

User Manual for MakeGlossariesGUI version 2.1

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1 Introduction

The \LaTeX glossaries package has three methods of generating a glossary (list of abbreviations, terms or symbols): directly using \LaTeX , using `makeindex` or using `xindy`. The first option requires two \LaTeX runs (as with cross-references), the last two options requires a \LaTeX run followed by running the indexing application (`makeindex` or `xindy`), followed by another \LaTeX run. The `glossaries-extra` package provides two more methods (just using `\printunsrtglossary` or using `\printunsrtglossary` with `bib2gls`). These last two methods aren't supported by `MakeGlossariesGUI` (although it will flag documents that require `bib2gls` if detected, as part of its diagnostics). Your document may require additional applications, such as `bibtex`, but that's outside of the scope of `MakeGlossariesGUI`.

The `glossaries` package provides a Perl script called `makeglossaries` that's intended to simplify this step for options 2 and 3. However, sometimes things can go wrong and users may not be able to work out why. The `makeglossaries` script tries to diagnose problems, but not everyone wants to install Perl for some reason (which is a shame, as there are some useful \TeX -related Perl scripts, including `xindy`). The `glossaries` package also provides a light-weight Lua alternative, `makeglossaries-lite.lua`, but that doesn't provide any diagnostics. `MakeGlossariesGUI` is a Java application that (when run in batch mode) can be used instead of `makeglossaries` or `makeglossaries-lite.lua` however its primary purpose is a **graphical user interface (GUI)** tool for determining what's gone wrong when the glossary doesn't appear or is incomplete.

Since `MakeGlossariesGUI` is written in Java, you'll need the Java Runtime Environment installed. If your document build process supports the conditional execution of commands, then you can test if `MakeGlossariesGUI`, `makeglossaries` or `makeglossaries-lite.lua` are required by searching the log file for the presence of the command `\@istfilename`. (The argument is the style file. The extension determines whether `makeindex` or `xindy` is required.)

The `MakeGlossariesGUI` application runs in **GUI** mode by default, but can be run in batch mode using the `--batch` command line option. Command line invocation:

```
makeglossariesgui [<options>] [<filename>]
```

The *<filename>* must be supplied when run in batch mode (the `.aux` extension may be omitted), but is optional in **GUI** mode. The *<filename>* should be the auxiliary file produced by the \LaTeX run, but may also be the `.tex` or `.log` file if it has the same base-name as the auxiliary file and is located in the same directory. Unlike `makeglossaries` and `makeglossaries-lite.lua`, *<filename>* may include the directory path.

Available options:

- batch (or -b)** Invoke MakeGlossariesGUI in batch mode (*<filename>* must be supplied).
Note that the extra checks that parse the log file aren't performed in batch mode.
- gui** Invoke MakeGlossariesGUI in **GUI** mode (default).
- quiet** Suppress (non-error) messages that would otherwise have been written to STDOUT.
- dry-run (or -n)** Dry run mode (don't run the indexing application).
- nodry-run** Not dry run mode (default).
- debug** Print debug messages to STDOUT.
- version (or -v)** Print the version details to STDOUT and exit.
- help (or -h)** Print a brief summary of available options to STDOUT and exit.

When run in batch mode, MakeGlossariesGUI behaves much like **makeglossaries**. It reads the auxiliary file to determine whether to use **makeindex** or **xindy** and what options to pass to them. The **GUI settings** will be honoured.

2 Basic Use (GUI Mode)

A file can be loaded from the command line invocation (see [chapter 1](#)) or in the **GUI** using the File→Open menu item. You can also use the load file button on the toolbar or (if permitted by your operating system) drag and drop the file onto the main window. The input file should be the `.aux` file created by L^AT_EX, but if you try to load the main document `.tex` file or the `.log` transcript file, MakeGlossariesGUI will assume you meant the associated `.aux` file. (If you have used L^AT_EX's `-jobname` or `-output-directory` options, then you won't be able to use the `.tex` file and will have to use either the `.aux` or `.log` file.)

Example 1.

Suppose you have the following document (called, say, `basic-sample.tex`):

```
\documentclass{article}

\usepackage{glossaries}

\makeglossaries

\newglossaryentry{sample}{name={sample},
  description={an example}}

\begin{document}
A \gls{sample} document.

\printglossaries

\end{document}
```

First run L^AT_EX the usual way. This should create the auxiliary file `basic-sample.aux` as well as some other files including `basic-sample.glo` and `basic-sample.ist`. Now load the auxiliary file (`basic-sample.aux`) into MakeGlossariesGUI. (Since the main `.tex` file has the same basename as the `.aux` file, you can also use that, as mentioned above.)

Once MakeGlossariesGUI has successfully loaded the `.aux` file, it will run **makeindex** on the associated `.glo` file (with the `.ist` file as the style). In this case, there are no problems with the document and the `.tex` file is now ready for another L^AT_EX run. The general information panel ([Figure 2.1](#)) shows a summary of the document glossaries. In this case, there's only one glossary (the `main` one). If you edit the document source code

(.tex file) you can use the File→Reload menu item to reload the updated .aux file in MakeGlossariesGUI.

