updates the "forced" clef width, used when `\gre@bolshiftcleftypelocal` is `3`.

Arg	Value	Description
#1	distance	The new value to use for the "forced" clef width.

\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 TEX 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@dimen@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 TEX 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. Contains comma-separated values from 'Debug Category' on page 225, set via the debug package keyword parameter.

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

Macro to print debugging messages.

Arg	Value	Description
#1	string	The category of the message (used in conjunction with `\gre@debug` to determine whether to print the message or not; see 'Debug Category' on page 225
#2	string	The debug message

\gre@trace#1 *gregoriotex-common.tex*

Macro to mark the beginning of a function in the log with a GreTrace message.

Arg	Value	Description
#1	string	name and argument list of the function being identified.

\gre@trace@end#1 *gregoriotex-common.tex*

Macro to mark the end of a function in the log with a GreTrace message.

\gre@trace@prefixgregoriotex-common.tex *M*acro

to hold the prefix of GreTrace messages (value is manipulated to control indentation and indicate nesting).

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

Macro which checks for version consistency between GregorioTEX 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@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, descending.
	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, descending.
	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), descending.
	11	Space between puncta inclinata (also debilis for now), larger ambitus (range=4th or 5th), descending.
	12	Space between two puncta inclinata, ascending.
	13	Space between a punctum inclinatum and a punctum inclinatum debilis, ascending.
	14	Space between puncta inclinata (also debilis for now), larger ambitus (range=3rd), ascending.
	15	Space between puncta inclinata (also debilis for now), larger ambitus (range=4th or 5th), ascending.
	16	Space between a punctum inclinatum and a “no-bar” glyph one pitch below.
	17	Space between a punctum inclinatum and a “no-bar” glyph two pitches below.
	18	Space between a punctum inclinatum and a “no-bar” glyph three or four pitches below
	19	Space between a punctum inclinatum and a “no-bar” glyph one pitch above.
	20	Space between a punctum inclinatum and a “no-bar” glyph two pitches above.
	21	Space between a punctum inclinatum and a “no-bar” glyph three or four pitches above
	22	Half-space.

\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@fixdebug *gregoriotex-common.tex*

Fixes the raw \gre@debug value for use with \gre@debugmsg.

\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 \gre @firstsyllablepart\gre @middlesyllablepart\gre @endsyllablepart

\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 \gre @nextfirstsyllablepart\gre @nextmiddlesyllablepart\gre @nextendsy

\gre@if@rewritesyllable#1#2 *gregoriotex-syllable.tex*

Performs #1 if the syllable should be rewritten, else #2.

Arg	Value	Description
#1	TEX code	Code to perform when rewriting the syllable
#2	TEX code	Code to perform when *not* rewriting the syllable

\gre@save@endsyllablepart *gregoriotex-syllable.tex*

Control sequence aliased to the carry-over syllable part to be moved to the next syllable.

\gre@save@fixedtextformat#1 *gregoriotex-syllable.tex*

Control sequence aliased to the fixed text format for the carry-over syllable part to be moved to the next syllable.

Arg	Value	Description
#1	string	The carry-over syllable part, as with `\gre @fixednexttextformat`

\gre@save@pointandclick *gregoriotex-syllable.tex*

Control sequence aliased to the line:char:column of the point-and-click link for the carry-over syllable part to be moved to the next syllable

\gre@push@endsyllable#1 *gregoriotex-syllable.tex*

Sets the save aliases to push the end-syllable part of the current syllable to the next syllable if necessary.

Arg	Value	Description
#1	link target	line:char:column for the link to use for the pushed syllable part

\gre@emit@syllabletext#1 *gregoriotex-syllable.tex*

Emits the text for the syllable, prepending the carry-over syllable part if necessary and consolidating the fixed text styles if possible.

Arg	Value	Description
#1	TEX code	Code that emits the syllable text

\gre@emit@endsyllablepart *gregoriotex-syllable.tex*

Emits the text for the end syllable part if it *is not* to be moved to the next syllable.

\gre@emit@endsyllablepartfornextsyllable *gregoriotex-syllable.tex*

Emits the text for the end syllable part if it *is* to be moved to the next syllable. This is used when projecting the next syllable text while processing some syllable.

\gre@syllable@args *gregoriotex-syllable.tex*

Saves the arguments to `\GreSyllable`. Needed so that `\GreSyllable` can look forward to see if the next token is `\GreBarSyllable`.

\gre@syllable@expand *gregoriotex-syllable.tex*

Calls `\gre@syllable@act`, passing the arguments saved in `gre@syllable@args`. Needed so that `\GreSyllable` can look forward to see if the next token is `\GreBarSyllable`.

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

Typesets the syllable. Same arguments as `\GreSyllable`. See the description of that macro for more information. Needed so that `\GreSyllable` can look forward to see if the next token is `\GreBarSyllable`.

\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@gregoriotexversion *gregoriotex-main.tex*

Macro to hold the version number of GregorioTEX 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-n,p] *gregoriotex-main.tex*

Macros which map gabc pitch letters (the final part of the macro name) to the numerical value that GregorioTEX 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@pitch@abovestaff *gregoriotex-main.tex*

The pitch above the staff.

\gre@pitch@belowstaff *gregoriotex-main.tex*

The pitch below the staff.

\gre@pitch@ledger@above *gregoriotex-main.tex*

The pitch of the ledger line above the staff.

\gre@pitch@ledger@below *gregoriotex-main.tex*

The pitch of the ledger line below the staff.

\gre@pitch@barvepisema *gregoriotex-main.tex*

The pitch of the bar episema.

\gre@pitch@underbrace *gregoriotex-main.tex*

The pitch of the under-the-staff brace.

\gre@pitch@overbrace *gregoriotex-main.tex*

The pitch of the over-the-staff brace.

\gre@pitch@overbraceglyph *gregoriotex-main.tex*

The pitch of the over-the-staff brace glyph.

\gre@pitch@bar *gregoriotex-main.tex*

The pitch of the bar glyph.

\gre@pitch@raresign *gregoriotex-main.tex*

The pitch of a rare sign (semicirculus, etc.).

\gre@pitch@dummy *gregoriotex-main.tex*

A meaningless (don't-care) pitch.

\gre@pitch@nominal *gregoriotex-main.tex*

A pitch guaranteed to be in the staff.

\gre@pitch@cleftop *gregoriotex-spaces.tex*

The pitch of the highest point of the current clef.

\gre@pitch@clefbottom *gregoriotex-spaces.tex*

The pitch of the lowest point of the current clef.

\gre@saveclefextrema#1#2 *gregoriotex-signs.tex*

Computes the pitches of the lowest and highest points of a clef and saves them into \gre@pitch@cleftop and \gre@pitch@clefbottom.

Arg	Value	Description
#1	integer	the line of the primary clef (1 is the bottom line)
#2	integer	the line of the secondary clef (1 is the bottom line, 0 means no secondary clef)

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

Macro to generate the point-and-click links.

Arg	Value	Description
#1	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@prefixII *gregoriotex-spaces.tex*

Same as \gre@prefix. Used when we were dealing with two distances simultaneously.

\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.
	granapadano	Use the Grana Padano font.

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

Macro to make a few checks and call the right macros between `\endbeforebar, \endofword, \endof`

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 LaTeX or `\message` in Plain TeX.

\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 LaTeX version.

\gre@localrightbox *gregoriotex-main.tex*

Alias for \luatexlocalrightbox or \localrightbox, depending on LaTeX version.

\gre@resizebox *gregoriotex-main.tex*

Alias for \resizebox.

\gre@dimension *gregoriotex-spaces.tex*

Workhorse function for setting distances in \grecreatedim and \grechangedim.

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

Saves the current value of the dimension and then changes it. The arguments are the same as \grechangedim. Used to temporarily change the dimension for a given line, which is restored at the next beginning of the next line.

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

Saves the current value of the count and then changes it. The arguments are the same as \grechangeocount. Used to temporarily change the count for a given line, which is restored at the next beginning of the next line.

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

Sets the number of staff lines.

Arg	Value	Description
#1	integer	The number of staff lines

\gre@stafflines *gregoriotex-main.tex*

Contains the number of staff lines.

\gre@romannumeral@majuscule#1 *gregoriotex-main.tex*

Typesets its numeric argument as an upper-case Roman numeral.

Arg	Value	Description
#1	integer	The number to typeset

\gre@romannumeral@minuscule#1 *gregoriotex-main.tex*

Typesets its numeric argument as a lower-case Roman numeral.

Arg	Value	Description
#1	integer	The number to typeset

\gre@bar@space@suffix#1#2#3 *gregoriotex-symbols.tex*

Macro used to select the corresct suffix of the `bar@x` spaces.

Arg	Value	Description
#1	`0`	emits nothing
	1 emits `@standalone`	
#2	`0`	emits `@notext` (only if standalone)
	1 emits `@text` (only if standalone)	
#3	`0`	emits nothing
	1 emits `@short`	

\gre@drawadditionalline#1#2#3#4#5#6 *gregoriotex-signs.tex*

Workhorse function behind \GreDrawAdditionalLine.

Arg	Value	Description
#1	0	Draw an over-the-staff ledger line.
	1	Draw an under-the-staff ledger line.
#2	distance	The length of the line, with TeX units, excluding any left or right distances coming from the rest of the arguments.
#3	0	Start the line at this point.
	1	Start the line to the left of this point by gre@dimen@additionallineswidth.
	2	Start the line to the left of this point by #4.
#4	distance	The distance to move left before starting the line if #3 is 2.
#5	0	End the line exactly #2 to the right of this point.
	1	End the line gre@dimen@additionallineswidth to the right of #2 from this point.
	2	End the line #6 to the right of #2 from this point.
#6	distance	The distance to end the line after #2 from this point if #3 is 2.

\gre@get@unkern@aftermora *gregoriotex-signs.tex*

Calculates the amount of shift needed to take into account the presence of a punctum mora at the end of a syllable according to the setting in \gre@count@shiftaftermora.

\gre@unkern@bar@aftermora *gregoriotex-signs.tex*

Macro which kerns between a punctum mora and a bar according to the setting in \gre@count@shiftaftermora.

\gre@setgregoriofontscaled[#1]#2#3 *gregoriotex-main.tex*

Workhorse behind \gresetgregoriofontscaled.

Arg	Value	Description
#1	*(omitted)*	Use the normal font and rule set.
	op	Use the alternate Dominican font/rule set.
#2	greciliae	Use the Greciliae font (default).
	gregorio	Use the Gregorio font.
	granapadano	Use the Grana Padano font.
#3	integer	the scaling factor

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

Macro for calculating the position of the elements of a bar syllable using the new bar positioning algorithm.

Arg	Value	Description
#1	0	bar is not the end of a word
	1	bar is the end of a word
#2	integer	alignment type of the first glyph in the next syllable. See 'Note Alignment Type' on page 220

\gre@newlinearg *gregoriotex-syllable.tex*

Macro for storing the argument for \gre@newlinecommon when the line break must be delayed (i.e. in the new bar spacing algorithm).

\gre@newlinecommondelayed *gregoriotex-syllable.tex*

Macro used in place of \gre@newlinecommon when the line break must be delayed.

\gre@newlinecommonsaved *gregoriotex-syllable.tex*

Macro for storing original behavior of \gre@newlinecommon so that it can be restored after the delayed line break takes effect.

\gre@punctum@mora#1#2#3#4 *gregoriotex-signs.tex*

Macro to typeset a punctum mora.

Arg	Value	Description
#1	pitch	height of the punctum mora (one of the \gre @pitch@... macros.
#2	0	general case
	1	make the punctum mora zero-width
	2	shift the width of one punctum to the left
	3	same as 2 but with ambitus of one
#3	1	punctum mora in the note before the last note of a podatus, porrectus, or torculus resupinus
	0	other cases
#4	1	punctum inclinatum
	0	other cases

\gre@changecavumhole#1[#2][#3] *gregoriotex-main.tex*

Macro used by \grechangecavumglyph to handle the optional arguments.

\gre@alterationadjustment#1 *gregoriotex-spaces.tex*

Macro to make adjustments to nextbegindifference in order to account for an alteration at the begining of the next syllable.

\gre@punctummoraadjustment *gregoriotex-spaces.tex*

Macro to make adjustments to cursor position and previousenddifference based on the presence of a punctum mora at the end of the last syllable.

\gre@num@min#1#2 *gregoriotex-spaces.tex*

Puts the lower of its two integer arguments into \gre@count@temp@one.

Arg	Value	Description
#1	integer	the first value to compare
#2	integer	the second value to compare

\gre@num@max#1#2 *gregoriotex-spaces.tex*

Puts the greater of its two integer arguments into \gre@count@temp@one.

Arg	Value	Description
#1	integer	the first value to compare
#2	integer	the second value to compare

\gre@evaluatenextsyllable#1 *gregoriotex-syllable.tex*

Evaluates its first argument as an advance computation against the next syllable. Twiddles the ifgre@evaluatingnextsyllable flag around evaluation of the macro argument.

\gre@save@additionalspaces *gregoriotex-spaces.tex*

Macro to save the additional vertical spaces associated with the line (additionalbottomspace, additionaltopspace, additionaltopspacealt, additionaltopspacenabc, currenttranslationh textlower, currentabovelinestextheight, and constantglyphraise) so that they can be restored later.

