

# Babel support for the German language (post-1996 orthography)

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v2.14 (2024/01/19)

## Abstract

This manual documents babel language support for German (post-1996 orthography), including support for the Austrian and Swiss (standard) varieties of German. The manual is part of the babel-german bundle.

## 1 Aim and usage

The babel ‘language definition file’ `ngermanb.ldf` documented in this manual provides the babel package with all language specific strings, settings and commands needed for writing German texts, including texts in the Austrian and Swiss (standard) varieties of German.<sup>1</sup> Furthermore, it is assured that the correct hyphenation patterns for the respective language or variety are used (see sec. 3 for details). The file, and hence this manual, addresses the contemporary (‘reformed’, i. e., post-1996) orthography. For traditional (pre-1996) German orthography support, please refer to the complementary [manual for the `germanb.ldf` language definition file](#).

In order to use the language definitions provided here, you need to use the babel package and pass the respective language/variety name<sup>2</sup> as an option, either of

- `\usepackage[ngerman]{babel}`
- `\usepackage[naustrian]{babel}`
- New feature in v. 2.14!      • `\usepackage[ngerman.capsz]{babel}`<sup>3</sup>
- `\usepackage[naustrian.capsz]{babel}`
- `\usepackage[nswissgerman]{babel}`
- New feature in v. 2.10!      • `\usepackage[nswissgerman.toss]{babel}`<sup>4</sup>

Using multiple varieties in parallel is possible; consult the babel manual [2] for details.

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\*Current maintainer. Please report issues via <https://github.com/jspitz/babel-german>.

<sup>1</sup>The file `ngermanb.ldf` started as a re-implementation of the package `ngerman.sty` by Bernd Raichle (cf. [6]), which itself builds on `german.sty`, originally developed by Hubert Partl (cf. [4]) and later maintained by Bernd Raichle as well. The initial re-implementation was done by Johannes Braams.

<sup>2</sup>Obviously, the prefix (n) in the language/variety names stands for ‘new’ (orthography) here, since the names `austrian`, `german` and `swissgerman` were already used for pre-1996 orthography.

<sup>3</sup>See sec. 4.1 on the `capsz` modifier.

<sup>4</sup>See sec. 4.2 on the `toss` modifier.

## 2 Shorthands

For all three varieties of German, the character " is made active in order to provide some shorthand macros for frequently used special characters as well as for better control of hyphenation, line breaks and ligatures. Table 1 provides an overview of the shorthands that are provided by babel-german for ngerman, naustrian and nswissgerman.

Table 1: The extra definitions made by ngermanb.ldf

	"a	Umlaut ⟨ä⟩ (shorthand for \a). Similar shorthands are available for all other lower- and uppercase vowels (umlauts: "a, "o, "u, "A, "O, "U; tremata: "e, "i, "E, "I).
	"s	German ⟨ß⟩ (shorthand for \ss{}); but cf. sec. 4.2.
	"z	German ⟨ß⟩ (shorthand for \ss{}). Differs to "s in uppercase version; but cf. sec. 4.2.
	"S	\uppercase{"s}, typeset as ⟨SS⟩ (⟨ß⟩ is traditionally written as ⟨SS⟩ in uppercase writing, but cf. sec. 4.1 if you prefer a capital eszett).
	"Z	\uppercase{"z}, typeset as ⟨SZ⟩. In traditional spelling, ⟨ß⟩ could also be written as ⟨SZ⟩ instead of ⟨SS⟩ in uppercase writing. Note that, with reformed orthography, the ⟨SZ⟩ variant has been deprecated in favour of ⟨SS⟩ only.
	"	Disable ligature at this position (e. g., at morpheme boundaries, as in Auf"   lage).
	"-	An additional breakpoint that does still allow for hyphenation at the breakpoints preset in the hyphenation patterns (as opposed to \-).
	"=	An explicit hyphen with a breakpoint, allowing for hyphenation at the other points preset in the hyphenation patterns (as opposed to plain -); useful for long compounds such as IT"Dienstleisterinnen.
	"~	An explicit hyphen without a breakpoint. Useful for cases where the hyphen should stick at the following syllable, e. g., bergauf und "~ab.
	""	A breakpoint that does not output a hyphen if the line break is performed (consider parenthetical extensions as in (pseudo"~)"wissenschaftlich).
New feature in v. 2.9!	"/	A slash that allows for a linebreak. As opposed to \slash{}, hyphenation at the breakpoints preset in the hyphenation patterns is still allowed.
New feature in v. 2.14!	"*	An asterisk which assures the word can still be hyphenated at its defined breakpoints. Useful if you want to employ gender-sensitive writing (gender star). Similar shorthands are available for the alternative gender-sensitive spellings, "ː and "...
New feature in v. 2.14!	"x	Inserts a gender mark which assures the word can still be hyphenated at its defined breakpoints. This is predefined to * but can be globally redefined by redefining the macro \def\mkngender{*}
	"‘	German left double quotes ⟨„⟩.
	"’	German right double quotes ⟨”⟩.
	"<	French/Swiss left double quotes ⟨«⟩.
	">	French/Swiss right double quotes ⟨»⟩.