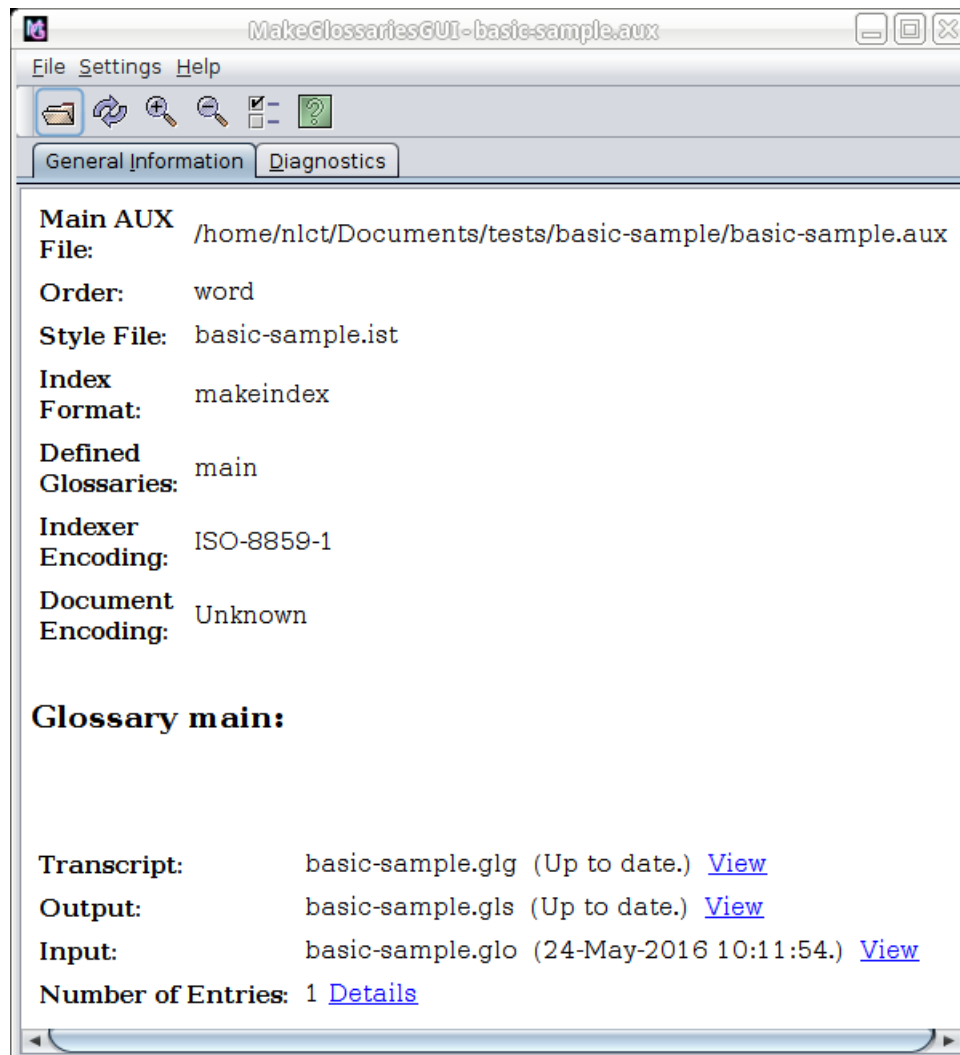


Figure 2.1: General Information Panel (Basic Sample)

In this example, only one entry has been indexed in the `main` glossary. You can find out more information by clicking on the “Details” link, which will open the window shown in [Figure 2.2](#).

Since only one entry has been used, there’s only one row. The first column lists the entry’s label, the second column lists the entry’s sort field and the third column shows the number of times that entry was indexed in the document. If you have a long list of entries, you can use the search box to find an entry according to its *label*. (The sort column isn’t searched.) Regular expressions are permitted.

The screenshot shows a window titled "Glossary 'main'". At the top left is a small icon, and at the top right is a close button (X). Below the title bar is a search field labeled "Tag:" with a magnifying glass icon to its right. Below the search field is a table with three columns: "Entry Tag", "Sort", and "Occurrences". The table contains one row with the values "sample", "sample", and "1". Below the table is a large, empty, light gray rectangular area.

Entry Tag	Sort	Occurrences
sample	sample	1

Figure 2.2: Entry Details (Basic Sample)

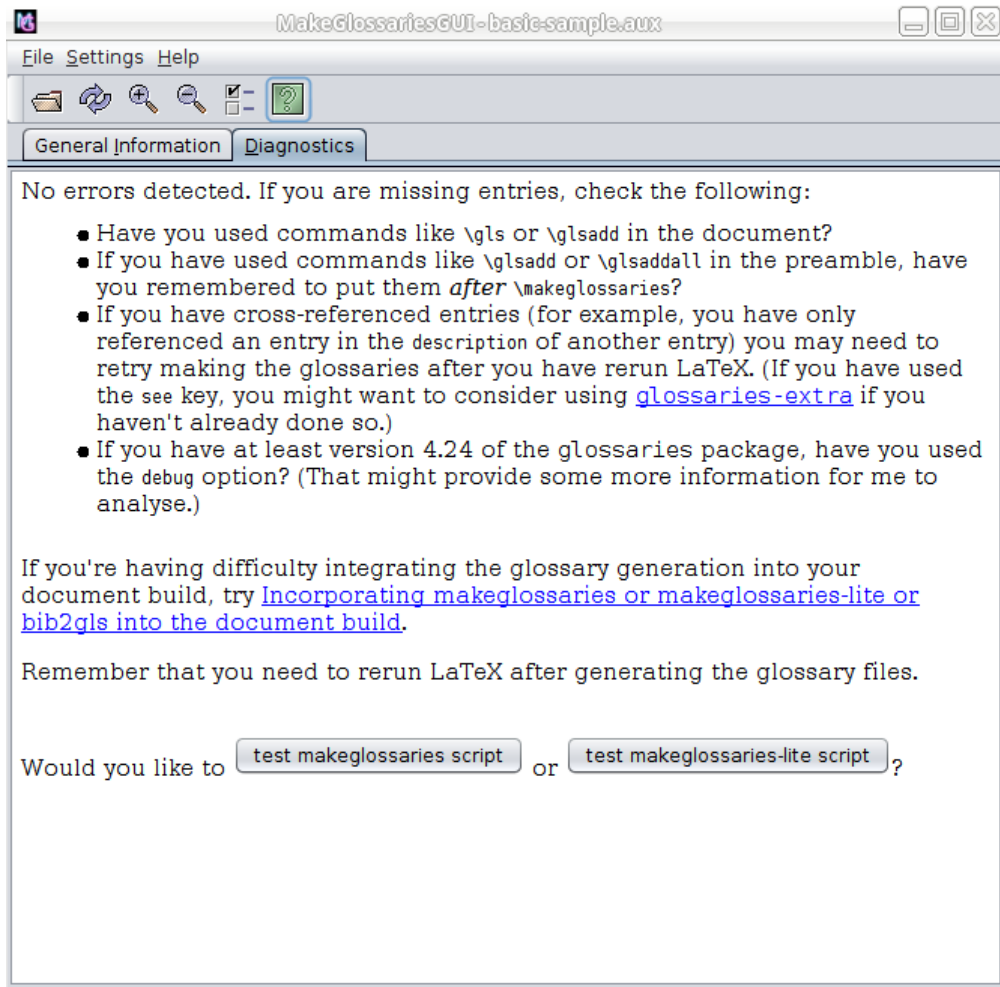


Figure 2.3: Diagnostics Tab (Basic Sample)