\gre@restore@additionalspaces *gregoriotex-spaces.tex*

Macro to restore the additional vertical spaces associated with the line from their saved values.

\gre@clearsyllable#1 *gregoriotex-spaces.tex*

Prevents the current syllable from overlapping with the previous syllable.

Arg	Value	Description
#1	bar	the current syllable is a bar syllable.
	note	the current syllable is a note syllable.

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

GregorioTEX loads a number of fonts which are referred to by the following macros.

\gre@font@music *gregoriotex-main.tex*

The font for the neumes and other principle score elements.

\gre@font@music@hollow *gregoriotex-main.tex*

The font for cavum neumes.

\gre@font@music@hole *gregoriotex-main.tex*

The font for cavum neume holes.

\gre@font@style *gregoriotex-main.tex*

The font for some of the extra characters, such as the bar for barred letters.

\gre@font@nabc *gregoriotex-nabc.tex*

The font for ancient notation.

\gre@font@initial *gregoriotex.tex*

The font for the default initial format in Plain TEX.

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

Macro holding the factor at which the font is loaded. There is one of these macros for each chant font which has been loaded with the ending of the macro name being the name of the chant font (gregorio, granapadano, etc.).

4.3 Character Reference Aliases

To make referencing and changing them easier, GregorioTEX stores reference information for certain characters using the following macros.

\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@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@zerohyph *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).

\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.

\gre@nabccharno#1#2#3 *gregoriotex-nabc.tex*

Prints the nabc glyphs for the given nabc string.

Arg	Value	Description
#1	string	nabc code representing the character
#2	string	name of nabc font to use
#3	integer	scaling factor

4.4 Flags

Flags are either boolean (defined with `\newif`), LuaTEX attributes, or counts (defined with `\newcount`). They store settings and/or the current state of something so that GregorioTEX 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@annotationbottomline` *gregoriotex-main.tex*

Boolean used to indicate if the bottom line of the annotation should be used as the control line for its initial vertical alignment.

`\gre@count@annotationvalign` *gregoriotex-main.tex*

Count used to indicate which part of the annotation control line should be initially aligned with the top line of the staff. Values: `0`, top; `1`, baseline; or `2`, bottom.

`\ifgre@forcehyphen` *gregoriotex-main.tex*

Boolean used to indicate if hyphens should be forced between all syllables in a polysyllabic word.

`\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@hepisemabridge *gregoriotex-signs.tex*

Boolean used to specify whether adjacent horizontal episemata should be joined together.

\ifgre@metapost@brace *gregoriotex-signs.tex*

Boolean used to specify whether round over-the-staff braces should be drawn by METAPOST as opposed to rendered via the score font.

\ifgre@metapost@underbrace *gregoriotex-signs.tex*

Boolean used to specify whether round under-the-staff braces should be drawn by METAPOST as opposed to rendered via the score font.

\ifgre@metapost@curlybrace *gregoriotex-signs.tex*

Boolean used to specify whether curly braces should be drawn by METAPOST as opposed to rendered via the score font.

\ifgre@metapost@barbrace *gregoriotex-signs.tex*

Boolean used to specify whether divisio 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.

\ifgre@rewritesyllables *gregoriotex-syllable.tex*

Boolean that enables moving the last part of a syllable to the next if there is no hyphen.

\gre@attr@dash *gregoriotex-main.tex*

A LuaTEX attribute which indicates whether a syllable takes a dash if it ends a line.

\gre@attr@center *gregoriotex-main.tex*

A LuaTEX attribute which indicates the type of translation centering.

\gre@attr@glyph@id *gregoriotex-main.tex*

A LuaTEX attribute which identifies the glyph we are at. Used for dynamic line spacing.

\gre@attr@glyph@top *gregoriotex-main.tex*

A LuaTEX attribute which identifies the high point of the glyph. Used for dynamic line spacing.

\gre@attr@glyph@bottom *gregoriotex-main.tex*

A LuaTEX attribute which identifies the low point of the glyph. Used for dynamic line spacing.

\gre@attr@syllable@id *gregoriotex-main.tex*

A LuaTEX attribute which identifies one syllable from the next. Used to position the text after the center of a syllable on the next syllable if the text flows properly, in order to improve ligaturing.

\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 TEX 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@lastendswithmora *gregoriotex-syllable.tex*

Boolean which indicates if the previous syllable ends with a punctum mora (set glyph by glyph, do not rely on it when typesetting glyph).

\ifgre@thisendswithmora *gregoriotex-syllable.tex*

Same as previous one but for current syllable.

\ifgre@ledgerline@above *gregoriotex-spaces.tex*

Boolean which indicates whether the system should act as if there is a ledger line above the staff.

\ifgre@ledgerline@below *gregoriotex-spaces.tex*

Boolean which indicates whether the system should act as if there is a ledger line below the staff.

\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@useledgerlineheuristic *gregoriotex-spaces.tex*

Boolean which specifies whether ledger line heuristics will be used or not.

\ifgre@usestylefont *gregoriotex-main.tex*

Boolean which specifies whether the style font should be loaded or not.

\ifgre@loadholehollowfonts *gregoriotex-main.tex*

Boolean which specifies whether the hole and hollow fonts 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@usecustosalteration *gregoriotex-signs.tex*

Boolean which indicates whether alterations should be printed for custodes.

\ifgre@blockeolcustos *gregoriotex-main.tex*

Boolean which indicates whether the custos at the end of the line should be blocked.

\ifgre@blockeolcustosbeforeeuouae *gregoriotex-main.tex*

Boolean which indicates whether the custos at the end of the line should be blocked if a EUOUAE block immediately follows.

\ifgre@blockeolcustos *gregoriotex-main.tex*

Boolean which indicates whether the custos at the end of the line should be blocked.

\ifgre@raggedbreakbeforeeuouae *gregoriotex-main.tex*

Boolean which indicates whether an automatic line break immediately before a EUOUAE block should be ragged.

\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 set and used by `\GreSyllable` to decide if a hyphen should be shown after the syllable.

\ifgre@possibleluahyphenafterthissyllable *gregoriotex-syllable.tex*

Boolean set by `\GreSyllable` indicating if the Lua pass may add an hyphen after the syllable, used by `\gre@calculate@eolshift` for protrusion calculation.

\ifgre@thirdlineadjustmentnecessary *gregoriotex-syllable.tex*

Boolean which indicates that a third-line adjustment to staff line width is necessary.

\ifgre@scale@stafflinefactor *gregoriotex-spaces.tex*

Boolean indicating whether the stafflinefactor should scale with changes of `grefactor`, or not.

\ifgre@haslinethree *gregoriotex-spaces.tex*

Boolean indicating whether the staff has a third line.

\ifgre@haslinefour *gregoriotex-spaces.tex*

Boolean indicating whether the staff has a fourth line.

\ifgre@haslinefive *gregoriotex-spaces.tex*

Boolean indicating whether the staff has a fifth line.

\gre@count@shiftaftermora *gregoriotex-signs.tex*

Count indicating when the presence of a punctum mora at the end of a syllable should affect the spacing with the next syllable.

\gre@count@lastglyphiscavum *gregoriotex-spaces.tex*

Count indicating if the last glyph has a cavum (this includes flats, naturals, punctum cavum, etc.), when staff line shouldn't appear underneath this empty part. Can be:

- 0: previous and current glyph are not cavum
- 1: current glyph is (set when line is hidden, at the end of the glyph)
- 2: previous glyph is (set at beginning of glyph)

\ifgre@allowdeprecated *gregoriotex.sty* and *gregoriotex.tex*

Boolean which controls whether deprecated functions raise a warning (true) or an error (false).

\ifgre@newbarspacing *gregoriotex-syllable.tex*

Boolean which controls whether the new bar spacing algorithm is activated.

\ifgre@disablehepisema *gregoriotex-signs.tex*

Boolean to disable the printing of horizontal episemata.

\ifgre@disablemora *gregoriotex-signs.tex*

Boolean to disable the printing of punctum morae.

\ifgre@disablevepisema *gregoriotex-signs.tex*

Boolean to disable the printing of vertical episemata.

\ifgre@lastendswithmorasave *gregoriotex-syllable.tex*

Boolean for saving `\ifgre@lastendswithmora` for later restoration.

\gre@lasteuouaeindex *gregoriotex-main.tex*

Count which keeps track of the most recent euouae area.

\ifgre@firstin@euouae *gregoriotex-main.tex*

Boolean indicating we're dealing with the first syllable in an euouae area.

\ifgre@gabcforcecenters *gregoriotex-syllable.tex*

Boolean for determining whether forced centers in gabc are allowed to determine syllable alignment in `syllable` and `firstletter` alignment modes.

\ifgre@forcedcentering *gregoriotex-syllable.tex*

Boolean indicating that the current syllable had a forced center in the gabc which is to be respected.

\ifgre@nextforcedcentering *gregoriotex-syllable.tex*

Boolean indicating that the next syllable had a forced center in the gabc which is to be respected.

\ifgre@unbreakableendofelement *gregoriotex-main.tex*

Boolean used by `\GreEndOfElement` to store whether the line may be broken at that point.

\gre@count@syllablenotes *gregoriotex-syllable.tex*

Count containing the number of notes in the syllable.

\gre@count@unbreakabletotalnotes *gregoriotex-syllable.tex*

Count containing the minimum number of notes in the syllable before the syllable may be broken across lines.

\gre@count@unbreakableinitialnotes *gregoriotex-syllable.tex*

Count containing the minimum number of notes at the start of a syllable that must be kept together when the syllable is broken across lines.

\gre@count@unbreakablefinalnotes *gregoriotex-syllable.tex*

Count containing the minimum number of notes at the end of a syllable that must be kept together when the syllable is broken across lines.

\ifgre@shownotes *gregoriotex-syllable.tex*

Boolean indicating whether the notes should be shown.

\ifgre@nabcvoice@i@visible *gregoriotex-nabc.tex*

Boolean indicating whether the first nabc voice should be shown.

\ifgre@showlyrics *gregoriotex-syllable.tex*

Boolean indicating whether the lyrics should be shown.

\gre@initiallines *gregoriotex-syllable.tex*

Number of lines the initial takes up. Currently limited to 0, 1, or 2. Not currently a count, but will be changed to one in 5.0.

\ifgre@rewritethissyllable *gregoriotex-syllable.tex*

Boolean indicating that a syllable should be rewritten to improve ligature rendering.

\ifgre@textcleared *gregoriotex-syllable.tex*

Boolean indicating that the text of this syllable should not overlap any previous syllable.

\ifgre@evaluatingnextsyllable *gregoriotex-syllable.tex*

Boolean indicating that some aspect of the next syllable is being evaluated in advance.

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@commentary *gregoriotex-main.tex*

Box holding the commentary which goes above the first staff line on the right.

\gre@box@add *gregoriotex-main.tex*

Box used for the new line to be added to the box being built (used in multi-line commentaries and annotations).

\gre@box@old *gregoriotex-main.tex*

Box used for the existing lines in the box being build when a new line is being added (used in multi-line commentaries and annotations).

\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@temp@clef *gregoriotex-signs.tex*

Box for holding (and measuring) the clef when stacking non-overlapping clefs.

\gre@box@temp@cleftwo *gregoriotex-signs.tex*

Box for holding (and measuring) the secondary clef when stacking non-overlapping clefs.

\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 Protrusion factors

\gre@protrusionfactor@... *gregoriotex-spaces.tex*

Macros that store the protrusion factors created by \gresetprotrusionfactor.

4.7 Distances

All of the distances listed in Distances have an internal associated with them, of the form of \gre@space@*@*, 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.

In some cases it is necessary to temporarily manipulate some of these distances for the purpose of some particular operation and then restore them to their previous values. In that case the distance will have a \gre@saved@... register associated with it (e.g. \gre@dimen@constantglyphraise is saved to and restored from \gre@saved@dimen@constantglyphraise).

We also have save registries for \baselineskip, \lineskip, \lineskiplimit, \parskip, and \parfillskip so that we can modify the way line breaking decisions are handled inside a score without affecting the rest of the document.

\gre@dimen@morawidth *gregoriotex-spaces.tex*

Width of a punctum mora (reinitialized at each score, lazily recomputed).

\gre@dimen@clefwidth@current *gregoriotex-spaces.tex*

Width of the current clef.

\gre@dimen@clefwidth@largest *gregoriotex-spaces.tex*

Width of the largest clef in the score.

\gre@dimen@clefwidth@bol *gregoriotex-spaces.tex*

Width of the clef used to compute bolshift.

\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@additionaltopspacealt *gregoriotex-spaces.tex*

Dimension representing extra space above the staff needed for above lines text.

\gre@dimen@additionaltopspacenabc *gregoriotex-spaces.tex*

Dimension representing extra space above the staff needed for nabc notation.

\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@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. This means that `\kern\gre@dimen@enddifference` will take you from the end of the text to the end of the notes.

For regular syllables and bar syllables using the old bar spacing algorithm this is calculated using `\gre@calculate@enddifference`. For bar syllables using the new bar spacing algorithm the calculation is `-\wd\gre@box@syllabletext - \gre@dimen@begindif`

\gre@dimen@previousenddifference *gregoriotex-spaces.tex*

Stored value of enddifference prior to the current one.