Table 2 lists some babel macros for quotation marks that might be used as an alternative to the quotation mark shorthands listed above.

## 3 Hyphenation patterns

The question which hyphenation patterns are used by Babel in case of the varieties of German needs some elaboration. There is a set of established hyphenation patterns for pre- and post-1996 German orthography that has been available with T<sub>E</sub>X distributions for a long time (currently, these are shipped in form of the dehyphn and dehyphn files). These patterns, though, have many flaws (they produce wrong hyphenations, and not much is known about their construction). Therefore, a group of people developed com-

Table 2: Alternative commands for quotation marks (provided by babel)

<code>\glqq</code>	German left double quotes <code>«</code> .
<code>\grqq</code>	German right double quotes <code>»</code> .
<code>\glq</code>	German left single quotes <code>‚</code> .
<code>\grq</code>	German right single quotes <code>‘</code> .
<code>\flqq</code>	French/Swiss left double quotes <code>«</code> .
<code>\frqq</code>	French/Swiss right double quotes <code>»</code> .
<code>\flq</code>	French/Swiss left single quotes <code>‹</code> .
<code>\frq</code>	French/Swiss right single quotes <code>›</code> .
<code>\dq</code>	The straight quotation mark character <code>"</code> .

pletely new patterns that do much better, the so-called ‘experimental’ new hyphenation patterns of German, distributed in the `dehyph-exptl` package [3]. As opposed to the old patterns, the new ones undergo constant improvement. The price for this, however, is that hyphenation and thus the typeset document is subject to change with, and only due to, pattern updates.

Modern engines (i. e., `xetex` and `luatex`) have already embraced those new patterns, i. e., they are activated on these engines by default. The classic  $\text{\TeX}$  engines (`tex/pdftex`), however, haven’t: they continue to use the old patterns. The reason for this is one of  $\text{\TeX}$ ’s quality standards: refrain, if ever possible, from changing the output of user’s documents in the wake of software updates.

This means that you need to explicitly activate the new patterns for a given document with the classic engines, should you want to use them instead of the old ones. With Babel, this can be done easily by means of the `\babelprovide` command and the `hyphenrules` option:

```
\babelprovide[hyphenrules=ngerman-x-latest]{ngerman}
```

For `naustrian` and `nswissgerman`, use a respectively adapted version of the above.

## 4 Variety-specific options

### 4.1 Capital eszett letter

New feature in v. 2.14! In 2008, a capital variant of the letter `ß` has been included to the Unicode standard (U+1E9E), and in 2017, the capital eszett letter has been acknowledged in German orthography as a valid alternative to `SS` in uppercase writing of `ß`. The letter differs from its miniscule counterpart in that it is usually more wide to match the form of uppercase letters.

If you want to use this letter, you can do so by using the Babel modifier `capss`, which is supported for the `ngerman` and `naustrian` varieties. I. e., pass `ngerman.capss` or `naustrian.capss` (rather than `ngerman` or `naustrian`) as babel option. As the eszett letter is not common in Swiss German writing in general, the option is not supported there. Similarly, the pre-1996 varieties do not support the letter either.

The modifier causes both `\MakeUppercase` and the `"S` shorthand to use the capital eszett letter. Note that this requires a font which actually contains the glyph (otherwise, you still get `SS`) and  $\text{\TeX}$  kernel 2023/06 at least.