The **Diagnostics** tab (Figure 2.3) provides information, warnings and suggestions. In this example, there are no errors detected, so it just provides suggestions and some links on how to incorporate `makeglossaries` into your document build process. There are also two buttons provided to test the `makeglossaries` and `makeglossaries-lite.lua` scripts. In the first case, the action will also test if Perl is installed.

If you have defined an entry in your document, but it’s not listed in the details window for the relevant glossary, then it hasn’t been indexed in your document. Remember that the commands described in section 9 (“Using Glossary Terms Without Links”) of the `glossaries` manual don’t index the terms. These essentially are all the commands in the form `\glsentry<field>` or `\glossentryname<field>`, such as `\glsentrytext`, `\glsentryshort`, `\glsentrylong` or `\glossentryname`, and their case-changing vari-

ants. Also `\glsentrytitlecase` and `\gls hyperlink`.

If you're using the `glossaries-extra` package, remember that the `noindex` option will suppress indexing.

Example 2.

Now let's consider the following document (called, say, `missing-sort.tex`):

```
\documentclass{article}

\usepackage[utf8]{inputenc}
\usepackage[xindy]{glossaries}

\makeglossaries

\newglossaryentry{S}{name={\S},
  description={section symbol}}

\newglossaryentry{alpha}{name={\ensuremath{\alpha}},
  description={alpha}}

\newglossaryentry{beta}{name={\beta},text={\beta},
  description={beta}}

\begin{document}
Test: \gls{S}, $\gls{alpha}$, $\gls{beta}$.

\printglossaries

\end{document}
```

As before, run \LaTeX as usual on this document. Since the `xindy` package option has been used, this will create a `.xdy` file instead of a `.ist` file and the `.glo` file is now in `xindy`'s format. There are, however, problems with this document. The `glossaries` manual advises using the `sort` key for entries that contain special characters or commands in the entry's name. This document hasn't followed that advice, and `xindy` will complain. The `S` entry just causes a warning:

Would replace complete index key with empty string, ignoring
and the `S` entry is ignored. The `alpha` and `beta` entries cause an error:

index 0 should be less than the length of the string

Again the entries are ignored, but the message is fairly cryptic. If we load the auxiliary file (`missing-sort.aux`) into `MakeGlossariesGUI`, these problems are detected, and the following error message is displayed:

Xindy has ignored one or more entries with empty sort strings. Xindy failed with exit code 1.

Once this error message has been dismissed, the **Diagnostics** tab should automatically be selected (see [Figure 2.4](#)). This identifies the problem entries and recommends a solution, in this case, add the `sort` key to the entry definition. The actual warning and error message reported by `xindy` are shown at the end. (You can adjust the font used by these messages if you like, see [chapter 3](#).)

In the **General Information** panel, the “Details” link can again be used to view the list of indexed entries, but now the problematic entries are shown in red (see [Figure 2.5](#)).

MakeGlossariesGUI actually performs more problem-checking than `makeglossaries` as it also tries to parse the log file for certain messages (but only in **GUI** mode). This is illustrated in the next example, which won’t generate any error messages from `makeglossaries`.

Example 3.

Spot what’s wrong with the following document:

```
\documentclass{article}

\usepackage{glossaries}

\makeglossaries

\newglossaryentry{sample}{name={sample},
description={an example}}

\begin{document}
A \gls{sample} document.

\printglossary[type=acronym]

\end{document}
```

If you use the normal method of \LaTeX , `makeglossaries`, \LaTeX , you won’t get any error messages, but the glossary won’t be displayed. Why not? If we switch from

```
\usepackage{glossaries}
```

to

```
\usepackage{glossaries-extra}
```

then we do finally get an error:

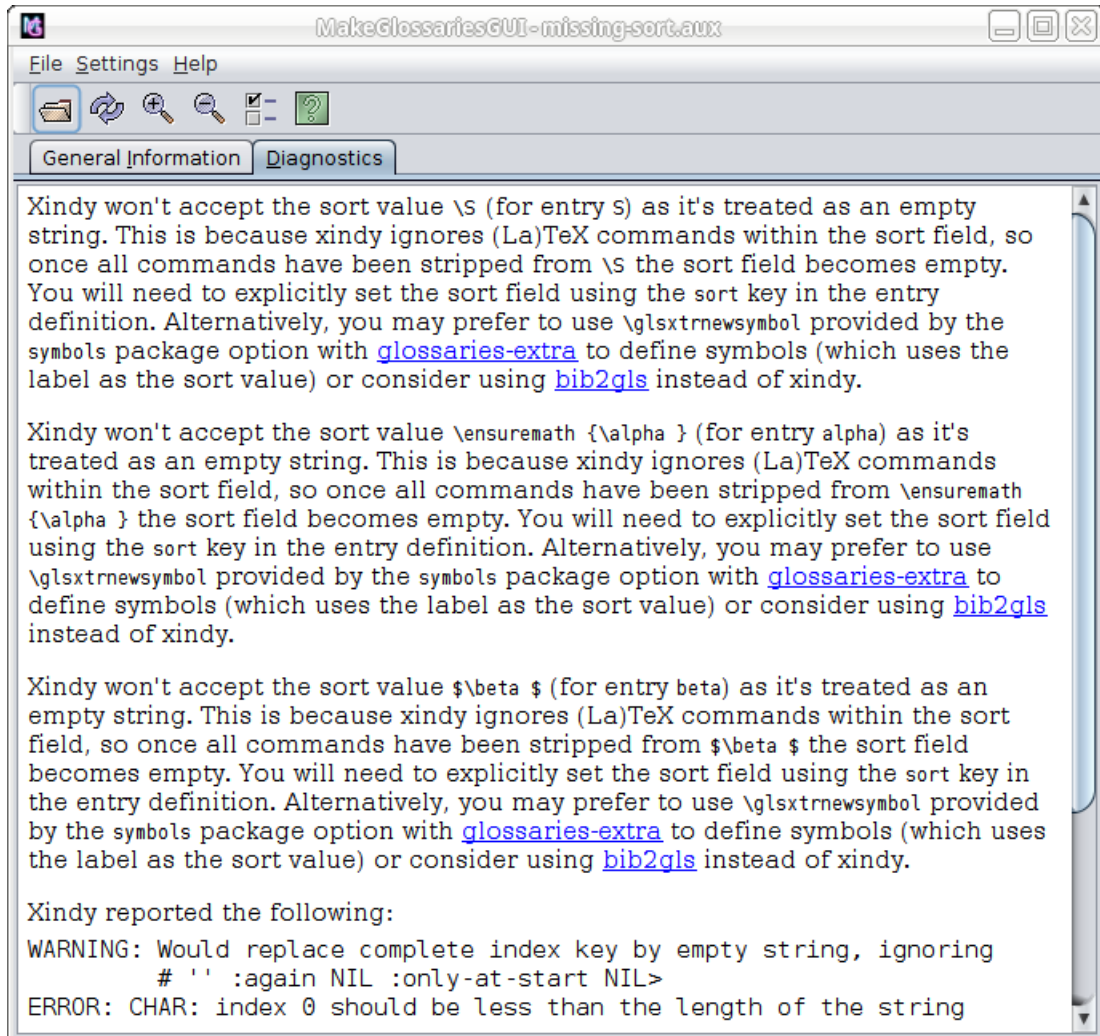


Figure 2.4: Diagnostics Panel

The screenshot shows a window titled "Glossary 'main'". At the top left is a small icon, and at the top right is a close button. Below the title bar is a search field labeled "Tag:" with a magnifying glass icon to its right. Below the search field is a table with three columns: "Entry Tag", "Sort", and "Occurrences".

Entry Tag	Sort	Occurrences
S	\S	1
beta	β	1
alpha	α	1

Figure 2.5: Entry Details (Problematic Entries)

! Package glossaries-extra Error: Glossary type 'acronym' doesn't exist.

The `glossaries-extra` package is stricter than the base `glossaries` package. The problem here is that I've used `type=acronym`, but there's no glossary with that label. (I haven't used the `acronym` option.) If you're not using the extension package, this is harder to pick up, but `MakeGlossariesGUI` will notify you of the problem. This example document will trigger the error

No glossary 'acronym'.

and the diagnostics panel will show the message:

It looks as though you might have done something like
`\printglossary[type={acronym}]`, but there's no acronym glossary.

If you switch to the **General Information** panel, the labels for the glossaries defined in the document are listed next to "Defined Glossaries:" so you can check the indicated type against it. In this example, the list has only the single label "main".

Remember that you not only have to define your entries, but you also have to index them if you want them to appear in the glossary. The `glossaries` package provides many commands that index entries, the most commonly used one being `\gls`, which displays the text associated with the entry, indexes the entry, marks it as having been used and (if the `hyperref` package has been loaded) also creates a link to the definition in the glossary. Other commands provide variations, such as displaying different text or not changing the "first use flag". In particular, the `\glsadd` command only indexes the entry without displaying any text.

Example 4.

In the sample document below, I've defined an entry but it hasn't been indexed anywhere in the document.

```
\documentclass{article}

\usepackage{glossaries}

\makeglossaries

\newglossaryentry{sample}{name={sample},
  description={an example}}

\begin{document}
A sample document.

\printglossaries

\end{document}
```

My first step, as usual, is to run L^AT_EX on this document, which will create the .aux file. Now if I try loading this file into MakeGlossariesGUI I get the error message:

No entries were found for glossary 'main'.

The diagnostics panel shows the following message:

There were no entries listed for the main glossary. Remember that you must index entries for them to appear in the glossary using the commands provided by the glossaries package. Entries that have been defined but not indexed won't be listed. If you don't want to use this glossary, add the `nomain` package option to your document. Check the following:

- Have you used commands like `\gls` or `\glsadd` in the document? (If you haven't, you need to add them.)
- If you have used commands like `\glsadd` or `\glsaddall` in the preamble, have you remembered to put them *after* `\makeglossaries`
- If you have at least version 4.24 of the glossaries package, have you used the debug option? (That might provide some more information for me to analyse.)

(The sentence referencing `nomain` only appears if there are no entries for the main glossary, but not for any other glossaries.)

Remember that if you use `\makenoidxglossaries`, you don't need `makeindex` or `xindy`.

Example 5.

Consider the following document:

```
\documentclass{article}

\usepackage{glossaries}

\makenoidxglossaries

\newglossaryentry{sample}{name={sample},
  description={an example}}

\begin{document}
A \gls{sample} document.

\printnoidxglossaries

\end{document}
```

If I load the .aux file for this document into MakeGlossariesGUI, I get the following message in the diagnostics panel:

```
It seems you've used \makenoidxglossaries, which means you don't need
xindy or makeindex, you just need a second LaTeX run to get the glossary up
to date.
```

Note that MakeGlossariesGUI can still provide some limited diagnostics even when `\makenoidxglossaries` has been used. To illustrate this, if we modify the above sample document slightly, introducing an error:

```
\documentclass{article}

\usepackage{glossaries}

\makenoidxglossaries

\newglossaryentry{sample}{name={sample},
description={an example}}

\begin{document}
A \gls{sample} document.

\printnoidxglossary[type=acronym]

\end{document}
```

This provides some additional information in the diagnostics panel:

```
Package glossaries Warning: Empty glossary for
\printnoidxglossary[type={acronym}] Rerun may be required (or you
may have forgotten to use commands like \gls) on input line 13.

It looks as though you might have done something like
\printnoidxglossary[type={acronym}], but there's no acronym glossary.
```

So MakeGlossariesGUI picks up the error.