\gre@dimen@adjustedpreviousenddifference *gregoriotex-spaces.tex*

Stored value of enddifference prior to the current one after adjusting for the possibility of a punctum mora at the end of the last syllable (and the setting of `\gre@count@aftermorashift`.

\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@skip@adjustednextbegindifference *gregoriotex-spaces.tex*

Only used in new bar spacing algorithm. It is `grebegindifference` adjusted with `alterationadjustmentbar` if relevant.

\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. This means that `\kern\gre@dimen@begindifference` will take you from the start of the notes to the start of the text.

For regular syllables and bar syllables using the old bar spacing algorithm this is calculated as `\gre@dimen@notesaligncenter - \gre@dimen@textaligncenter`.
For bar syllables using the new bar spacing algorithm the calculation is `-\wd\gre@box@syllablenote`

\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@dimen@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@dimen@commentarytrueraise *gregoriotex-spaces.tex*

The distance from the baseline of the initial to the baseline of the commentary.

\gre@skip@minTextDistance *gregoriotex-spaces.tex*

Minimum distance between text.

\gre@skip@minNotesDistance *gregoriotex-spaces.tex*

Minimum distance between notes.

\gre@dimen@curTextDistance *gregoriotex-spaces.tex*

Current distance between text.

\gre@dimen@curNotesDistance *gregoriotex-spaces.tex*

Current distance between notes.

\gre@skip@minShiftText *gregoriotex-spaces.tex*

Minimum shift required for the text.

\gre@skip@minShiftNotes *gregoriotex-spaces.tex*

Minimum shift required for the notes.

\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.

\greslurheight *gregoriotex-signs.tex*

Stores the computed height of a variable-length slur. The control sequence name does not have the `@` symbol because this dimension is used within METAPOST.

\gre@dimen@bar@shift *gregoriotex-spaces.tex*

Shift of the bar away from its center position to account for the offset limits in the new bar spacing algorithm.

\gre@dimen@text@shift *gregoriotex-spaces.tex*

Shift of the text away from its center position to account for the offset limits in the new bar spacing algorithm.

\gre@skip@bar@allocation *gregoriotex-spaces.tex*

Space allocated to the bar in the new bar spacing algorithm.

\gre@skip@bar@requirement *gregoriotex-spaces.tex*

Space required by the bar in the new bar spacing algorithm.

\gre@skip@text@allocation *gregoriotex-spaces.tex*

Space allocated to the text in the new bar spacing algorithm.

\gre@skip@text@requirement *gregoriotex-spaces.tex*

Space required by the text in the new bar spacing algorithm.

\gre@skip@bar@lastskip *gregoriotex-signs.tex*

Skip after the most recent bar.

\gre@skip@punctummorashift *gregoriotex-spaces.tex*

Displacement of whole syllable to account for the presence of a punctum mora at the end of the previous syllable.

\gre@skip@alterationshift *gregoriotex-spaces.tex*

Displacement of whole syllable to account for the presence of an alteration at the beginning of the next syllable.

4.8 Penalties

These are the macros that GregorioTEX 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.

4.9 Backwards compatibility

Depending on version of LuaTEX/ LATEX, some primitives have different names We define the following local aliases to account for this eventuality.

\gre@localleftbox *gregoriotex-main.tex*

Current primitive: `\localleftbox` Legacy primitive: `\luatexlocalleftbox`

\gre@localrightbox *gregoriotex-main.tex*

Current primitive: `\localrightbox` Legacy primitive: `\luatexlocalrightbox`

\gre@startlink *gregoriotex-main.tex*

Current primitive: \pdfextension startlink Legacy primitive: \pdfstartlink

\gre@endlink *gregoriotex-main.tex*

Current primitive: \pdfextension endlink Legacy primitive: \pdfendlink

\gre@savepos *gregoriotex-main.tex*

Current primitive: \savepos Legacy primitive: \pdfsavepos

\gre@lastxpos *gregoriotex-main.tex*

Current primitive: \lastxpos Legacy primitive: \pdflastxpos

\gre@lastypos *gregoriotex-main.tex*

Current primitive: \lastypos Legacy primitive: \pdflastypos

4.10 LaTeX/Plain TeX compatibility

While every effort has been made to use only primitives which are compatible with both LaTeX and Plain TeX, it is sometimes necessary to use primitives which are defined for one but not the other (usually its LaTeX that has what we need built in). In these cases we have to provide an equivalent macro to the TeX version which is lacking.

\MessageBreak *gregoriotex.tex*

Creates a line break in typeout, warning, bug, and error messages. Copied from LaTeX source.

\protect *gregoriotex.tex*

Prints the name of the macro, rather than its contents in typeout, warning, bug, and error messages. Copied from LaTeX 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 stropha
8	flexus with an ambitus of one
9	flexus deminutus
10	virgula
11	divisio minima
12	divisio minor
13	divisio maior
14	dominican bar
15	divisio finalis
16	no note

5.2 Note Offset Specifier

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 porrectus 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

5.3 Debug Category

String with the following possibilities:

annotation Annotation-related (text above the score initial) messages.

barspacing Bar spacing computations.

bolshift Beginning-of-line shift computations.

clear Syllable clearing messages. Generated when handling the `<clear>` gabc directive.

changeglyph Glyph changes. Generated when glyph substitutions are made.

commentary Commentary-related messages.

compile Auto-compile messages. Generating when handing `\gregorioscore`

custos Custos-related messages. Generating when computing and handling custodes.

eolshift End-of-line shift computations.

general Non-specific messages.

hyphen Hyphen-related messages. Generated when computing and handling automatic hyphens.

ifdim Dimension comparisons.

initial Score-initial-related messages.

lineheight Line height events. Generated when line heights are computed or exercised.

linesglue Messages about line glue. Generated during line break processing in Lua.

mapfont Font mapping messages. Generated when analyzing score fonts.

offsetcase Offset case messages. Generated when the offset cases (for 'Note Offset Specifier' on page 221) are generated in Lua.

spacing Random spacing-related messages.

syllablerewriting Syllable rewrite messages. Generated when rewriting syllables for better kerning and ligaturing.

syllablespacing Syllable spacing computations.

trace Messages to trace the calling of functions.

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:

```
name: incipit;
gabc-copyright: copyright on this gabc file;
score-copyright: copyright on the source score;
author: if known;
language: latin;
mode: 6;
mode-modifier: t.;
annotation: IN.;
annotation: 6;
%%
(clef) text(notes)
```

6.2 Headers

The headers, such as `name: incipit;`, above, each have a name before the colon and a value, between the colon and the semicolon. The header name is composed of ASCII letters and numbers, optionally separated by dashes. If you wish to write a value over several lines, omit the semicolon at the end of the first line, and end the header value with `;;` (two semicolons).

Some headers have special meaning to Gregorio:

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:

```
gabc-copyright: CC0-1.0 by Elie Roux, 2009
<http://creativecommons.org/publicdomain/zero/1.0/>;;
```

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:

```
score-copyright: (C) Abbaye de Solesmes, 1934;
```

author The author of the piece, if known; of course, the author of most traditional chant is not known.

language The language of the lyrics.

oriscus-orientation If `legacy`, the orientation of an unconnected oriscus must be set manually.

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 immediately prior to `\gregorioscore`.
- The `annotation` header field is defined.

mode-modifier The mode "modifier" of the piece. This may be any TEX code to typeset after the mode, if the mode is typeset. If the mode is not typeset, the mode-modifier will also not be typeset.

mode-differentia The mode or tone differentia of the piece. Typically, this expresses the variant of the psalm tone to use for the piece. This may be any TEX code to typeset after the mode-modifier, if the mode is typeset. If the mode is not typeset, the mode-differentia will also not be typeset.

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:

```
annotation:Ad Magnif.;
annotation:VIII G;
```

Full TEX markup is accepted:

```
annotation:{\color{red}Ad Magnif.};
annotation:{\color{red}VIII G};
```

If the user already defined annotation(s) in the main TEX file via `\greannotation` then the `annotation` header field will not overwrite that definition.

Although gregorio ascribes no special meaning to them, other suggested headers are:

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.

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.

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.

6.2.1 Mode Headers

The three mode headers described above (`mode`, `mode-modifier`, and `mode-differentia`) will be typeset above the initial if neither the `annotation` gabc header nor the `\greannotation` TEX command is used.

The mode annotation will look like MODE ***mode-modifier*** **mode-differentia**.

The `mode` header is typically a number that will be typeset as a Roman numeral using the `modeline` style. Therefore, if the first character of `mode` is a number from one (`1`) through eight (`8`), that number will be converted according to the `\gresetmodenumbersystem` setting. However, there are other modes, so all other parts of `mode` will be typeset directly. If the `mode` header is omitted, none of the other mode headers will be typeset.

The `mode-modifier` header is some text (typeset in the `modemodifier` style) that appears after `mode`, but before `mode-differentia`. This is meant for an extra notation that indicates something without altering the mode itself. An example would be ***t.*** to indicate a transposed mode. If the `mode-modifier` header starts with punctuation, there will be no space before it, otherwise there will be a `\thinspace` before it.

The `mode-differentia` header is some text (typeset in the `modedifferentia` style) that appears after `mode-modifier`. This is meant for indicating the psalm tone ending to use for the paired psalm tone. If the `mode-differentia` header starts with punctuation, there will be no space before it, otherwise there will be a `\thinspace` before it.

Some examples:

mode	mode-modifier	mode-differentia	Result
6			VI
4A			IVA
4a			IVA
2*	t.		II* ***t.***
5	,\thinspace t.		V, ***t.***
7		c\raise 0.5ex\hbox {\small 2}	VII $\mathbf{c}^{2}$
8	-t.	G*	VIII-***t.*** G*
t. irregularis			T. IRREGULARIS

6.3 General Syntax

6.4 Note Syntax

`[nocustos]` will prevent a custos from appearing at the point where specified, if line formatting causes a line break there. The `[nocustos]` tag must appear *before* spaces appearing at the point specified or it will have no effect.

6.5 Neume Fusion

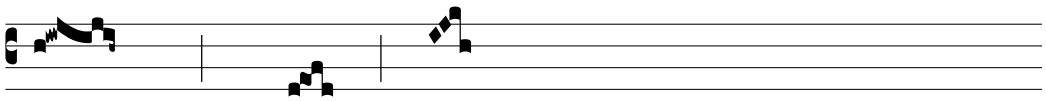
Neume fusion allows for the composition of new shapes based on a set of primitive neumes. These primitives are:

Gabc	Description	Rules
g	punctum	fuses from higher or lower notes, and can fuse to higher or lower notes
go	oriscus	may only fuse in the direction it was fused from
gO	oriscus scapus	at the start only, next note must be higher to fuse
gw	quilisma	does not fuse from anything, and only fuses to a higher note
gV	virga reversa	at the start only, next note must be lower to fuse
gf	flexus	if not at the end, must be followed by a higher note to fuse
gh	pes	at the end only; in non-liquescent form, the previous note must be lower to fuse
gfg	porrectus	at the end only, previous note must be lower to fuse

Placing the `@` character between two notes will attempt to use the above rules to fuse the notes together. If a shape that is not fusable is used, Gregorio will typically fall back on the non-fusable form, but in some cases will result in a syntax error.

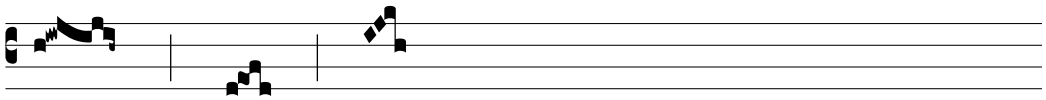
Placing the `@` character before a primitive that would get a stem will suppress the stem. Given the above list of primitives, this means the flexus and the porrectus.

Here are some examples of fusion:



h@iw@ji@j@ih~ d@eo@fd IJ@kh

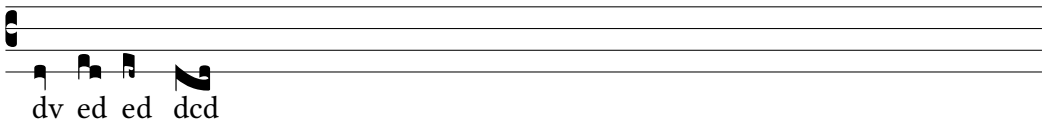
As a convenience, a sequence of notes enclosed within `@[` and `]` will be fused automatically based on an algorithm that breaks up the notes into the above primitives. Using the same examples as before:



@[hiwjijih~] @[deofd] @[IJkh]

6.6 Stem length for the bottom lines

Gregorio will determine the length of the stem for most neumes. Some manual input might be needed for notes on the bottom staff line (*d*). Most of the time they will take a short form:



But when a ledger line is drawn below these notes, they should take a long form. The problem is that many cases are ambiguous: for instance if a note is close to a ledger line, one may want to make it long, others may not. To solve this problem, you can add `[ll:0]` to the note carrying the stem to get its short form, or `[ll:1]` to force its long form.