## 4.2 Handling of "s and "z in Swiss German

New feature in v. 2.10! In Swiss (and Liechtensteinian) German writing, the use of ⟨ß⟩ is rather uncommon. Swiss writers would normally use ⟨ss⟩ where German or Austrian writers use the ⟨ß⟩ character (e. g., *Buße* vs. *Busse*). When texts (or names) from other German speaking areas are quoted, however, the spelling and hence the ⟨ß⟩ is often maintained (particularly in scholarly writing where the spelling of quoted text is not supposed to be touched).

We assume that (1) Swiss writers normally input ⟨ss⟩ directly when they mean ⟨ss⟩, and that (2) the ⟨ß⟩-related shorthands "s and "z are useful also for Swiss writers when they actually need ⟨ß⟩, the more so since the ⟨ß⟩ is not as directly accessible on Swiss keyboards as it is on German and Austrian ones. On the other hand, there might be occasions where writers want to transfer a text from German or Austrian into Swiss Standard German and adapt the spelling on the fly, i. e., transform all ⟨ß⟩ into ⟨ss⟩.

For this special case, we provide an option to make the ⟨ß⟩-related shorthands "s and "z expand to the respective digraphs<sup>5</sup>, ⟨ss⟩ and ⟨sz⟩, rather than to ⟨ß⟩. This is not the default behavior with `nswissgerman` since, as mentioned, there are situations when the ⟨ß⟩ is (and has to be) used in Swiss writing, and normally, no shorthand is needed to input (or output) two simple ⟨s⟩ characters. You can opt-in (and out) digraphical expansion of "s and "z on a global and local level:

- To globally switch on the digraphical expansion, use the Babel modifier `toss` (read: 'to ⟨ss⟩') with `nswissgerman`. I. e., pass `nswissgerman.toss` (rather than `nswissgerman`) as babel option.
- To switch on the digraphical expansion only locally, you can use the boolean switch `\ntosstrue`. Likewise, `\ntossfalse` switches off (both locally and globally set) digraphical expansion.

Both these changes result in the following deviant behavior of two shorthands:

"s Expands to digraph ⟨ss⟩  
 "z Expands to digraph ⟨sz⟩

## 5 Implementation

### 5.1 General settings

If `ngermanb.ldf` is read via the deprecated babel option `ngermanb`, we make it behave as if `ngerman` was specified.

```
1 \def\tmpa{ngermanb}
2 \ifx\CurrentOption\tmpa
3   \def\CurrentOption{ngerman}
4 \fi
```

The macro `\LdfInit` takes care of preventing that this file is loaded more than once with the same option, checking the category code of the @ sign, etc.

```
5 \LdfInit\CurrentOption{captions\CurrentOption}
```

We define some helper macros that help us to identify later on which variety of German we are currently dealing with.

```
6 \def\bbl@opt@ngerman{ngerman}
```

---

<sup>5</sup>In graphematics, the term *digraph* denotes two characters that make a functional pair (which means, depending on the theoretical assumptions: they represent a single sound or they are semantically distinctive).

```

7 \def\bbl@opt@ngermanb{ngermanb}
8 \def\bbl@opt@naustrian{naustrian}
9 \def\bbl@opt@nswissgerman{nswissgerman}

```

If `ngermanb. ldf` is read as an option, i.e., by the `\usepackage` command, `ngerman` could be an ‘unknown’ language, so we have to make it known. We check for the existence of `\l@ngerman` and issue a warning if it is unknown.

```

10 \ifx\l@ngerman\undefined
11   \nopatterns{German (new orthography)}
12   \adddialect\l@ngerman0
13 \fi

```

We set `naustrian` and `nswissgerman` as dialects of `ngerman`, since they use the same hyphenation patterns than `ngerman`. If no `ngerman` patterns are found, we issue a warning.

```

14 \ifx\CurrentOption\bbl@opt@naustrian
15   \ifx\l@ngerman\undefined
16     \nopatterns{German (new orthography), needed by Austrian (new orthography)}
17     \adddialect\l@naustrian0
18   \else
19     \adddialect\l@naustrian\l@ngerman
20   \fi
21 \fi
22 \ifx\CurrentOption\bbl@opt@nswissgerman
23   \ifx\l@ngerman\undefined
24     \nopatterns{German (new orthography), needed by Swiss Standard German (new orthography)}
25     \adddialect\l@nswissgerman0
26   \else
27     \adddialect\l@nswissgerman\l@ngerman
28   \fi
29 \fi

```

## 5.2 Language-specific strings (captions)

The next step consists of defining macros that provide language specific strings and settings.