Note that MakeGlossariesGUI also looks for warnings from the `glossaries` package, so if you are encountering any problems, make sure you haven't suppressed the warnings with the `nowarn` package option.

Example 6.

In this example I've omitted `\printglossary` from the document:

```

\documentclass{article}

\usepackage{glossaries}

\makeglossaries

\newglossaryentry{sample}{name={sample},
description={an example}}

\begin{document}
A \gls{sample} document.

\end{document}

```

This doesn't cause any problems for `makeindex` as all the associated files have been created correctly. The document simply doesn't load the file generated by `makeindex` as there's no `\printglossary` (or `\printglossaries`). However the `glossaries` package does generate a warning, and this warning is picked up by `MakeGlossariesGUI` and displayed in the diagnostics panel:

```

Package glossaries Warning: No \printglossary or \printglossaries
found. (Remove \makeglossaries if you don't want any glossaries.) This
document will not have a glossary.

```

If you suppress these warnings then `MakeGlossariesGUI` can't help.

Sometimes things can go so badly wrong that `LATEX` doesn't even generate an auxiliary file. In this case you can load the `.log` file instead. (You'll need to change the file selector filter to show all files.) `MakeGlossariesGUI` will parse the log file to see if it recognises any of the error messages. Some `LATEX` error messages can be quite cryptic so there's no guarantee that `MakeGlossariesGUI` will be able to help, but it might detect something useful. Note that this option is only available in `GUI` mode.

Example 7.

Consider the following document:

```

\batchmode
\documentclass{beamer}

\usepackage{glossaries}

\makeglossaries

\newglossaryentry{sample}{name=sample,first={\textit{sample}},
description={an example}}

```



```

\begin{document}

\begin{frame}
\gls{sample}
\end{frame}

\begin{frame}
\printglossary
\end{frame}

\end{document}

```

This document goes badly wrong. The first error message is:

```

! Undefined control sequence.
\in@ #1#2->\begingroup \def \in@@

```

If I load the log file into MakeGlossariesGUI, the diagnostic panel displays the following:

Since the aux file doesn't exist, there's not much I can do to help, but I'll parse the log file in case there are any clues there.

It's possible that there's an expansion issue involving a fragile command. Things to check for:

- Have you used a class like `beamer` that doesn't make common formatting commands like `\textit` robust?
- Have you tried using `\protect` in front of fragile commands contained within your entry definitions?
- Have you tried switching off the expansion using commands like `\glsnoexpandfields`? (See section 4.6 Expansion in the `glossaries` user manual.)

The problem here is that a fragile command has been used in the entry definition. The problematic command in this example is `\textit`, which is normally robust, but it happens to be fragile with the `beamer` class. The solution is to either protect the problematic command with `\protect` or use `\glsnoexpandfields` before you define the entries. For example:

```

\documentclass{beamer}

\usepackage{glossaries}

\makeglossaries

```

```

\glsnoexpandfields

\newglossaryentry{sample}{name=sample,first={\textit{sample}},
  description={an example}}

\begin{document}

\begin{frame}
\gls{sample}
\end{frame}

\begin{frame}
\printglossary
\end{frame}

\end{document}

```

The main panel shows the character encoding that MakeGlossariesGUI believes is being used by the indexing application and, if detected, the document input encoding. Since `makeindex` only supports characters in the range 1 to 255, MakeGlossariesGUI assumes ISO-8859-1 (Latin-1) for `makeindex` and will add an advisory note if the document class uses a different encoding.

Example 8.

Consider the following example:

```

\documentclass{article}

\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}

\usepackage[style=indexgroup]{glossaries}

\makeglossaries

\newglossaryentry{elite}{name={\acute{e}lite},description={select group}}

\begin{document}
\gls{elite}

\printglossary
\end{document}

```

This document is saved as UTF-8 and has a term where the sort value starts with

an extended character. This doesn't work as `makeindex` treats the UTF-8 letter as two separate characters from the two octets. This not only affects the sorting but also causes a problem for the `indexgroup` style.