6.7 Custom Ledger Lines

To specify a custom ledger line, use `[oll:`*left*`;`*right*`]` to create an over-the-staff ledger line with specified lengths to the left and right of the point where it is introduced. If *left* is `0`, the ledger line will start at the introduction point. If *left* is `1`, the ledger line will start at the *additionaallineswidth* distance to the left of the introduction point. Otherwise, the line will start at the *left* distance (taken to be an explicit length, with TEX units required) to the left of the introduction point. When using this form, `right` must be an explicit length to the right of the introduction point at which to end the line.

Alternately, use `[oll:`*left*`{`*right*`]` to specify the start of an over-the-staff ledger line, followed by `[oll:}]` at some point later to specify its end. When using this form, *left* has the same meaning as before. However, *right* takes on similar values as *left*, which are instead applied to the right of the specified endpoint.

Use `ull` instead of `oll` (with either form) to create an under-the-staff ledger line.

When using this feature with fusion, you will not be able to start or end a ledger line in the middle of two-note primitive shapes. To work around this, either adjust the parameters of the ledger line or use manual fusion to break up those two notes.

6.8 Simple Slurs

To specify a simple slur, use `[oslur:`*shift*`;`*width*`,`*height*`]` to create an over-the-notes slur with the specified *width* and *height*. If *shift* is `0`, the slur will start on the right side of the note to which it is atteched. If *shift* is `1`, the slur will start one punctum's width to the left of the right side of the note to which it is attached. If *shift* is `2`, the slur will start one-half punctum's width to the left of the right side of the note to which it is attached.

Alternately, use `[oslur:`*shift*`{]` to specify the start of an over-the-notes slur, followed by `[oslur:`*shift*`}]` at some point later to specify its end. When using this form, *shift* has the same meaning as before, but applies to both ends of the slur.

Use `uslur` instead of `oslur` (with either form) to create an under-the-staff slur.

6.9 Horizontal episema placement for very high and low notes

Gregorio places horizontal episema under c and above k (or the not above upper line when staff does not have exactly 4 lines) closer to the notes when no ledger line is present. The heuristics used by Gregorio are not perfect so it may be necessary to make the presence or absence of ledger line explicit for horizontal episema placement. This is done in the exact same way as for stem length: place `[ll:0]` or `[ll:1]` on the note carrying the episema, to force gregorio to consider the absence or presence of a ledger line in episema placement.

6.10 Horizontal Episema Tuning

The horizontal episema position within the space can be adjusted should the defaults not be satisfactory.

There are five tunable dimensions:

Dimension	Description
`overhepisemalowshift`	The shift for positioning a horizontal episema that is over a note in a low position in the space
`overhepisemahighhift`	The shift for positioning a horizontal episema that is over a note in a high position in the space
`underhepisemalowshift`	The shift for positioning a horizontal episema that is under a note in a low position in the space
`underhepisemahighhift`	The shift for positioning a horizontal episema that is under a note in a high position in the space
`hepisemamiddleshift`	The shift for centering the horizontal episema in the middle of a space

In addition, gabc allows you to adjust the positioning of a given episema by appending `[oh:`*p*`]` (for the episema over the note) or `[uh:`*p*`]` (for the episema under the note). Here, *p* is an optional position specifier followed by an optional nudge. However at least one or the other must be specified.

The position specifier allows you to select which of the five tunable dimensions will be used for the base position:

Specifier	Base shift
omitted	Use the default shift based on the position of the episema relative to the note
`m`	Use `hepisemamiddleshift`.
`l`	Use `overhepisemalowshift` or `underhepisemalowshift` depending on whether the episema is over or under the note.
`h`	Use `overhepisemahighshift` or `underhepisemahighshift` depending on whether the episema is over or under the note.
`ol`	Use `overhepisemalowshift`.
`oh`	Use `overhepisemahighshift`.
`ul`	Use `underhepisemalowshift`.
`uh`	Use `underhepisemahighshift`.

The nudge is a TEX dimension specification (number and units) that starts with + for a nudge upwards or - for a nudge downwards from base position selected by the position speciifer. If omitted, the episema will be drawn at the base position.

In addition, gabc also allows you to specify that a block of notes—possibly separated with spaces and in different syllables–should be considered a single unit when it comes to positioning the horizontal episema. To do this, put `[oh:`*p*`{]` (for the episema over the note) or `[uh:`*p*`{]` (for the episema under the note) before the first note of the block and the corresponding `[oh}]` or `[uh}]` after the last note of the block. When using this syntax, *p* is the position specifier as before, but is entirely optional, and when completely omitted, allows the `:` to also be omitted.

6.11 Lyric Centering

Gregorio centers the text of each syllable around the first note of each syllable. There are three basic modes, selected with the command `\gresetlyriccentering{<mode>}`:

syllable the entire syllable is centered around the first note

firstletter the first letter of the syllable is centered around the first note

vowel the vowel sound of the syllable is centered around the first note

The default is `vowel`, being common in most Gregorian chant books with text in Latin.

All modes allow you to force the centering with curly brackets, for example `a{b}c` will center the notes around `b`.

6.11.1 Vowel detection

The default rules built into Gregorio for `vowel` mode are for Ecclesiatical 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. The default is Latin.

Special characters (input with `<sp>`) or verbatim text (`<v>`) count as consonants, so you have to force centering around them, for example `gr{<sp>'ae</sp>}`. If an elision (input with `<e>`) is present in the syllable, Gregorio will consider it as consonant too.

If no vowel is found, the notes are centered around the whole syllable.