`\@captionsngerman` The macro `\@captionsngerman` defines all strings used in the four standard document classes provided with  $\text{\LaTeX}$  for German. This is an internal macro that is inherited and modified by the following macros for the respective language varieties.

```

30 \@namedef{@captionsngerman}{%
31   \def\prefacename{Vorwort}%
32   \def\refname{Literatur}%
33   \def\abstractname{Zusammenfassung}%
34   \def\bibname{Literaturverzeichnis}%
35   \def\chaptername{Kapitel}%
36   \def\appendixname{Anhang}%
37   \def\contentsname{Inhaltsverzeichnis}%
38   \def\listfigurename{Abbildungsverzeichnis}%
39   \def\listtablename{Tabellenverzeichnis}%
40   \def\indexname{Index}%
41   \def\figurename{Abbildung}%
42   \def\tablename{Tabelle}%

```

```

43 \def\partname{Teil}%
44 \def\enclname{Anlage(n)}%
45 \def\ccname{Verteiler}%
46 \def\headtoname{An}%
47 \def\pagename{Seite}%
48 \def\seename{siehe}%
49 \def\alsoname{siehe auch}%
50 \def\proofname{Beweis}%
51 \def\glossaryname{Glossar}%
52 }

```

`\captionsngerman` The macro `\captionsngerman` is identical to `\@captionsngerman`, but only defined if `ngerman` is requested.

```

53 \ifx\CurrentOption\bbl@opt@ngerman
54   \@namedef{captionsngerman}{%
55     \nameuse{@captionsngerman}%
56   }
57 \fi

```

`\captionsnaustrian` The macro `\captionsnaustrian` builds on `\@captionsngerman`, but redefines some strings following Austrian conventions (for the respective variants, cf. [1]). It is only defined if `naustrian` is requested.

```

58 \ifx\CurrentOption\bbl@opt@naustrian
59   \@namedef{captionsnaustrian}{%
60     \nameuse{@captionsngerman}%
61     \def\enclname{Beilage(n)}%
62   }
63 \fi

```

`\captionsnswissgerman` The macro `\captionsnswissgerman` builds on `\@captionsngerman`, but redefines some strings following Swiss conventions (for the respective variants, cf. [1]). It is only defined if `nswissgerman` is requested.

```

64 \ifx\CurrentOption\bbl@opt@nswissgerman
65   \@namedef{captionsnswissgerman}{%
66     \nameuse{@captionsngerman}%
67     \def\enclname{Beilage(n)}%
68   }
69 \fi

```

### 5.3 Date localizations

`\month@ngerman` The macro `\month@ngerman` defines German month names for all varieties.

```

70 \def\month@ngerman{\ifcase\month\or
71   Januar\or Februar\or M\arz\or April\or Mai\or Juni\or
72   Juli\or August\or September\or Oktober\or November\or Dezember\fi}

```

`\datengerman` The macro `\datengerman` redefines the command `\today` to produce German dates. It is only defined if `ngerman` is requested.

```

73 \ifx\CurrentOption\bbl@opt@ngerman
74   \def\datengerman{\def\today{\number\day.\~\month@ngerman
75     \space\number\year}}
76 \fi

```

`\datenswissgerman` The macro `\datenswissgerman` does the same for Swiss Standard German dates. The result is identical to German. This macro is only defined if `nswissgerman` is requested.

```
77 \ifx\CurrentOption\bbl@opt@nswissgerman
78   \def\datenswissgerman{\def\today{\number\day.\- \month@ngerman
79     \space\number\year}}
80 \fi
```

`\datenaustrian` The macro `\datenaustrian` redefines the command `\today` to produce Austrian versions of the German dates. Here, the naming of January („Jänner“) differs from the other German varieties. The macro is only defined if `naustrian` is requested.

```
81 \ifx\CurrentOption\bbl@opt@naustrian
82   \def\datenaustrian{\def\today{\number\day.\- \ifnum1=\month
83     J\"anner\else \month@ngerman\fi \space\number\year}}
84 \fi
```

## 5.4 Extras

`\extrasnaustrian` The macros `\extrasngerman`, `\extrasnaustrian` and `\extrasnswissgerman`, respectively, will perform all the extra definitions needed for the German language or the respective variety. The macro `\noextrasngerman` is used to cancel the actions of `\extrasngerman`. `\noextrasnaustrian` and `\noextrasnswissgerman` behave analogously.