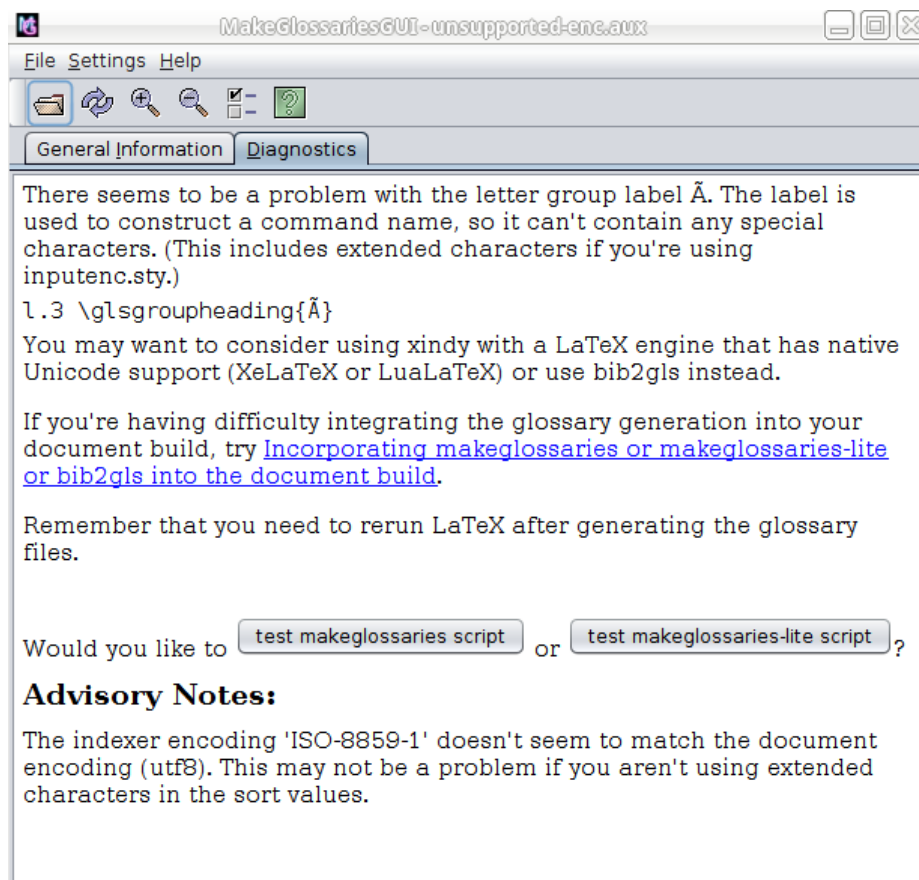


Figure 2.6: Encoding Problems (Diagnostics Panel)

The first message in the diagnostics panel (see [Figure 2.6](#)) is only picked up after you rerun `LaTeX` and reload the file in `MakeGlossariesGUI`, as it's only after the glossary file has been created by `makeindex` that the `LaTeX` call fails. The failure is caused by the first octet appearing in the argument of `\glsgroupheading`. This causes two problems: the argument of this command is a label so special or active characters will break it, and the `inputenc` package makes the first octet active, requiring the second octet as the argument. The message reads:

There seems to be a problem with the letter group label `Ã`. The label is used to construct a command name, so it can't contain any special characters. (This includes extended characters if you're using `inputenc.sty`.)

```
1.3 \glsgroupheading{Ã}
```

You may want to consider using xindy with a LaTeX engine that has native Unicode support (XeLaTeX or LuaLaTeX) or use bib2gls instead.

This message doesn't show up when you first attempt to create the glossary files with MakeGlossariesGUI. However, there's advisory message than points to a problem:

The indexer encoding 'ISO-8859-1' doesn't seem to match the document encoding (utf8). This may not be a problem if you aren't using extended characters in the sort values.

In this case it is a problem. The two different encodings are also shown in [Figure 2.6](#). The indexer encoding is listed as ISO-8859-1, and the document encoding is listed as utf8.

The problem shows up more clearly in the "Details" window (see [Figure 2.8](#)), which uses the indexer's encoding and so displays the sort value as Ã©lite instead of élite.

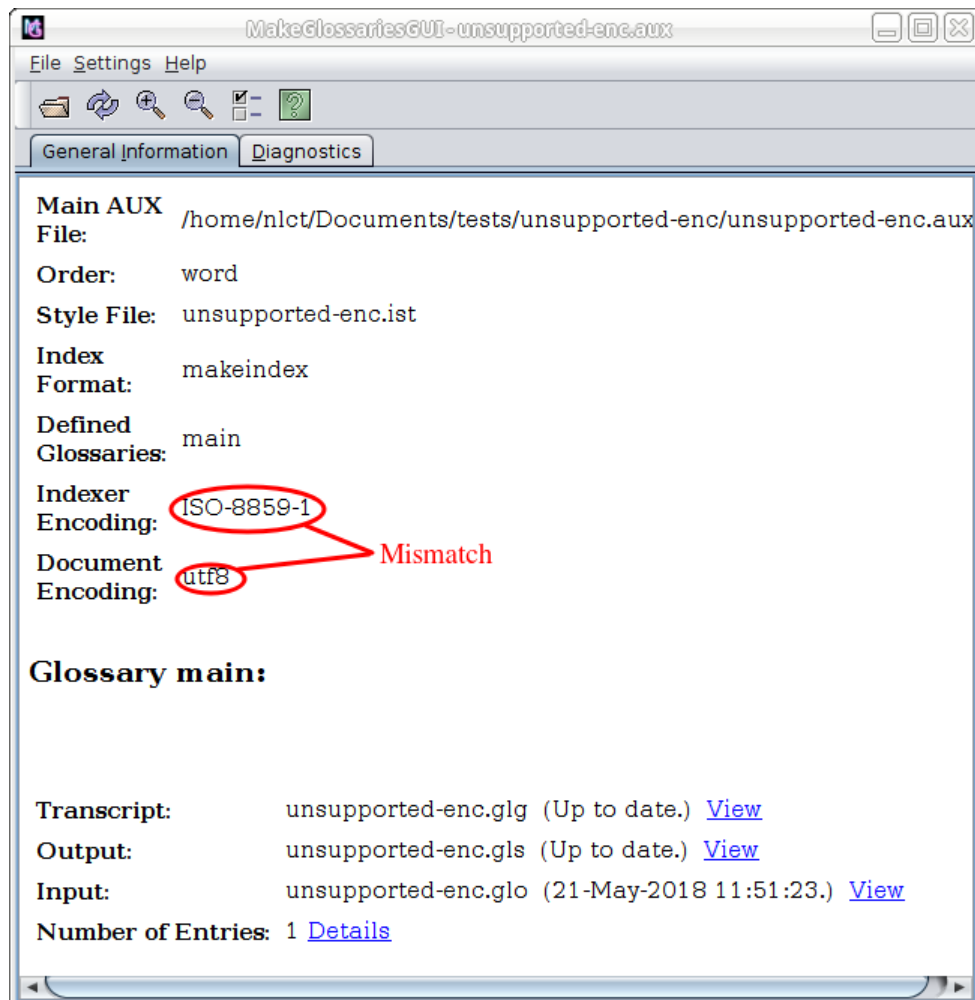


Figure 2.7: Encoding Problems (General Information Panel)

The image shows a window titled "Glossary 'main'". At the top, there is a search bar labeled "Tag:" with a magnifying glass icon to its right. Below the search bar is a table with three columns: "Entry Tag", "Sort", and "Occurrences". The table contains one row with the following data:

Entry Tag	Sort	Occurrences
elite	Ä@lite	1

The rest of the window area is a large, empty grey rectangle.