6.11.2 Vowel file

When run, Gregorio will look for a file named `gregorio-vowels.dat` in your working directory or amongst the GregorioTeX files. If it finds the language requested by the header (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:

```
alias [english] to [English];

language [English];

vowel aàáAÀÁ;
vowel eèéëEÈÉË;
vowel iìíIÌÍ;
vowel oòóOÒÓ;
vowel uùúUÙÚ;
vowel yýYÝ;
vowel æÆ;
vowel œŒ;

prefix qu Qu qU QU;
prefix y Y;

suffix w W;
suffix we We wE WE;

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 font and any variant glyphs contained within. 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.

Table A1: Score Glyphs

			Variants		Cavum		Cavum Variants	
Glyph Name	**Sample gabc**	**Glyph**	**Name**	**Glyph**	**Sample gabc**	**Glyph**	**Name**	**Glyph**
Accentus	(gr1)							
AccentusReversus	(gr2)							
Ancus*TwoTwo*Deminutus	(gec~)				(grec~)			
AncusLongqueue*TwoTwo*Deminutus	(hfd~)				(hrfd~)			
AscendensOriscus	(go1)				(gro1)			
AscendensOriscus*Two*Down	(go1@eg)				(gro1@eg)			
AscendensOriscus*Two*Up	(go1@ij)				(gro1@ij)			
AscendensOriscusLineBL	(e@go1)				(e@gro1)			
AscendensOriscusLineTL	(i@go1)				(i@gro1)			
AscendensOriscusScapus	(g01)				(gr01)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
AscendensOriscusScapus*Two*Down	(g01@eg)				(gr01@eg)			
AscendensOriscusScapus*Two*Up	(g01@ij)				(gr01@ij)			
AscendensOriscusScapusLongqueue	(h01)				(hr01)			
AscendensOriscusScapusLongqueue*Two*Down	(h01@eg)				(hr01@eg)			
AscendensOriscusScapusLongqueue*Two*Up	(h01@jk)				(hr01@jk)			
AscendensOriscusScapusOpenqueue	(a01)				(ar01)			
AscendensPunctumInclinatum	(G1)				(Gr1)			
AuctumMora	(g.)							
BarBrace	(,_)							
BracketLeft*Two*	([[ce]])							
BracketLeftLong*Two*	([[gi]])							
BracketLeftShort*Two*	([[fh]])							
BracketRight*Two*	([[ce]])							
BracketRightLong*Two*	([[gi]])							
BracketRightShort*Two*	([[fh]])							
CClef	(c3)							
CClefChange	(c3)							
Circulus	(gr3)							
CurlyBrace	([ocb:1;6mm])							
CustosDownLong	(j+)							
CustosDownMedium	(m+)							
CustosDownShort	(k+)							
CustosUpLong	(f+)							

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
CustosUpMedium	(a+)							
CustosUpShort	(g+)							
DescendensOriscus	(go0)				(gro0)			
DescendensOriscus*Two*Down	(go0@eeg)				(gro0@eeg)			
DescendensOriscus*Two*Up	(go0@ij)				(gro0@ij)			
DescendensOriscusLineBL	(e@go0)				(e@gro0)			
DescendensOriscusLineTL	(i@go0)				(i@gro0)			
DescendensOriscusScapus	(gO0)				(grO0)			
DescendensOriscusScapus*Two*Down	(gO0@eeg)				(grO0@eeg)			
DescendensOriscusScapus*Two*Up	(gO0@ij)				(grO0@ij)			
DescendensOriscusScapusLongqueue	(hO0)				(hrO0)			
DescendensOriscusScapusLongqueue*Two*Down	(hO0@eeg)				(hrO0@eeg)			
DescendensOriscusScapusLongqueue*Two*Up	(hO0@jk)				(hrO0@jk)			
DescendensOriscusScapusOpenqueue	(aO0)				(arO0)			
DescendensPunctumInclinatum	(G0)				(Gr0)			
DivisioDominican	(,3)							
DivisioDominicanAlt	(,4)							
DivisioMaior	(:)							
DivisioMinima	(,)							
DivisioMinor	(;)							
FClef	(f3)							
FClefChange	(f3)							
Flat	(gx)							

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
FlatHole	(*gx*)							
Flexus*Two*Ascendens	(ge<)				(gre<)			
Flexus*Two*Deminutus	(ge~)				(gre~)			
Flexus*Two*Descendens	(ge>)				(gre>)			
Flexus*Two*Nothing	(ge)				(gre)			
Flexus*TwoTwo*Up	(ge*@gi*)				(gre*@gi*)			
FlexusLongqueue*Two*Ascendens	(hf<)				(hrf<)			
FlexusLongqueue*Two*Deminutus	(hf~)				(hrf~)			
FlexusLongqueue*Two*Descendens	(hf>)				(hrf>)			
FlexusLongqueue*Two*Nothing	(hf)				(hrf)			
FlexusNobar*Two*Ascendens	(@hf<)				(@hrf<)			
FlexusNobar*Two*Deminutus	(@hf~)				(@hrf~)			
FlexusNobar*Two*Descendens	(@hf>)				(@hrf>)			
FlexusNobar*Two*Nothing	(@hf)				(@hrf)			
FlexusNobar*TwoTwo*Up	(@hf*@hj*)				(@hrf*@hj*)			
FlexusOpenqueue*One*Ascendens	(ba<)				(bra<)			
FlexusOpenqueue*One*Deminutus	(ba~)				(bra~)			
FlexusOpenqueue*One*Descendens	(ba>)				(bra>)			
FlexusOpenqueue*One*Nothing	(ba)				(bra)			
FlexusOriscus*Two*Ascendens	(goe<)				(groe<)			
FlexusOriscus*Two*Deminutus	(goe~)				(groe~)			
FlexusOriscus*Two*Descendens	(goe>)				(groe>)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
FlexusOriscus*Two*Nothing	(goe)				(groe)			
FlexusOriscusInusitatus*Two*Ascendens	(go1e<)				(gro1e<)			
FlexusOriscusInusitatus*Two*Deminutus	(go1e~)				(gro1e~)			
FlexusOriscusInusitatus*Two*Descendens	(go1e>)				(gro1e>)			
FlexusOriscusInusitatus*Two*Nothing	(go1e)				(gro1e)			
FlexusOriscusScapus*Two*Ascendens	(g0e<)				(gr0e<)			
FlexusOriscusScapus*Two*Descendens	(g0e>)				(gr0e>)			
FlexusOriscusScapus*Two*Nothing	(g0e)				(gr0e)			
FlexusOriscusScapusInusitatus*Two*Ascendens	(g01e<)				(gr01e<)			
FlexusOriscusScapusInusitatus*Two*Descendens	(g01e>)				(gr01e>)			
FlexusOriscusScapusInusitatus*Two*Nothing	(g01e)				(gr01e)			
FlexusOriscusScapusInusitatusLongqueue*Two*Ascendens	(h01f<)				(hr01f<)			
FlexusOriscusScapusInusitatusLongqueue*Two*Descendens	(h01f>)				(hr01f>)			
FlexusOriscusScapusInusitatusLongqueue*Two*Nothing	(h01f)				(hr01f)			
FlexusOriscusScapusLongqueue*Two*Ascendens	(h0f<)				(hr0f<)			
FlexusOriscusScapusLongqueue*Two*Descendens	(h0f>)				(hr0f>)			
FlexusOriscusScapusLongqueue*Two*Nothing	(h0f)				(hr0f)			
FlexusOriscusScapusOpenqueue*One*Ascendens	(b0a<)				(br0a<)			
FlexusOriscusScapusOpenqueue*One*Descendens	(b0a>)				(br0a>)			
FlexusOriscusScapusOpenqueue*One*Nothing	(b0a)				(br0a)			
LeadingOriscus*Two*	(go*igig*)				(gro*igig*)			
LeadingPunctum*Two*	(g*igig*)				(gr*igig*)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
LeadingPunctum *Two*InitioDebilis	(-g*igig*)				(-gr*igig*)			
LeadingQuilisma *Two*	(gw*igig*)				(grw*igig*)			
Linea	(g=)				(gr=)			
LineaPunctum	(gR)				(grR)		.caeciliae	
Lower**AscendensOriscus** *Two*Down	(*i*@go1*@eg*)				(*i*@gro1*@eg*)			
Lower**AscendensOriscus** *Two*Up	(*i*@go1*@ij*)				(*i*@gro1*@ij*)			
Lower**DescendensOriscus** *Two*Down	(*i*@go0*@eg*)				(*i*@gro0*@eg*)			
Lower**DescendensOriscus** *Two*Up	(*i*@go0*@ij*)				(*i*@gro0*@ij*)			
Lower**Flexus** *Two*Ascendens	(*i*@ge<)				(*i*@gre<)			
Lower**Flexus** *Two*Deminutus	(*i*@ge~)				(*i*@gre~)			
Lower**Flexus** *Two*Descendens	(*i*@ge>)				(*i*@gre>)			
Lower**Flexus** *Two*Nothing	(*i*@ge)				(*i*@gre)			
Lower**FlexusOriscus** *Two*Ascendens	(*i*@goe<)				(*i*@groe<)			
Lower**FlexusOriscus** *Two*Deminutus	(*i*@goe~)				(*i*@groe~)			
Lower**FlexusOriscus** *Two*Descendens	(*i*@goe>)				(*i*@groe>)			
Lower**FlexusOriscus** *Two*Nothing	(*i*@goe)				(*i*@groe)			
Lower**FlexusOriscusInusitatus** *Two*Ascendens	(*i*@go1e<)				(*i*@gro1e<)			
Lower**FlexusOriscusInusitatus** *Two*Deminutus	(*i*@go1e~)				(*i*@gro1e~)			
Lower**FlexusOriscusInusitatus** *Two*Descendens	(*i*@go1e>)				(*i*@gro1e>)			
Lower**FlexusOriscusInusitatus** *Two*Nothing	(*i*@go1e)				(*i*@gro1e)			
Lower**OblatusDescendensOriscus**	(*h*@go0)				(*h*@gro0)			
Lower**OblatusDescendensOriscus** *Two*Down	(*h*@go0*@e*)				(*h*@gro0*@e*)			
Lower**OblatusDescendensOriscus** *Two*Up	(*h*@go0*@i*)				(*h*@gro0*@i*)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Lower**OblatusFlexusOriscus***Two*Ascendens	(h@goe<)				(h@groe<)			
Lower**OblatusFlexusOriscus***Two*Deminutus	(h@goe~)				(h@groe~)			
Lower**OblatusFlexusOriscus***Two*Descendens	(h@goe>)				(h@groe>)			
Lower**OblatusFlexusOriscus***Two*Nothing	(h@goe)				(h@groe)			
Lower**OblatusPesQuassusInusitatus***Two*Ascendens	(h@go0i<)				(h@gro0i<)			
Lower**OblatusPesQuassusInusitatus***Two*Deminutus	(h@go0i~)				(h@gro0i~)			
Lower**OblatusPesQuassusInusitatus***Two*Descendens	(h@go0i>)				(h@gro0i>)			
Lower**OblatusPesQuassusInusitatus***Two*Nothing	(h@go0i)				(h@gro0i)			
Lower**OblatusPesQuassusInusitatusLongqueue***Two*Nothing	(i@ho0j)				(i@hro0j)			
Lower**OblatusPesQuassusInusitatusOpenqueue***One*Nothing	(b@ao0b)				(b@aro0b)			
Lower**Pes***Two*Deminutus	(i@gi~)				(i@gri~)			
Lower**PesQuadratum***Two*Ascendens	(i@gqi<)				(i@grqi<)			
Lower**PesQuadratum***Two*Descendens	(i@gqi>)				(i@grqi>)			
Lower**PesQuadratum***Two*Nothing	(i@gqi)				(i@grqi)			
Lower**PesQuadratumLongqueue***Two*Nothing	(j@hqj)				(j@hrqj)			
Lower**PesQuadratumOpenqueue***One*Nothing	(b@aqb)				(b@arqb)			
Lower**PesQuassus***Two*Ascendens	(i@goi<)				(i@groi<)			
Lower**PesQuassus***Two*Deminutus	(i@goi~)				(i@groi~)			
Lower**PesQuassus***Two*Descendens	(i@goi>)				(i@groi>)			
Lower**PesQuassus***Two*Nothing	(i@goi)				(i@groi)			
Lower**PesQuassusInusitatus***Two*Ascendens	(i@go0i<)				(i@gro0i<)			
Lower**PesQuassusInusitatus***Two*Deminutus	(i@go0i~)				(i@gro0i~)			
Lower**PesQuassusInusitatus***Two*Descendens	(i@go0i>)				(i@gro0i>)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Lower**PesQuassusInusitatus***Two*Nothing	(*i*@go0i)				(*i*@gro0i)			
Lower**PesQuassusInusitatusLongqueue***Two*Nothing	(*j*@ho0j)				(*j*@hro0j)			
Lower**PesQuassusLongqueue***Two*Nothing	(*j*@hoj)				(*j*@hroj)			
Lower**PesQuassusOpenqueue***One*Nothing	(*b*@aob)				(*b*@arob)			
Lower**Punctum***Two*Down	(*i*@g*@eg*)				(*i*@gr*@eg*)			
Lower**Punctum***Two*Up	(*i*@g*@ij*)				(*i*@gr*@ij*)			
Natural	(gy)							
NaturalHole	(*gy*)							
OriscusDeminutus	(go~)		.caeciliae		(gro~)		.caeciliae	
Pes*Two*Deminutus	(gi~)				(gri~)			
Pes*Two*Nothing	(gi)				(gri)			
Pes*Two*InitioDebilis	(-gi)				(-gri)			
Pes*Two*InitioDebilisDeminutus	(-gi~)				(-gri~)			
PesAscendensOriscus*Two*Nothing	(gi0*/j*)				(gri0*/j*)			
PesDescendensOriscus*Two*Nothing	(gi0*/h*)				(gri0*/h*)			
PesQuadratum*Two*Ascendens	(gqi<)				(grqi<)			
PesQuadratum*Two*Descendens	(gqi>)				(grqi>)			
PesQuadratum*Two*Nothing	(gqi)				(grqi)			
PesQuadratum*Two*InitioDebilis	(-gqi)				(-grqi)			
PesQuadratum*Two*InitioDebilisAscendens	(-gqi<)				(-grqi<)			
PesQuadratum*Two*InitioDebilisDescendens	(-gqi>)				(-grqi>)			
PesQuadratumLongqueue*Two*Nothing	(hqj)				(hrqj)			
PesQuadratumLongqueue*Two*InitioDebilis	(-hqj)				(-hrqj)			
PesQuadratumOpenqueue*One*Nothing	(aqb)				(arqb)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
PesQuadratumOpenqueue*One*InitioDebilis	(-aqb)				(-arqb)			