`\noextrasnswissgerman` First, the character " is declared active for all German varieties. This is done once, later on its definition may vary.

`\noextrasngerman`

```
85 \initiate@active@char{"}
```

Depending on the option with which the language definition file has been loaded, the macro `\extrasngerman`, `\extrasnaustrian` or `\extrasnswissgerman` is defined. Each of those is identical: they load the shorthands defined below and activate the " character.

```
86 \@namedef{extras\CurrentOption}{%
87   \languageshorthands{ngerman}%
88 }
89 \expandafter\addto\csname extras\CurrentOption\endcsname{%
90   \bbl@activate{"}}
```

`toss` For Swiss Standard German, we allow optionally to expand the ⟨ß⟩-related shorthands the Swiss way, i. e. as ⟨ss⟩ (globally, if the modifier `toss` is used or locally if `\ntosstrue`).

```
\ntossfalse 91 \newif\iftoss\ntossfalse
92 \newif\ifbbl@ntoss\bbl@ntossfalse
93 \ifx\bbl@mod@nswissgerman\undefined\else
94   \@expandtwoargs\in@{,toss,}{, \bbl@mod@nswissgerman,}
95   \ifin@
96     \ntosstrue
97   \fi
98   \addto\extrasnswissgerman{%
99     \iftoss\bbl@ntosstrue\else\bbl@ntossfalse\fi}
100 \fi
```

`capsz` For German and Austrian Standard German, we allow optionally to uppercase ⟨ß⟩ with the capital eszett letter rather as ⟨SS⟩ if the font provides the glyph (if the modifier `capsz` is used).

```
101 \newif\ifcapsz\capszfalse
102 \newif\ifbbl@capsz\bbl@capszfalse
```

```

103 \ifx\bbl@mod@ngerman\undefined\else
104   \expandtwoargs\in@{, capsz, }{, \bbl@mod@ngerman, }
105   \ifin@
106     \capsztrue
107   \fi
108   \addto\extrasngerman{%
109     \ifcapsz\bbl@capsztrue\bbl@csarg\xdef{casing@ngerman}{de-x-eszett}%
110     \else\bbl@csarg\xdef{casing@ngerman}{de}\bbl@capszfalse\fi}
111 \fi
112 \newif\if@at@capsz\@at@capszfalse
113 \ifx\bbl@mod@naustrian\undefined\else
114   \expandtwoargs\in@{, capsz, }{, \bbl@mod@naustrian, }
115   \ifin@
116     \@at@capsztrue
117   \fi
118   \addto\extrasnaustrian{%
119     \if@at@capsz\bbl@capsztrue\bbl@csarg\xdef{casing@naustrian}{de-x-eszett}%
120     \else\bbl@csarg\xdef{casing@naustrian}{de}\bbl@capszfalse\fi}
121 \fi

```

Next, again depending on the option with which the language definition file has been loaded, the macro `\noextrasngerman`, `\noextrasnaustrian` or `\noextrasnswissgerman` is defined. These deactivate the " character and thus turn the shorthands off again outside of the respective variety.

```

122 \expandafter\addto\csname noextras\CurrentOption\endcsname{%
123   \bbl@deactivate{"}

```

Now deactivate the settings that might have been done by the modifiers:

```

124 \ifx\CurrentOption\bbl@opt@nswissgerman
125   \addto\noextrasnswissgerman{\bbl@ntossfalse}
126 \fi
127 \ifx\CurrentOption\bbl@opt@ngerman
128   \ifbbl@capsz
129     \addto\noextrasngerman{\bbl@capszfalse\bbl@csarg\xdef{casing@ngerman}{de}}
130   \fi
131 \fi
132 \ifx\CurrentOption\bbl@opt@naustrian
133   \ifbbl@capsz
134     \addto\noextrasnaustrian{\bbl@capszfalse\bbl@csarg\xdef{casing@naustrian}{de}}
135   \fi
136 \fi