Figure 2.8: Encoding Problems (Details Window)

3 Settings

The application settings can be adjusted through the Settings menu. This has menu items for increasing or decreasing the font size (Settings→Increase Font Size or Settings→Decrease Font Size), setting the dry run mode (Settings→Dry Run Mode) or open the **Preferences** dialog window (Settings→Edit Properties). Note that the dry run mode is the only setting that isn't remembered the next time you run MakeGlossariesGUI.

The **Preferences** dialog has four tabs: **Start Up Directory**, **Diagnostics**, **Applications** and **GUI**.

3.1 Start Up Directory

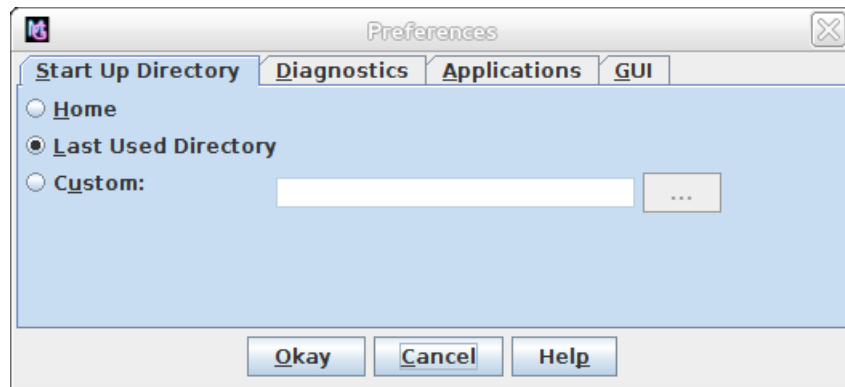


Figure 3.1: Properties Dialog (Start Up Directory)

The **Start Up Directory** (Figure 3.1) tab allows you to select the directory to use on start up. This is the directory the file chooser will be set to initially.

3.2 Diagnostic Settings

MakeGlossariesGUI will try to determine if you have defined any entries within the document environment. Although the glossaries package allows document definitions, the manual encourages defining entries in the preamble, see section 4.10 of the glossaries user manual (“Drawbacks With Defining Entries in the Document Environment”). If you want to skip this check, deselect the **Check for document definitions** check box.

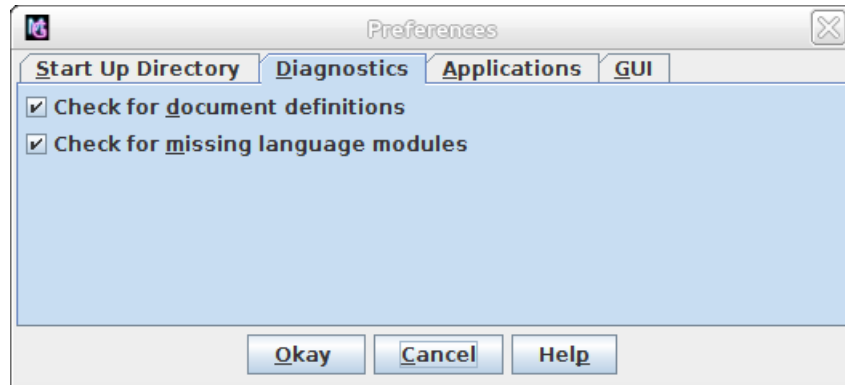


Figure 3.2: Properties Dialog (Diagnostics)

There's also a check to see if the `glossaries` package has complained about missing language modules. Not all languages are supported and, for those languages that are supported, the appropriate module must be installed in addition to installing the `glossaries` package. If the required language support is missing, the glossary files can still be built, you'll just have to manually change the fixed text for the title following the instructions in section 1.3 ("Multi-Lingual Support") of the `glossaries` user manual. If you want to skip this check, deselect the **Check for missing language modules** check box.

3.3 Indexing Applications

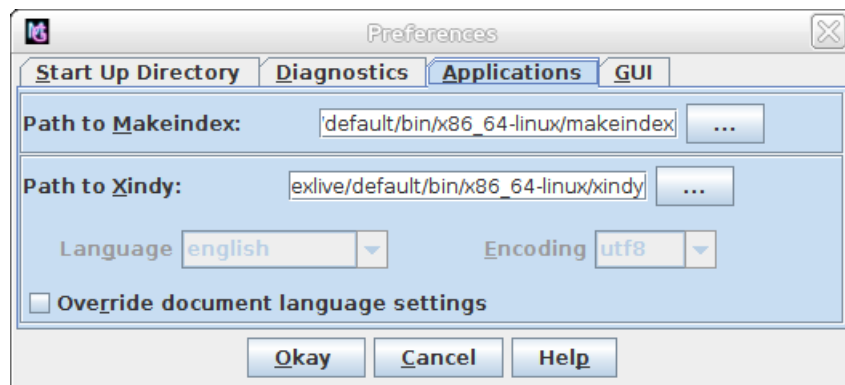


Figure 3.3: Properties Dialog (Applications)

The **Applications** tab lists the paths to `makeindex` and `xindy`. `MakeGlossariesGUI` will attempt to locate them on your system's path, but if they can't be detected, you'll need

to specify the correct location. You can omit the location for an unrequired application.

MakeGlossariesGUI will try to determine the language and input encoding from the `.aux` file to pass to `xindy`, but you can override this if you want to. Make sure that the **Override document language settings** check box is selected, and change the language and encoding as appropriate. Note that the batch mode will also use these settings, although they can only be adjusted in the **GUI** mode.