PesQuassus*Two*Ascendens	(goi<)				(groi<)			
PesQuassus*Two*Deminutus	(goi~)				(groi~)			
PesQuassus*Two*Descendens	(goi>)				(groi>)			
PesQuassus*Two*Nothing	(goi)				(groi)			
PesQuassusInusitatus*Two*Ascendens	(go0i<)				(gro0i<)			
PesQuassusInusitatus*Two*Deminutus	(go0i~)				(gro0i~)			
PesQuassusInusitatus*Two*Descendens	(go0i>)				(gro0i>)			
PesQuassusInusitatus*Two*Nothing	(go0i)				(gro0i)			
PesQuassusInusitatusLongqueue*Two*Nothing	(ho0j)				(hro0j)			
PesQuassusLongqueue*Two*Nothing	(hoj)				(hroj)			
PesQuassusOpenqueue*One*Nothing	(aob)				(arob)			
Porrectus*TwoTwo*Ascendens	(geg<)				(greg<)			
Porrectus*TwoTwo*Deminutus	(geg~)		.alt		(greg~)		.alt	
Porrectus*TwoTwo*Descendens	(geg>)				(greg>)			
Porrectus*TwoTwo*Nothing	(geg)				(greg)			
PorrectusFlexus*TwoTwoTwo*Ascendens	(gege<)				(grege<)			
PorrectusFlexus*TwoTwoTwo*Deminutus	(gege~)				(grege~)			
PorrectusFlexus*TwoTwoTwo*Descendens	(gege>)				(grege>)			
PorrectusFlexus*TwoTwoTwo*Nothing	(gege)				(grege)			
PorrectusFlexusLongqueue*OneTwoTwo*Ascendens	(hghg<)				(hrghg<)			
PorrectusFlexusLongqueue*OneTwoTwo*Deminutus	(hghg~)				(hrghg~)			
PorrectusFlexusLongqueue*OneTwoTwo*Descendens	(hghg>)				(hrghg>)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
PorrectusFlexusLongqueue*OneTwoTwo*Nothing	(hghg)				(hrghg)			
PorrectusFlexusNobar*TwoTwoTwo*Ascendens	(egege<)				(egrege<)			
PorrectusFlexusNobar*TwoTwoTwo*Deminutus	(egege~)				(egrege~)			
PorrectusFlexusNobar*TwoTwoTwo*Descendens	(egege>)				(egrege>)			
PorrectusFlexusNobar*TwoTwoTwo*Nothing	(egege)				(egrege)			
PorrectusLongqueue*OneTwo*Ascendens	(hfh<)				(hrfh<)			
PorrectusLongqueue*OneTwo*Deminutus	(hfh~)		.alt		(hrfh~)		.alt	
PorrectusLongqueue*TwoTwo*Deminutus	(hfh~)		.alt		(hrfh~)		.alt	
PorrectusLongqueue*OneTwo*Descendens	(hfh>)				(hrfh>)			
PorrectusLongqueue*OneTwo*Nothing	(hfh)				(hrfh)			
PorrectusNobar*TwoTwo*Ascendens	(@geg<)				(@greg<)			
PorrectusNobar*TwoTwo*Deminutus	(@geg~)				(@greg~)			
PorrectusNobar*TwoTwo*Descendens	(@geg>)				(@greg>)			
PorrectusNobar*TwoTwo*Nothing	(@geg)				(@greg)			
Punctum	(g)				(gr)		.caeciliae	
PunctumAscendens	(g<)				(gr<)			
PunctumDeminutus	(g~)							
PunctumDescendens	(g>)				(gr>)			
Punctum*Two*Down	(g@eg)				(gr@eg)			
Punctum*Two*Up	(g@ij)				(gr@ij)			
Punctum*Two*InitioDebilisUp	(-g@ij)				(-gr@ij)			
PunctumInclinatumDeminutus	(G~)				(Gr~)			
PunctumInclinatumAuctus	(G>)		.caeciliae		(Gr>)		.caeciliae	

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
PunctumLineBL	(e@g)				(e@gr)			
PunctumLineTL	(i@g)				(i@gr)			
Quilisma	(gw)				(grw)			
Quilisma*Two*Up	(gw@ij)				(grw@ij)			
QuilismaPes*Two*Deminutus	(gwi~)				(grwi~)			
QuilismaPes*Two*Nothing	(gwi)				(grwi)			
QuilismaPesQuadratum*Two*Ascendens	(gWi<)				(grWi<)			
QuilismaPesQuadratum*Two*Descendens	(gWi>)				(grWi>)			
QuilismaPesQuadratum*Two*Nothing	(gWi)				(grWi)			
QuilismaPesQuadratumLongqueue*Two*Nothing	(hWj)				(hrWj)			
QuilismaPesQuadratumOpenqueue*One*Nothing	(aWb)				(arWb)			
RoundBrace	([ob:1;6mm])							
RoundBraceDown	([ub:1;6mm])							
Salicus*TwoTwo*Ascendens	(giOk<)				(griOk<)			
Salicus*TwoTwo*Deminutus	(giOk~)				(griOk~)			
Salicus*TwoTwo*Descendens	(giOk>)				(griOk>)			
Salicus*TwoTwo*Nothing	(giOk)				(griOk)			
SalicusFlexus*TwoTwoTwo*Ascendens	(giOki<)				(griOki<)			
SalicusFlexus*TwoTwoTwo*Deminutus	(giOki~)				(griOki~)			
SalicusFlexus*TwoTwoTwo*Descendens	(giOki>)				(griOki>)			
SalicusFlexus*TwoTwoTwo*Nothing	(giOki)				(griOki)			
SalicusLongqueue*TwoTwo*Nothing	(hjOl)				(hrjOl)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Scandicus*TwoTwo*Deminutus	(gik~)				(grik~)			
Scandicus*TwoTwo*Nothing	(gik)				(grik)			
Semicirculus	(gr4)							
SemicirculusReversus	(gr5)							
Sharp	(g#)							
SharpHole	(g#)							
Stropha	(gs)		.caeciliae		(grs)		.caeciliae	
StrophaAucta	(gs>)		.caeciliae		(grs>)		.caeciliae	
StrophaAuctaLongtail	(hs>)				(hrs>)			
Torculus*TwoTwo*Ascendens	(gig<)				(grig<)			
Torculus*TwoTwo*Deminutus	(gig~)				(grig~)			
Torculus*TwoTwo*Descendens	(gig>)				(grig>)			
Torculus*TwoTwo*Nothing	(gig)				(grig)			
Torculus*TwoTwo*InitioDebilis	(-gig)				(-grig)			
Torculus*TwoTwo*InitioDebilisAscendens	(-gig<)				(-grig<)			
Torculus*TwoTwo*InitioDebilisDeminutus	(-gig~)				(-grig~)			
Torculus*TwoTwo*InitioDebilisDescendens	(-gig>)				(-grig>)			
TorculusLiquescens*TwoTwoTwo*Deminutus	(gige~)				(grige~)			
TorculusLiquescensQuilisma*TwoTwoTwo*Deminutus	(gwige~)				(grwige~)			
TorculusQuilisma*TwoTwo*Ascendens	(gwig<)				(grwig<)			
TorculusQuilisma*TwoTwo*Deminutus	(gwig~)				(grwig~)			
TorculusQuilisma*TwoTwo*Descendens	(gwig>)				(grwig>)			
TorculusQuilisma*TwoTwo*Nothing	(gwig)				(grwig)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
TorculusResupinus*TwoTwoTwo*Ascendens	(gigi<)				(grigi<)			
TorculusResupinus*TwoTwoTwo*Deminutus	(gigi~)		.alt		(grigi~)		.alt	
TorculusResupinus*TwoTwoTwo*Descendens	(gigi>)				(grigi>)			
TorculusResupinus*TwoTwoTwo*Nothing	(gigi)				(grigi)			
TorculusResupinus*TwoTwoTwo*InitioDebilis	(-gigi)				(-grigi)			
TorculusResupinus*TwoTwoTwo*InitioDebilisAscendens	(-gigi<)				(-grigi<)			
TorculusResupinus*TwoTwoTwo*InitioDebilisDeminutus	(-gigi~)		.alt		(-grigi~)		.alt	
TorculusResupinus*TwoTwoTwo*InitioDebilisDescendens	(-gigi>)				(-grigi>)			
TorculusResupinusQuilisma*TwoTwoTwo*Ascendens	(gwigi<)				(grwigi<)			
TorculusResupinusQuilisma*TwoTwoTwo*Deminutus	(gwigi~)		.alt		(grwigi~)		.alt	
TorculusResupinusQuilisma*TwoTwoTwo*Descendens	(gwigi>)				(grwigi>)			
TorculusResupinusQuilisma*TwoTwoTwo*Nothing	(gwigi)				(grwigi)			
Upper**AscendensOriscus***Two*Down	(e@go1@eg)				(e@gro1@eg)			
Upper**AscendensOriscus***Two*Up	(e@go1@ij)				(e@gro1@ij)			
Upper**DescendensOriscus***Two*Down	(e@go0@eg)				(e@gro0@eg)			
Upper**DescendensOriscus***Two*Up	(e@go0@ij)				(e@gro0@ij)			
Upper**Flexus***Two*Ascendens	(e@ge<)				(e@gre<)			
Upper**Flexus***Two*Deminutus	(e@ge~)				(e@gre~)			
Upper**Flexus***Two*Descendens	(e@ge>)				(e@gre>)			
Upper**Flexus***Two*Nothing	(e@ge)				(e@gre)			
Upper**FlexusOriscus***Two*Ascendens	(e@goe<)				(e@groe<)			
Upper**FlexusOriscus***Two*Deminutus	(e@goe~)				(e@groe~)			
Upper**FlexusOriscus***Two*Descendens	(e@goe>)				(e@groe>)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Upper**FlexusOriscus***Two*Nothing	(*e*@goe)				(*e*@groe)			
Upper**FlexusOriscusInusitatus***Two*Ascendens	(*e*@go1e<)				(*e*@gro1e<)			
Upper**FlexusOriscusInusitatus***Two*Deminutus	(*e*@go1e~)				(*e*@gro1e~)			
Upper**FlexusOriscusInusitatus***Two*Descendens	(*e*@go1e>)				(*e*@gro1e>)			
Upper**FlexusOriscusInusitatus***Two*Nothing	(*e*@go1e)				(*e*@gro1e)			
Upper**OblatusAscendensOriscus**	(*f*@go1)				(*f*@gro1)			
Upper**OblatusAscendensOriscus***Two*Down	(*f*@go1*@e*)				(*f*@gro1*@e*)			
Upper**OblatusAscendensOriscus***Two*Up	(*f*@go1*@i*)				(*f*@gro1*@i*)			
Upper**OblatusFlexusOriscusInusitatus***Two*Ascendens	(*f*@go1e<)				(*f*@gro1e<)			
Upper**OblatusFlexusOriscusInusitatus***Two*Deminutus	(*f*@go1e~)				(*f*@gro1e~)			
Upper**OblatusFlexusOriscusInusitatus***Two*Descendens	(*f*@go1e>)				(*f*@gro1e>)			
Upper**OblatusFlexusOriscusInusitatus***Two*Nothing	(*f*@go1e)				(*f*@gro1e)			
Upper**OblatusPesQuassus***Two*Ascendens	(*f*@goi<)				(*f*@groi<)			
Upper**OblatusPesQuassus***Two*Deminutus	(*f*@goi~)				(*f*@groi~)			
Upper**OblatusPesQuassus***Two*Descendens	(*f*@goi>)				(*f*@groi>)			
Upper**OblatusPesQuassus***Two*Nothing	(*f*@goi)				(*f*@groi)			
Upper**OblatusPesQuassusLongqueue***Two*Nothing	(*g*@hoj)				(*g*@hroj)			
Upper**OblatusPesQuassusOpenqueue***One*Nothing	(*a*@boc)				(*a*@broc)			
Upper**Pes***Two*Deminutus	(*e*@gi~)				(*e*@gri~)			
Upper**Pes***Two*Nothing	(*e*@gi)				(*e*@gri)			
Upper**PesQuadratum***Two*Ascendens	(*e*@gqi<)				(*e*@grqi<)			
Upper**PesQuadratum***Two*Descendens	(*e*@gqi>)				(*e*@grqi>)			
Upper**PesQuadratum***Two*Nothing	(*e*@gqi)				(*e*@grqi)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Upper**PesQuadratumLongqueue***Two*Nothing	(*f*@hqj)				(*f*@hrqj)			
Upper**PesQuadratumOpenqueue***One*Nothing	(*a*@bqc)				(*a*@bqc)			
Upper**PesQuassus***Two*Ascendens	(*e*@goi<)				(*e*@groi<)			
Upper**PesQuassus***Two*Deminutus	(*e*@goi~)				(*e*@groi~)			
Upper**PesQuassus***Two*Descendens	(*e*@goi>)				(*e*@groi>)			
Upper**PesQuassus***Two*Nothing	(*e*@goi)				(*e*@groi)			
Upper**PesQuassusInusitatus***Two*Ascendens	(*e*@go0i<)				(*e*@gro0i<)			
Upper**PesQuassusInusitatus***Two*Deminutus	(*e*@go0i~)				(*e*@gro0i~)			
Upper**PesQuassusInusitatus***Two*Descendens	(*e*@go0i>)				(*e*@gro0i>)			
Upper**PesQuassusInusitatus***Two*Nothing	(*e*@go0i)				(*e*@gro0i)			
Upper**PesQuassusInusitatusLongqueue***Two*Nothing	(*f*@ho0j)				(*f*@hro0j)			
Upper**PesQuassusLongqueue***Two*Nothing	(*f*@hoj)				(*f*@hroj)			
Upper**PesQuassusOpenqueue***One*Nothing	(*a*@cod)				(*a*@cod)			
Upper**Punctum***Two*Down	(*e*@g*@eg*)				(*e*@gr*@eg*)			
Upper**Punctum***Two*Up	(*e*@g*@ij*)				(*e*@gr*@ij*)			
VEpisema	(*g*')		.circumflexus					
Virga	(gv)				(grv)			
VirgaLongqueue	(hv)				(hrv)			
VirgaOpenqueue	(av)				(arv)			
VirgaReversa	(gV)				(grV)			
VirgaReversaAscendens	(gV<)				(grV<)			
VirgaReversaDescendens	(gV>)				(grV>)			
VirgaReversa*Two*Down	(gV*@eg*)				(grV*@eg*)			
VirgaReversaLongqueue	(hV)				(hrV)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
VirgaReversaLongqueueAscendens	(hV<)				(hrV<)			
VirgaReversaLongqueueDescendens	(hV>)				(hrV>)			
VirgaReversaLongqueue*Two*Down	(hV@fg)				(hrV@fg)			
VirgaReversaOpenqueue	(aV)				(arV)			
VirgaReversaOpenqueueAscendens	(aV<)				(arV<)			
VirgaReversaOpenqueueDescendens	(aV>)				(arV>)			
Virgula	(‘)							

A.2 Dominican Score Font Glyphs

The following table lists all of the score glyphs available in the Dominican versions of the greciliae fonts in the same vein as the prior table.

Table A2: Score Glyphs

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Accentus	(gr1)							
AccentusReversus	(gr2)							
Ancus*TwoTwo*Deminutus	(gec~)				(grec~)			
AncusLongqueue*TwoTwo*Deminutus	(hfd~)				(hrfd~)			