```

In order for  $\TeX$  to be able to hyphenate German words which contain ‘ß’ (in the OT1 position  $\text{^^Y}$ ) we have to give the character a nonzero `\lccode` (see Appendix H, the  $\TeX$ book).

```

137 \expandafter\addto\csname extras\CurrentOption\endcsname{%
138   \babel@savevariable{\lccode25}%
139   \lccode25=25}

```

The umlaut accent macro `\` is changed to lower the umlaut dots. The redefinition is done with the help of `\umlautlow`.

```

140 \expandafter\addto\csname extras\CurrentOption\endcsname{%
141   \babel@save{"\umlautlow}

142 \expandafter\addto\csname noextras\CurrentOption\endcsname{%
143   \umlauthigh}

```



The current version of the ‘new’ German hyphenation patterns (dehyphn.tex) is to be used with `\lefthyphenmin` and `\righthyphenmin` set to 2.

```
144 \providehyphenmins{\CurrentOption}{\tw@\tw@}
```

For German texts we need to assure that `\frenchspacing` is turned on.

```
145 \expandafter\addto\csname extras\CurrentOption\endcsname{%
146   \bbl@frenchspacing}
147 \expandafter\addto\csname noextras\CurrentOption\endcsname{%
148   \bbl@nonfrenchspacing}
```

## 5.5 Active characters, macros & shorthands

The following code is necessary because we need an extra active character. This character is then used as indicated in table 1.

In order to be able to define the function of `"`, we first define a couple of ‘support’ macros.

`\dq` We save the original double quotation mark character in `\dq` to keep it available, the math accent `\"` can now be typed as `"`.

Furthermore, we define some helper macros for contextual  $\langle\beta\rangle$  handling.

```
149 \begingroup \catcode'\ "12
150 \def\x{\endgroup
151   \def\dq{"}
152   \def@SS{\mathchar"7019 }
153   \def\bbl@ss{\ifbbl@ntoss ss\else\textormath{\ss}{\@SS}}\fi}
154   \def\bbl@SS{\ifbbl@capsz\MakeUppercase{\ss}\else SS\fi}
155   \def\bbl@sz{\ifbbl@ntoss sz\else\textormath{\ss}{\@SS}}\fi}
156   \def\bbl@SZ{SZ}
157 }
158 \x
```

Since we need to add special cases for `hyperref` which needs `hyperref`’s `\texorpdfstring`, we provide a dummy command for the case that `hyperref` is not loaded.

```
159 \providecommand\texorpdfstring[2]{#1}
```

Now we can define the doublequote shorthands: the umlauts,

```
160 \declare@shorthand{ngerman}{a}{\textormath{"a}{\bbl@allowhyphens}{\ddot a}}
161 \declare@shorthand{ngerman}{o}{\textormath{"o}{\bbl@allowhyphens}{\ddot o}}
162 \declare@shorthand{ngerman}{u}{\textormath{"u}{\bbl@allowhyphens}{\ddot u}}
163 \declare@shorthand{ngerman}{A}{\textormath{"A}{\bbl@allowhyphens}{\ddot A}}
164 \declare@shorthand{ngerman}{O}{\textormath{"O}{\bbl@allowhyphens}{\ddot O}}
165 \declare@shorthand{ngerman}{U}{\textormath{"U}{\bbl@allowhyphens}{\ddot U}}
```

tremata,

```
166 \declare@shorthand{ngerman}{e}{\textormath{"e}{\ddot e}}
167 \declare@shorthand{ngerman}{E}{\textormath{"E}{\ddot E}}
168 \declare@shorthand{ngerman}{i}{\textormath{"i}{\i}}%
169   {\ddot\imath}}
170 \declare@shorthand{ngerman}{I}{\textormath{"I}{\ddot I}}
```

German  $\beta$ ,

```
171 \declare@shorthand{ngerman}{s}{\bbl@ss}
172 \declare@shorthand{ngerman}{S}{\bbl@SS}
173 \declare@shorthand{ngerman}{z}{\bbl@sz}
174 \declare@shorthand{ngerman}{Z}{\bbl@SZ}
```