3.4 GUI Preferences

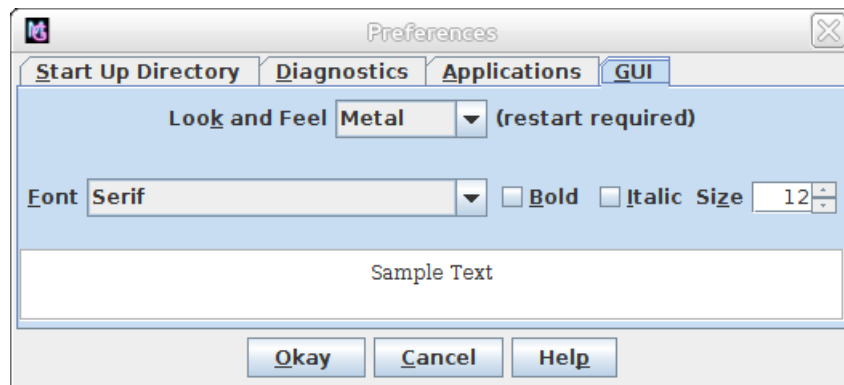


Figure 3.4: GUI Preferences (Metal Look and Feel)

The font used in the **General Information** and **Diagnostics** panels can be set in the **GUI** tab. In addition to adjusting the font size through the **Settings**→**Increase Font Size** or **Settings**→**Decrease Font Size** menu items, you can also set the required font size in this tab.

The **Look and Feel** can be set by selecting the required option in the **Look and Feel** drop-down menu. Note that a restart is required as the Look and Feel is set on start up. The title bar appearance is governed by your usual operating system preference. The Look and Feel changes the way the window elements are displayed. **Figure 3.4** shows the “Metal” Look and Feel. **Figure 3.5** shows the “Nimbus” Look and Feel. **Figure 3.6** shows the “CDE/Motif” Look and Feel. **Figure 3.7** shows the “GTK+” Look and Feel. You may not have all these options on your system or you may have additional options, depending on your Java installation.

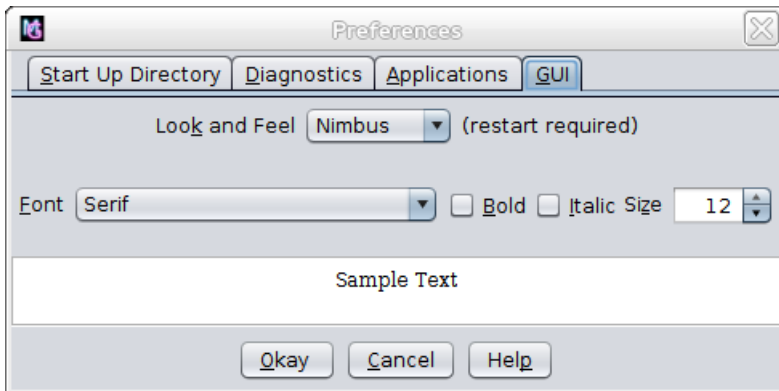


Figure 3.5: GUI Preferences (Nimbus Look and Feel)

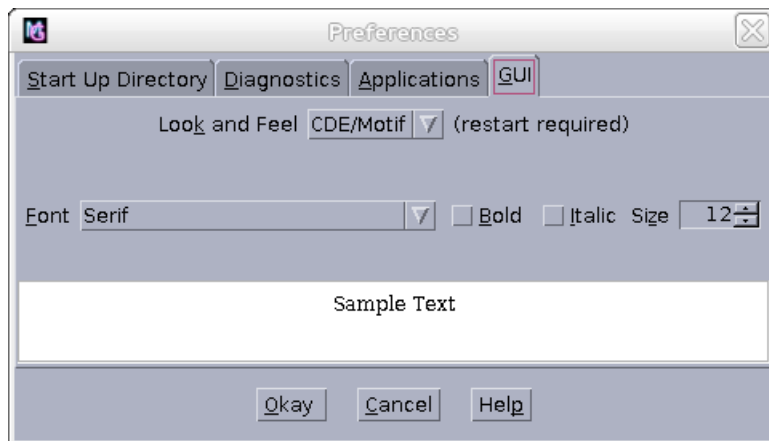


Figure 3.6: GUI Preferences (CDE/Motif Look and Feel)

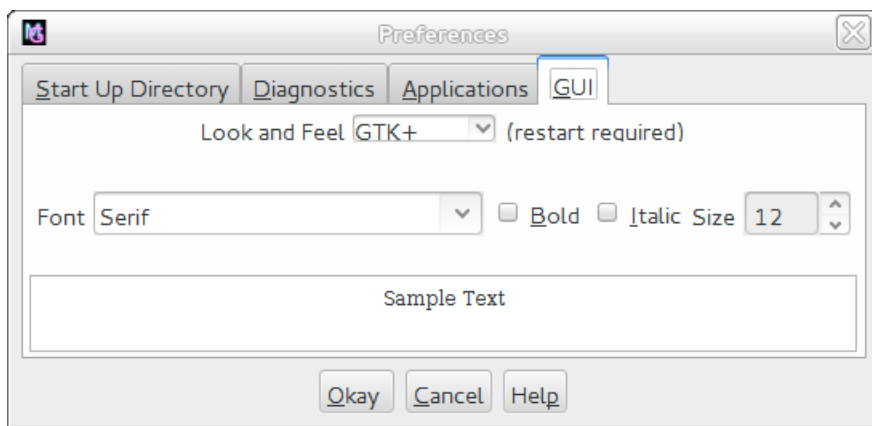


Figure 3.7: GUI Preferences (GTK+ Look and Feel)

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Glossary

bib2gls an indexing application designed specifically for use with glossaries-extra.sty. [3](#)

GUI graphical user interface. [3–5](#), [10](#), [16](#), [25](#)

Look and Feel the appearance (look) of Java applications and how the widgets behave (feel). [25](#)

makeglossaries a Perl script provided with the glossaries package which runs either makeindex or xindy, depending on the settings in the .aux file. [3](#), [4](#), [8](#), [10](#)

makeglossaries-lite.lua a Lua script provided with the glossaries package as a light-weight alternative to makeglossaries (the .lua extension may be omitted or replaced with .exe, according to the TeX distribution). [3](#), [8](#)

makeindex an indexing application. [3–5](#), [14](#), [16](#), [18](#), [19](#), [24](#)

xindy an indexing application written in Perl. [3](#), [4](#), [9](#), [10](#), [14](#), [24](#), [25](#)

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