AscendensOriscus	(go1)				(gro1)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
AscendensOriscus*Two*Down	(go1@eg)				(gro1@eg)			
AscendensOriscus*Two*Up	(go1@ij)				(gro1@ij)			
AscendensOriscusLineBL	(e@go1)				(e@gro1)			
AscendensOriscusLineTL	(i@go1)				(i@gro1)			
AscendensOriscusScapus	(g01)				(gr01)			
AscendensOriscusScapus*Two*Down	(g01@eg)				(gr01@eg)			
AscendensOriscusScapus*Two*Up	(g01@ij)				(gr01@ij)			
AscendensOriscusScapusLongqueue	(h01)				(hr01)			
AscendensOriscusScapusLongqueue*Two*Down	(h01@eg)				(hr01@eg)			
AscendensOriscusScapusLongqueue*Two*Up	(h01@jk)				(hr01@jk)			
AscendensOriscusScapusOpenqueue	(a01)				(ar01)			
AscendensPunctumInclinatum	(G1)				(Gr1)			
AuctumMora	(g.)							
BarBrace	(,_)							
BracketLeft*Two*	([[ce]])							
BracketLeftLong*Two*	([[gi]])							
BracketLeftShort*Two*	([[fh]])							
BracketRight*Two*	([[ce]])							
BracketRightLong*Two*	([[gi]])							
BracketRightShort*Two*	([[fh]])							
CClef	(c3)							
CClefChange	(c3)							
Circulus	(gr3)							

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
CurlyBrace	([ocb:1;6mm])							
CustosDownLong	(j+)							
CustosDownMedium	(m+)							
CustosDownShort	(k+)							
CustosUpLong	(f+)							
CustosUpMedium	(a+)							
CustosUpShort	(g+)							
DescendensOriscus	(go0)				(gro0)			
DescendensOriscus*Two*Down	(go0@eg)				(gro0@eg)			
DescendensOriscus*Two*Up	(go0@ij)				(gro0@ij)			
DescendensOriscusLineBL	(e@go0)				(e@gro0)			
DescendensOriscusLineTL	(i@go0)				(i@gro0)			
DescendensOriscusScapus	(gO0)				(grO0)			
DescendensOriscusScapus*Two*Down	(gO0@eg)				(grO0@eg)			
DescendensOriscusScapus*Two*Up	(gO0@ij)				(grO0@ij)			
DescendensOriscusScapusLongqueue	(hO0)				(hrO0)			
DescendensOriscusScapusLongqueue*Two*Down	(hO0@eg)				(hrO0@eg)			
DescendensOriscusScapusLongqueue*Two*Up	(hO0@jk)				(hrO0@jk)			
DescendensOriscusScapusOpenqueue	(aO0)				(arO0)			
DescendensPunctumInclinatum	(G0)				(Gr0)			
DivisioDominican	(,3)							
DivisioDominicanAlt	(,4)							
DivisioMaior	(:)							

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
DivisioMinima	(,)							
DivisioMinor	(;)							
FClef	(f3)							
FClefChange	(f3)							
Flat	(gx)							
FlatHole	(*gx*)							
Flexus*Two*Ascendens	(ge<)				(gre<)			
Flexus*Two*Deminutus	(ge~)				(gre~)			
Flexus*Two*Descendens	(ge>)				(gre>)			
Flexus*Two*Nothing	(ge)				(gre)			
Flexus*TwoTwo*Up	(ge*@gi*)				(gre*@gi*)			
FlexusLongqueue*Two*Ascendens	(hf<)				(hrf<)			
FlexusLongqueue*Two*Deminutus	(hf~)				(hrf~)			
FlexusLongqueue*Two*Descendens	(hf>)				(hrf>)			
FlexusLongqueue*Two*Nothing	(hf)				(hrf)			
FlexusNobar*Two*Ascendens	(@hf<)				(@hrf<)			
FlexusNobar*Two*Deminutus	(@hf~)				(@hrf~)			
FlexusNobar*Two*Descendens	(@hf>)				(@hrf>)			
FlexusNobar*Two*Nothing	(@hf)				(@hrf)			
FlexusNobar*TwoTwo*Up	(@hf*@hj*)				(@hrf*@hj*)			
FlexusOpenqueue*One*Ascendens	(ba<)				(bra<)			
FlexusOpenqueue*One*Deminutus	(ba~)				(bra~)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
FlexusOpenqueue*One*Descendens	(ba>)				(bra>)			
FlexusOpenqueue*One*Nothing	(ba)				(bra)			
FlexusOriscus*Two*Ascendens	(goe<)				(groe<)			
FlexusOriscus*Two*Deminutus	(goe~)				(groe~)			
FlexusOriscus*Two*Descendens	(goe>)				(groe>)			
FlexusOriscus*Two*Nothing	(goe)				(groe)			
FlexusOriscusInusitatus*Two*Ascendens	(go1e<)				(gro1e<)			
FlexusOriscusInusitatus*Two*Deminutus	(go1e~)				(gro1e~)			
FlexusOriscusInusitatus*Two*Descendens	(go1e>)				(gro1e>)			
FlexusOriscusInusitatus*Two*Nothing	(go1e)				(gro1e)			
FlexusOriscusScapus*Two*Ascendens	(g0e<)				(gr0e<)			
FlexusOriscusScapus*Two*Descendens	(g0e>)				(gr0e>)			
FlexusOriscusScapus*Two*Nothing	(g0e)				(gr0e)			
FlexusOriscusScapusInusitatus*Two*Ascendens	(g01e<)				(gr01e<)			
FlexusOriscusScapusInusitatus*Two*Descendens	(g01e>)				(gr01e>)			
FlexusOriscusScapusInusitatus*Two*Nothing	(g01e)				(gr01e)			
FlexusOriscusScapusInusitatusLongqueue*Two*Ascendens	(h01f<)				(hr01f<)			
FlexusOriscusScapusInusitatusLongqueue*Two*Descendens	(h01f>)				(hr01f>)			
FlexusOriscusScapusInusitatusLongqueue*Two*Nothing	(h01f)				(hr01f)			
FlexusOriscusScapusLongqueue*Two*Ascendens	(h0f<)				(hr0f<)			
FlexusOriscusScapusLongqueue*Two*Descendens	(h0f>)				(hr0f>)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
FlexusOriscusScapusLongqueue*Two*Nothing	(h0f)				(hr0f)			
FlexusOriscusScapusOpenqueue*One*Ascendens	(b0a<)				(br0a<)			
FlexusOriscusScapusOpenqueue*One*Descendens	(b0a>)				(br0a>)			
FlexusOriscusScapusOpenqueue*One*Nothing	(b0a)				(br0a)			
LeadingOriscus*Two*	(go*igig*)				(gro*igig*)			
LeadingPunctum*Two*	(g*igig*)				(gr*igig*)			
LeadingPunctum*Two*InitioDebilis	(-g*igig*)				(-gr*igig*)			
LeadingQuilisma*Two*	(gw*igig*)				(grw*igig*)			
Linea	(g=)				(gr=)			
LineaPunctum	(gR)				(grR)		.caeciliae	
Lower**AscendensOriscus***Two*Down	(*i*@go1*@eg*)				(*i*@gro1*@eg*)			
Lower**AscendensOriscus***Two*Up	(*i*@go1*@ij*)				(*i*@gro1*@ij*)			
Lower**DescendensOriscus***Two*Down	(*i*@go0*@eg*)				(*i*@gro0*@eg*)			
Lower**DescendensOriscus***Two*Up	(*i*@go0*@ij*)				(*i*@gro0*@ij*)			
Lower**Flexus***Two*Ascendens	(*i*@ge<)				(*i*@gre<)			
Lower**Flexus***Two*Deminutus	(*i*@ge~)				(*i*@gre~)			
Lower**Flexus***Two*Descendens	(*i*@ge>)				(*i*@gre>)			
Lower**Flexus***Two*Nothing	(*i*@ge)				(*i*@gre)			
Lower**FlexusOriscus***Two*Ascendens	(*i*@goe<)				(*i*@groe<)			
Lower**FlexusOriscus***Two*Deminutus	(*i*@goe~)				(*i*@groe~)			
Lower**FlexusOriscus***Two*Descendens	(*i*@goe>)				(*i*@groe>)			
Lower**FlexusOriscus***Two*Nothing	(*i*@goe)				(*i*@groe)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Lower**FlexusOriscusInusitatus***Two*Ascendens	(*i*@go1e<)				(*i*@gro1e<)			
Lower**FlexusOriscusInusitatus***Two*Deminutus	(*i*@go1e~)				(*i*@gro1e~)			
Lower**FlexusOriscusInusitatus***Two*Descendens	(*i*@go1e>)				(*i*@gro1e>)			
Lower**FlexusOriscusInusitatus***Two*Nothing	(*i*@go1e)				(*i*@gro1e)			
Lower**OblatusDescendensOriscus**	(*h*@go0)				(*h*@gro0)			
Lower**OblatusDescendensOriscus***Two*Down	(*h*@go0*@e*)				(*h*@gro0*@e*)			
Lower**OblatusDescendensOriscus***Two*Up	(*h*@go0*@i*)				(*h*@gro0*@i*)			
Lower**OblatusFlexusOriscus***Two*Ascendens	(*h*@goe<)				(*h*@groe<)			
Lower**OblatusFlexusOriscus***Two*Deminutus	(*h*@goe~)				(*h*@groe~)			
Lower**OblatusFlexusOriscus***Two*Descendens	(*h*@goe>)				(*h*@groe>)			
Lower**OblatusFlexusOriscus***Two*Nothing	(*h*@goe)				(*h*@groe)			
Lower**OblatusPesQuassusInusitatus***Two*Ascendens	(*h*@go0i<)				(*h*@gro0i<)			
Lower**OblatusPesQuassusInusitatus***Two*Deminutus	(*h*@go0i~)				(*h*@gro0i~)			
Lower**OblatusPesQuassusInusitatus***Two*Descendens	(*h*@go0i>)				(*h*@gro0i>)			
Lower**OblatusPesQuassusInusitatus***Two*Nothing	(*h*@go0i)				(*h*@gro0i)			
Lower**OblatusPesQuassusInusitatusLongqueue***Two*Nothing	(*i*@ho0j)				(*i*@hro0j)			
Lower**OblatusPesQuassusInusitatusOpenqueue***One*Nothing	(*b*@ao0b)				(*b*@aro0b)			
Lower**Pes***Two*Deminutus	(*i*@gi~)				(*i*@gri~)			
Lower**PesQuadratum***Two*Ascendens	(*i*@gqi<)				(*i*@grqi<)			
Lower**PesQuadratum***Two*Descendens	(*i*@gqi>)				(*i*@grqi>)			
Lower**PesQuadratum***Two*Nothing	(*i*@gqi)				(*i*@grqi)			
Lower**PesQuadratumLongqueue***Two*Nothing	(*j*@hqj)				(*j*@hrqj)			
Lower**PesQuadratumOpenqueue***One*Nothing	(*b*@aqb)				(*b*@arqb)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Lower**PesQuassus***Two*Ascendens	(*i*@goi<)				(*i*@groi<)			
Lower**PesQuassus***Two*Deminutus	(*i*@goi~)				(*i*@groi~)			
Lower**PesQuassus***Two*Descendens	(*i*@goi>)				(*i*@groi>)			
Lower**PesQuassus***Two*Nothing	(*i*@goi)				(*i*@groi)			
Lower**PesQuassusInusitatus***Two*Ascendens	(*i*@go0i<)				(*i*@gro0i<)			
Lower**PesQuassusInusitatus***Two*Deminutus	(*i*@go0i~)				(*i*@gro0i~)			
Lower**PesQuassusInusitatus***Two*Descendens	(*i*@go0i>)				(*i*@gro0i>)			
Lower**PesQuassusInusitatus***Two*Nothing	(*i*@go0i)				(*i*@gro0i)			
Lower**PesQuassusInusitatusLongqueue***Two*Nothing	(*j*@ho0j)				(*j*@hro0j)			
Lower**PesQuassusLongqueue***Two*Nothing	(*j*@hoj)				(*j*@hroj)			
Lower**PesQuassusOpenqueue***One*Nothing	(*b*@aob)				(*b*@arob)			
Lower**Punctum***Two*Down	(*i*@g*@eg*)				(*i*@gr*@eg*)			
Lower**Punctum***Two*Up	(*i*@g*@ij*)				(*i*@gr*@ij*)			
Natural	(gy)							
NaturalHole	(*gy*)							
OriscusDeminutus	(go~)		.caeciliae		(gro~)		.caeciliae	
Pes*Two*Deminutus	(gi~)				(gri~)			
Pes*Two*Nothing	(gi)				(gri)			
Pes*Two*InitioDebilis	(-gi)				(-gri)			
Pes*Two*InitioDebilisDeminutus	(-gi~)				(-gri~)			
PesAscendensOriscus*Two*Nothing	(gi0*/j*)				(gri0*/j*)			
PesDescendensOriscus*Two*Nothing	(gi0*/h*)				(gri0*/h*)			
PesQuadratum*Two*Ascendens	(gqi<)				(grqi<)			
PesQuadratum*Two*Descendens	(gqi>)				(grqi>)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
PesQuadratum*Two*Nothing	(gqi)				(grqi)			
PesQuadratum*Two*InitioDebilis	(-gqi)				(-grqi)			
PesQuadratum*Two*InitioDebilisAscendens	(-gqi<)				(-grqi<)			
PesQuadratum*Two*InitioDebilisDescendens	(-gqi>)				(-grqi>)			
PesQuadratumLongqueue*Two*Nothing	(hqj)				(hrqj)			
PesQuadratumLongqueue*Two*InitioDebilis	(-hqj)				(-hrqj)			
PesQuadratumOpenqueue*One*Nothing	(aqb)				(arqb)			
PesQuadratumOpenqueue*One*InitioDebilis	(-aqb)				(-arqb)			
PesQuassus*Two*Ascendens	(goi<)				(groi<)			
PesQuassus*Two*Deminutus	(goi~)				(groi~)			
PesQuassus*Two*Descendens	(goi>)				(groi>)			
PesQuassus*Two*Nothing	(goi)				(groi)			
PesQuassusInusitatus*Two*Ascendens	(go0i<)				(gro0i<)			
PesQuassusInusitatus*Two*Deminutus	(go0i~)				(gro0i~)			
PesQuassusInusitatus*Two*Descendens	(go0i>)				(gro0i>)			
PesQuassusInusitatus*Two*Nothing	(go0i)				(gro0i)			
PesQuassusInusitatusLongqueue*Two*Nothing	(ho0j)				(hro0j)			
PesQuassusLongqueue*Two*Nothing	(hoj)				(hroj)			
PesQuassusOpenqueue*One*Nothing	(aob)				(arob)			
Porrectus*TwoTwo*Ascendens	(geg<)				(greg<)			
Porrectus*TwoTwo*Deminutus	(geg~)		.alt		(greg~)		.alt	
Porrectus*TwoTwo*Descendens	(geg>)				(greg>)			
Porrectus*TwoTwo*Nothing	(geg)				(greg)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
PorrectusFlexus*TwoTwoTwo*Ascendens	(gege<)				(grege<)			