German and French/Swiss quotation marks,

```
175 \declare@shorthand{ngerman}{" '}{\glqq}
176 \declare@shorthand{ngerman}{" "}{\grqq}
177 \declare@shorthand{ngerman}{"<}{\flqq}
178 \declare@shorthand{ngerman}{">}{\frqq}
```

some additional commands (hyphenation, line breaking and ligature control):

```
179 \declare@shorthand{ngerman}{"-}{\nobreak\-\bbl@allowhyphens}
180 \declare@shorthand{ngerman}{"}{\}%
181 \texorpdfstring{\textormath{\penalty\@M\discretionary{-}{-}{\kern.03em}\bbl@allowhyphens}{}}% TeX string
182 \}% PDF string
183 }
184 \declare@shorthand{ngerman}{""}{\hskip\z@skip}
185 \declare@shorthand{ngerman}{ "~}{\}%
186 \texorpdfstring{\textormath{\leavevmode\hbox{-}{-}{-}}}% tex string
187 \}% PDF string
188 }
189 \declare@shorthand{ngerman}{ "="}{\penalty\@M-\hskip\z@skip}
190 \declare@shorthand{ngerman}{ "/"}{\textormath
191 {\bbl@allowhyphens\discretionary{/}{/}{\bbl@allowhyphens}{}}
```

and some shorthands to support gender-sensitive spelling:

```
192 \def\mkngender{*}
193 \declare@shorthand{ngerman}{":}{\nobreak:\bbl@allowhyphens}
194 \declare@shorthand{ngerman}{ "*}{\nobreak*\bbl@allowhyphens}
195 \declare@shorthand{ngerman}{ "_}{\nobreak\_ \bbl@allowhyphens}
196 \declare@shorthand{ngerman}{ "x}{\nobreak\mkngender\bbl@allowhyphens}
```

\mdqon All that's left to do now is to define a couple of commands for reasons of compatibility  
\mdqoff with german.sty.

```
197 \def\mdqon{\shorthandon{}}
198 \def\mdqoff{\shorthandoff{}}
```

The macro \ldf@finish takes care of looking for a configuration file, setting the main language to be switched on at \begin{document} and resetting the category code of @ to its original value.

```
199 \ldf@finish\CurrentOption
```

## 5.6 naustrian.ldf, ngerman.ldf and nswissgerman.ldf

Babel expects a *<lang>.ldf* file for each *<lang>*. So we create portmanteau ldf files for naustrian, ngerman and nswissgerman.<sup>6</sup> These files themselves only load ngermanb.ldf, which does the real work:

```
200 \input ngermanb.ldf\relax
```

---

<sup>6</sup>For naustrian and ngerman, this is not strictly necessary, since babel provides aliases for these languages (pointing to ngermanb). However, since babel does not officially support these aliases anymore after the language definition files have been separated from the core, we provide the whole range of ldf files for the sake of completeness.

## Change History

Version 2.6f	
General: Renamed from <code>germanb.ldf</code> ; language names changed from <code>german</code> and <code>austrian</code> to <code>ngerman</code> and <code>naustrian</code> . . . . .	1
Version 2.6j	
<code>\noextrasngerman</code> : Deactivate shorthands outside of German . . .	8
Version 2.6k	
<code>\@captionsngerman</code> : Added <code>\glossaryname</code> . . . . .	5
<code>\noextrasngerman</code> : Now use <code>\providehyphenmins</code> to provide a default value . . . . .	9
Version 2.6m	
<code>\noextrasngerman</code> : Turn frenchspacing on, as in <code>german.sty</code> . . . . .	9
Version 2.6n	
<code>\@captionsngerman</code> : Corrected typo <code>\captionnsgerman</code> . . . . .	5
Version 2.7	
General: Added support for variety <code>nswissgerman</code> . . . . .	1
Generate portmanteau files <code>naustrian.ldf</code> , <code>ngerman.ldf</code> and <code>nswissgerman.ldf</code> . . . . .	10
Revised <code>naustrian</code> support. . . . .	1
Revised documentation: Turn the babel manual chapter into a self-enclosed manual. . . . .	1
<code>\@captionsngerman</code> : Changed <code>\enclname</code> in <code>naustrian</code> to <code>Beilage(n)</code> . . . . .	5
Split <code>\captionsngerman</code> from <code>\captionsnaustrian</code> and <code>\captionsnswissgerman</code> . . . . .	5
<code>\datenswissgerman</code> : Added <code>\datenswissgerman</code> . . . . .	7
<code>\extrasnswissgerman</code> : Added <code>\extrasnswissgerman</code> . . . . .	7
<code>\noextrasngerman</code> : Deactivate shorthands also outside of <code>naustrian</code> and <code>nswissgerman</code> . . . .	8
Do not use <code>\@namedef</code> when <code>\noextras</code> is already defined and should not be overwritten. . . . .	8
<code>\noextrasnswissgerman</code> : Added <code>\noextrasnswissgerman</code> . . . . .	7
Version 2.8	
General: Only add dialects if the respective variety is loaded . . . . .	5
<code>\@captionsngerman</code> : Define trans-variational base captions which are loaded and modified by the varieties . . . . .	5
<code>\captionsnaustrian</code> : Only define <code>\captionsnaustrian</code> if <code>naustrian</code> is requested. . . . .	6
<code>\captionsngerman</code> : Only define <code>\captionsngerman</code> if <code>ngerman</code> is requested. . . . .	6
<code>\captionsnswissgerman</code> : Only define <code>\captionsnswissgerman</code> if <code>nswissgerman</code> is requested. . . . .	6
<code>\datenaustrian</code> : Only define <code>\datenaustrian</code> if <code>naustrian</code> is requested. . . . .	7
<code>\datengerman</code> : Only define <code>\datengerman</code> if <code>ngerman</code> is requested. . . . .	6
<code>\datenswissgerman</code> : Only define <code>\datenswissgerman</code> if <code>nswissgerman</code> is requested. . . . .	7
Version 2.9	
General: Add <code>/</code> shortcut for breakable slash (taken from <code>dutch.ldf</code> ) . . . .	10
Do not attempt to load <code>\l@naustrian</code> or <code>\l@nswissgerman</code> , which do not exist . . . . .	5
Version 2.10	
General: Add helper macros to identify the current option. . . . .	4
Improvements to the manual . . . . .	1
<code>\noextrasngerman</code> : Implement boolean switch <code>\ntosstrue</code> / <code>\ntossfalse</code> to customize $\langle\beta\rangle$ -related shorthands in Swiss Standard German context. . .	7
Implement modifier <code>toss</code> to customize $\langle\beta\rangle$ -related shorthands in Swiss Standard German context. . .	7
Version 2.11	
General: Fix old hyphenation regression introduced with babel 3.7 (2002) in a number of shorthands (change of meaning of <code>\allowhyphens</code> vs. <code>\bbl@allowhyphens</code> ) . . . . .	10
Version 2.12	
General: Properly handle shorthands in <code>hyperref</code> pdf strings . . . . .	9
Version 2.13	
General: Move option helper macros	

after \LdfInit to fix plain tex usage. . . . .	4	Output capital eszett for "S if possible and required . . . . .	9
Version 2.14			
General: Add "*", ":", "_", and "x shorthands to support gender-sensitive writing . . . . .	10	capsz: Implement modifier capsz to use capital eszett letter in Austrian and German varieties if possible. . .	7

## References

- [1] Ammon, Ulrich et al.: *Variantenwörterbuch des Deutschen. Die Standardsprache in Österreich, der Schweiz und Deutschland sowie in Liechtenstein, Luxemburg, Ostbelgien und Südtirol*. Berlin, New York: De Gruyter.
- [2] Braams, Johannes and Bezos, Javier: *Babel*. <http://www.ctan.org/pkg/babel>.
- [3] Deutschsprachige Trennmustermannschaft: *dehyph-exptl – Experimental hyphenation patterns for the German language*. <https://ctan.org/pkg/dehyph-exptl>.
- [4] Partl, Hubert: *German T<sub>E</sub>X, TUGboat* 9/1 (1988), p. 70–72.
- [5] Manuel Pégourié-Gonnard et al.: *hyph-utf8 – Hyphenation patterns expressed in UTF-8*. <https://ctan.org/pkg/hyph-utf8>.
- [6] Raichle, Bernd: *German*. <http://www.ctan.org/pkg/german>.