PorrectusFlexus*TwoTwoTwo*Deminutus	(gege~)				(grege~)			
PorrectusFlexus*TwoTwoTwo*Descendens	(gege>)				(grege>)			
PorrectusFlexus*TwoTwoTwo*Nothing	(gege)				(grege)			
PorrectusFlexusLongqueue*OneTwoTwo*Ascendens	(hghg<)				(hrghg<)			
PorrectusFlexusLongqueue*OneTwoTwo*Deminutus	(hghg~)				(hrghg~)			
PorrectusFlexusLongqueue*OneTwoTwo*Descendens	(hghg>)				(hrghg>)			
PorrectusFlexusLongqueue*OneTwoTwo*Nothing	(hghg)				(hrghg)			
PorrectusFlexusNobar*TwoTwoTwo*Ascendens	(egege<)				(egrege<)			
PorrectusFlexusNobar*TwoTwoTwo*Deminutus	(egege~)				(egrege~)			
PorrectusFlexusNobar*TwoTwoTwo*Descendens	(egege>)				(egrege>)			
PorrectusFlexusNobar*TwoTwoTwo*Nothing	(egege)				(egrege)			
PorrectusLongqueue*OneTwo*Ascendens	(hfh<)				(hrfh<)			
PorrectusLongqueue*OneTwo*Deminutus	(hfh~)		.alt		(hrfh~)		.alt	
PorrectusLongqueue*TwoTwo*Deminutus	(hfh~)		.alt		(hrfh~)		.alt	
PorrectusLongqueue*OneTwo*Descendens	(hfh>)				(hrfh>)			
PorrectusLongqueue*OneTwo*Nothing	(hfh)				(hrfh)			
PorrectusNobar*TwoTwo*Ascendens	(@geg<)				(@greg<)			
PorrectusNobar*TwoTwo*Deminutus	(@geg~)				(@greg~)			
PorrectusNobar*TwoTwo*Descendens	(@geg>)				(@greg>)			
PorrectusNobar*TwoTwo*Nothing	(@geg)				(@greg)			
Punctum	(g)				(gr)		.caeciliae	

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
PunctumAscendens	(g<)				(gr<)			
PunctumDeminutus	(g~)							
PunctumDescendens	(g>)				(gr>)			
Punctum*Two*Down	(g@eg)				(gr@eg)			
Punctum*Two*Up	(g@ij)				(gr@ij)			
Punctum*Two*InitioDebilisUp	(-g@ij)				(-gr@ij)			
PunctumInclinatumDeminutus	(G~)				(Gr~)			
PunctumInclinatumAuctus	(G>)		.caeciliae		(Gr>)		.caeciliae	
PunctumLineBL	(e@g)				(e@gr)			
PunctumLineTL	(i@g)				(i@gr)			
Quilisma	(gw)				(grw)			
Quilisma*Two*Up	(gw@ij)				(grw@ij)			
QuilismaPes*Two*Deminutus	(gwi~)				(grwi~)			
QuilismaPes*Two*Nothing	(gwi)				(grwi)			
QuilismaPesQuadratum*Two*Ascendens	(gWi<)				(grWi<)			
QuilismaPesQuadratum*Two*Descendens	(gWi>)				(grWi>)			
QuilismaPesQuadratum*Two*Nothing	(gWi)				(grWi)			
QuilismaPesQuadratumLongqueue*Two*Nothing	(hWj)				(hrWj)			
QuilismaPesQuadratumOpenqueue*One*Nothing	(aWb)				(arWb)			
RoundBrace	([ob:1;6mm])							
RoundBraceDown	([ub:1;6mm])							
Salicus*TwoTwo*Ascendens	(giOk<)				(griOk<)			
Salicus*TwoTwo*Deminutus	(giOk~)				(griOk~)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Salicus *TwoTwo*Descendens	(gi0k>)				(gri0k>)			
Salicus *TwoTwo*Nothing	(gi0k)				(gri0k)			
SalicusFlexus *TwoTwoTwo*Ascendens	(gi0ki<)				(gri0ki<)			
SalicusFlexus *TwoTwoTwo*Deminutus	(gi0ki~)				(gri0ki~)			
SalicusFlexus *TwoTwoTwo*Descendens	(gi0ki>)				(gri0ki>)			
SalicusFlexus *TwoTwoTwo*Nothing	(gi0ki)				(gri0ki)			
SalicusLongqueue *TwoTwo*Nothing	(hj0l)				(hrj0l)			
Scandicus *TwoTwo*Deminutus	(gik~)				(grik~)			
Scandicus *TwoTwo*Nothing	(gik)				(grik)			
Semicirculus	($_g$r4)							
SemicirculusReversus	($_g$r5)							
Sharp	(g#)							
SharpHole	($_{g\#}$)							
Stropha	(gs)		.caeciliae		(grs)		.caeciliae	
StrophaAucta	(gs>)		.caeciliae		(grs>)		.caeciliae	
StrophaAuctaLongtail	(hs>)				(hrs>)			
Torculus *TwoTwo*Ascendens	(gig<)				(grig<)			
Torculus *TwoTwo*Deminutus	(gig~)				(grig~)			
Torculus *TwoTwo*Descendens	(gig>)				(grig>)			
Torculus *TwoTwo*Nothing	(gig)				(grig)			
Torculus *TwoTwo*InitioDebilis	(-gig)				(-grig)			
Torculus *TwoTwo*InitioDebilisAscendens	(-gig<)				(-grig<)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Torculus*TwoTwo*InitioDebilisDeminutus	(-gig~)				(-grig~)			
Torculus*TwoTwo*InitioDebilisDescendens	(-gig>)				(-grig>)			
TorculusLiquescens*TwoTwoTwo*Deminutus	(gige~)				(grige~)			
TorculusLiquescensQuilisma*TwoTwoTwo*Deminutus	(gwige~)				(grwige~)			
TorculusQuilisma*TwoTwo*Ascendens	(gwig<)				(grwig<)			
TorculusQuilisma*TwoTwo*Deminutus	(gwig~)				(grwig~)			
TorculusQuilisma*TwoTwo*Descendens	(gwig>)				(grwig>)			
TorculusQuilisma*TwoTwo*Nothing	(gwig)				(grwig)			
TorculusResupinus*TwoTwoTwo*Ascendens	(gigi<)				(grigi<)			
TorculusResupinus*TwoTwoTwo*Deminutus	(gigi~)		.alt		(grigi~)		.alt	
TorculusResupinus*TwoTwoTwo*Descendens	(gigi>)				(grigi>)			
TorculusResupinus*TwoTwoTwo*Nothing	(gigi)				(grigi)			
TorculusResupinus*TwoTwoTwo*InitioDebilis	(-gigi)				(-grigi)			
TorculusResupinus*TwoTwoTwo*InitioDebilisAscendens	(-gigi<)				(-grigi<)			
TorculusResupinus*TwoTwoTwo*InitioDebilisDeminutus	(-gigi~)		.alt		(-grigi~)		.alt	
TorculusResupinus*TwoTwoTwo*InitioDebilisDescendens	(-gigi>)				(-grigi>)			
TorculusResupinusQuilisma*TwoTwoTwo*Ascendens	(gwigi<)				(grwigi<)			
TorculusResupinusQuilisma*TwoTwoTwo*Deminutus	(gwigi~)		.alt		(grwigi~)		.alt	
TorculusResupinusQuilisma*TwoTwoTwo*Descendens	(gwigi>)				(grwigi>)			
TorculusResupinusQuilisma*TwoTwoTwo*Nothing	(gwigi)				(grwigi)			
Upper**AscendensOriscus***Two*Down	(e@go1@eg)				(e@gro1@eg)			
Upper**AscendensOriscus***Two*Up	(e@go1@ij)				(e@gro1@ij)			
Upper**DescendensOriscus***Two*Down	(e@go0@eg)				(e@gro0@eg)			
Upper**DescendensOriscus***Two*Up	(e@go0@ij)				(e@gro0@ij)			

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Upper**Flexus***Two*Ascendens	(e@ge<)				(e@gre<)			
Upper**Flexus***Two*Deminutus	(e@ge~)				(e@gre~)			
Upper**Flexus***Two*Descendens	(e@ge>)				(e@gre>)			
Upper**Flexus***Two*Nothing	(e@ge)				(e@gre)			
Upper**FlexusOriscus***Two*Ascendens	(e@goe<)				(e@groe<)			
Upper**FlexusOriscus***Two*Deminutus	(e@goe~)				(e@groe~)			
Upper**FlexusOriscus***Two*Descendens	(e@goe>)				(e@groe>)			
Upper**FlexusOriscus***Two*Nothing	(e@goe)				(e@groe)			
Upper**FlexusOriscusInusitatus***Two*Ascendens	(e@go1e<)				(e@gro1e<)			
Upper**FlexusOriscusInusitatus***Two*Deminutus	(e@go1e~)				(e@gro1e~)			
Upper**FlexusOriscusInusitatus***Two*Descendens	(e@go1e>)				(e@gro1e>)			
Upper**FlexusOriscusInusitatus***Two*Nothing	(e@go1e)				(e@gro1e)			
Upper**OblatusAscendensOriscus**	(f@go1)				(f@gro1)			
Upper**OblatusAscendensOriscus***Two*Down	(f@go1@e)				(f@gro1@e)			
Upper**OblatusAscendensOriscus***Two*Up	(f@go1@i)				(f@gro1@i)			
Upper**OblatusFlexusOriscusInusitatus***Two*Ascendens	(f@go1e<)				(f@gro1e<)			
Upper**OblatusFlexusOriscusInusitatus***Two*Deminutus	(f@go1e~)				(f@gro1e~)			
Upper**OblatusFlexusOriscusInusitatus***Two*Descendens	(f@go1e>)				(f@gro1e>)			
Upper**OblatusFlexusOriscusInusitatus***Two*Nothing	(f@go1e)				(f@gro1e)			
Upper**OblatusPesQuassus***Two*Ascendens	(f@goi<)				(f@groi<)			
Upper**OblatusPesQuassus***Two*Deminutus	(f@goi~)				(f@groi~)			
Upper**OblatusPesQuassus***Two*Descendens	(f@goi>)				(f@groi>)			

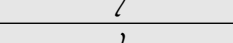
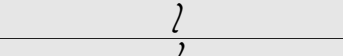
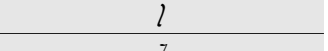
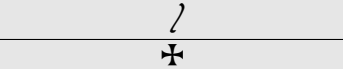
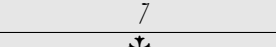
Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Upper**OblatusPesQuassus***Two*Nothing	(f@goi)				(f@groi)			
Upper**OblatusPesQuassusLongqueue***Two*Nothing	(g@hoj)				(g@hroj)			
Upper**OblatusPesQuassusOpenqueue***One*Nothing	(a@boc)				(a@broc)			
Upper**Pes***Two*Deminutus	(e@gi~)				(e@gri~)			
Upper**Pes***Two*Nothing	(e@gi)				(e@gri)			
Upper**PesQuadratum***Two*Ascendens	(e@gqi<)				(e@grqi<)			
Upper**PesQuadratum***Two*Descendens	(e@gqi>)				(e@grqi>)			
Upper**PesQuadratum***Two*Nothing	(e@gqi)				(e@grqi)			
Upper**PesQuadratumLongqueue***Two*Nothing	(f@hqj)				(f@hrqj)			
Upper**PesQuadratumOpenqueue***One*Nothing	(a@bqc)				(a@bqc)			
Upper**PesQuassus***Two*Ascendens	(e@goi<)				(e@groi<)			
Upper**PesQuassus***Two*Deminutus	(e@goi~)				(e@groi~)			
Upper**PesQuassus***Two*Descendens	(e@goi>)				(e@groi>)			
Upper**PesQuassus***Two*Nothing	(e@goi)				(e@groi)			
Upper**PesQuassusInusitatus***Two*Ascendens	(e@go0i<)				(e@gro0i<)			
Upper**PesQuassusInusitatus***Two*Deminutus	(e@go0i~)				(e@gro0i~)			
Upper**PesQuassusInusitatus***Two*Descendens	(e@go0i>)				(e@gro0i>)			
Upper**PesQuassusInusitatus***Two*Nothing	(e@go0i)				(e@gro0i)			
Upper**PesQuassusInusitatusLongqueue***Two*Nothing	(f@ho0j)				(f@hro0j)			
Upper**PesQuassusLongqueue***Two*Nothing	(f@hoj)				(f@hroj)			
Upper**PesQuassusOpenqueue***One*Nothing	(a@cod)				(a@cod)			
Upper**Punctum***Two*Down	(e@g@eg)				(e@gr@eg)			
Upper**Punctum***Two*Up	(e@g@ij)				(e@gr@ij)			
VEpisema	(g')		.circumflexus					

Glyph Name	Sample gabc	Glyph	Variants		Cavum		Cavum Variants	
			Name	Glyph	Sample gabc	Glyph	Name	Glyph
Virga	(gv)				(grv)			
VirgaLongqueue	(hv)				(hrv)			
VirgaOpenqueue	(av)				(arv)			
VirgaReversa	(gV)				(grV)			
VirgaReversaAscendens	(gV<)				(grV<)			
VirgaReversaDescendens	(gV>)				(grV>)			
VirgaReversa*Two*Down	(gV@eg)				(grV@eg)			
VirgaReversaLongqueue	(hV)				(hrV)			
VirgaReversaLongqueueAscendens	(hV<)				(hrV<)			
VirgaReversaLongqueueDescendens	(hV>)				(hrV>)			
VirgaReversaLongqueue*Two*Down	(hV@efg)				(hrV@efg)			
VirgaReversaOpenqueue	(aV)				(arV)			
VirgaReversaOpenqueueAscendens	(aV<)				(arV<)			
VirgaReversaOpenqueueDescendens	(aV>)				(arV>)			
Virgula	(‘)	’						

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 TEX document, and miscellaneous glyphs for more specialized use.

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	
HufnagelCustosUpMedium		HufnagelCustosUpShort	
HufnagelFClef		HufnagelFClefChange	
HufnagelFlat		HufnagelFlatHole	
HugnagelCFClef		Line1	
Line2		Line3	
Line4		Line5	
MedicaeaCClef		MedicaeaCClefChange	
MedicaeaCustosDownLong		MedicaeaCustosDownMedium	
MedicaeaCustosDownShort		MedicaeaCustosUpLong	
MedicaeaCustosUpMedium		MedicaeaCustosUpShort	
MedicaeaFClef		MedicaeaFClefChange	
MedicaeaFlat		MedicaeaFlatHole	

Glyph Name	Glyph	Glyph Name	Glyph
MensuralCustosDownLong		MensuralCustosDownMedium	
MensuralCustosDownShort		MensuralCustosUpLong	
MensuralCustosUpMedium		MensuralCustosUpShort	
MensuralFlat		MensuralFlatHole	
RBar		RBar.alt	
RBar.alt2		RBarCaption	
RBarCaptionSC		RBarCaptionSlant	
RBarSC		RBarSlant	
RBarSmall		RBarSmallSC	
RBarSmallSlant		RWithBarGoth	
StarHeight		StarSix	
VBar		VBar.alt	
VBar.alt2		VBarCaption	
VBarCaptionSC		VBarCaptionSlant	
VBarSC		VBarSlant	
VBarSmall		VBarSmallSC	
VBarSmallSlant		VWithBarGoth	

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