

The `ginpenc` package

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Abstract

If the package `inputenc` is used and German Umlauts are input directly, they are converted to `\"a` etc. This breaks the sort algorithm of `makeindex`, for instance. This package converts Umlauts and the Sharp s to the short forms, defined by the `babel` package, e.g. `"a`, instead, if the text is typeset in German.

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1 The user interface

To use this package place

```
\usepackage{ginpenc}
```

in the preamble of your document. No options are necessary.

If you also use the `babel` package, the German Umlauts and the Sharp S are written to outputfiles, e.g. the `idx` files, as "A, "O, "U, "a, "o, "u, and "s instead of "\A, "\O, "\U, "\a, "\o, "\u, and \ss if one of the German dialects (`german`, `ngerman`, `austrian`, `naustrian`) is active. If another language is active, this package does not do anything.

This should not change anything in the document itself. But output to auxiliary files as the index file with the extension `.idx` are written with these short-hand forms instead of the long forms. This helps `makeindex` to sort the entries correctly, if the command-line switch `-g` is given.

2 New commands

`\inputenc` This package defines the command `\inputenc` which returns the active encoding. If no encoding is active, it does not return anything.

Acknowledgements

Most code parts are by Heiko Oberdiek (`oberdiek@uni-freiburg.de`) (see `news-message.txt`).

3 The implementation

Heading of the package and all other files:

```
1 <package>\ProvidesPackage{ginpenc}
2 <ansinew>\ProvidesFile{ansinew.gie}
3 <applemac>\ProvidesFile{applemac.gie}
4 <ascii>\ProvidesFile{ascii.gie}
5 <cp1250>\ProvidesFile{cp1250.gie}
6 <cp1252>\ProvidesFile{cp1252.gie}
7 <cp437>\ProvidesFile{cp437.gie}
```

```

8 <cp437de>\ProvidesFile{cp437de.gie}
9 <cp850>\ProvidesFile{cp850.gie}
10 <cp852>\ProvidesFile{cp852.gie}
11 <cp865>\ProvidesFile{cp865.gie}
12 <decmulti>\ProvidesFile{decmulti.gie}
13 <latin1>\ProvidesFile{latin1.gie}
14 <latin2>\ProvidesFile{latin2.gie}
15 <latin3>\ProvidesFile{latin3.gie}
16 <latin5>\ProvidesFile{latin5.gie}
17 <latin9>\ProvidesFile{latin9.gie}
18 <next>\ProvidesFile{next.gie}
19 <package,gie> [2011/12/29 v1.01 Replace \string\"a by "a with babel for German texts]

```

\ifginpenc@babel Stores if babel has been loaded.

```
20 \newif\ifginpenc@babel
```

Everything has to be done at `\begin{document}` in order to ensure that the packages `inputenc` and `babel` are loaded before the code is executed.

```
21 \AtBeginDocument{%
```

\inputenc Default value for `\inputenc`:
22 \let\inputenc\empty

\inputencoding Redefinition of `\inputencoding` to store the input encoding name.
First, copy the original command.

```
23 \newcommand*\gie@inputencoding{}%
24 \let\gie@inputencoding\inputencoding
```

Redefine `\inputencoding`
25 \def\inputencoding#1{%

\inputenc Define `\inputenc` to the current value.
26 \def\inputenc{#1}%

Call the original `\inputencoding` command.

```
27 \gie@inputencoding{#1}%

```

If `babel` is loaded, load the corresponding definition file that redefines the `"A` to `"A` etc.

```
28 \ifginpenc@babel
29   \IfFileExists{\inputenc.gie}{%
30     \input{\inputenc.gie}%
31   }{%
32     \PackageWarning{ginpenc}{Encoding file \inputenc.gie not
33     found}%
34   }%
35 \fi
36 }%
```

\inputenc Since the package `inputenc` calls `\inputencoding` the first time before it is redefined the encoding has to be found out by a different way.

```

37  \begingroup
38  \expandafter\ifx\csname @inpenc@undefined\endcsname\relax
39      \edef\x{\endgroup}%
40  \else
41      \def\@inpenc@undefined{\def\noexpand\inputenc{\#1}}%
42      \edef\x{\endgroup
43          \@inpenc@undefined
44      }%
45  \fi
46  \x

```

If `babel` is loaded, load the corresponding definition file that redefines the `\"A` to `"A` etc.

```

47  \c@ifpackageloaded{babel}{%
48      \g@in@penc@babeltrue
49      \ifx\inputenc\empty
50  \else
51      \IfFileExists{\inputenc.gie}{%
52          \input{\inputenc.gie}%

```

Add the new commands to the extras section of all German languages.

```

53      \addto\extrasgerman{\umautgerman}%
54      \addto\extrasngerman{\umautgerman}%
55      \addto\extrasaustrian{\umautgerman}%
56      \addto\extrasnaustrian{\umautgerman}%
57      \addto\noextrasgerman{\umautnotgerman}%
58      \addto\noextrasngerman{\umautnotgerman}%
59      \addto\noextrasaustrian{\umautnotgerman}%
60      \addto\noextrasnaustrian{\umautnotgerman}%

```

Select active language to let take effect the `\extras` commands.

```

61      \expandafter\selectlanguage\expandafter{\languagename}%
62  }{%
63      \PackageWarning{g@in@penc}{Encoding file \inputenc.gie not
64          found}%
65  }%
66  \fi
67  }{%
68  }

```

4 Encoding files

Only the file `ansinew.gie` is described since the other files work the same.

4.1 ansinew.gie

The work is done in a group in order to avoid a change of the `shorthand` state. To reach a global definition of the commands they are defined with `\gdef`.

69 `\begingroup`

Switch on the German shorthands.

70 `\shorthand{"}%`

`\umlautgerman` Redefine the character codes in order to use the short versions of the Umlaut commands.

```
71 \gdef\umlautgerman{%
72   \DeclareInputText{196}{\"A}%
73   \DeclareInputText{214}{\"O}%
74   \DeclareInputText{220}{\"U}%
75   \DeclareInputText{223}{\"s}%
76   \DeclareInputText{228}{\"a}%
77   \DeclareInputText{246}{\"o}%
78   \DeclareInputText{252}{\"u}%
79 }%
```

Switch off the German shorthands.

80 `\shorthandoff{"}%`

`\umlautnotgerman` Redefine the character codes in order to use the long versions of the Umlaut commands outside German text.

```
81 \gdef\umlautnotgerman{%
82   \DeclareInputText{196}{\"A}%
83   \DeclareInputText{214}{\"O}%
84   \DeclareInputText{220}{\"U}%
85   \DeclareInputText{223}{\"ss}%
86   \DeclareInputText{228}{\"a}%
87   \DeclareInputText{246}{\"o}%
88   \DeclareInputText{252}{\"u}%
89 }%
```

90 `\endgroup`

4.2 applemac.gie

```
91 \begingroup
92 \shorthand{"}%
93 \gdef\umlautgerman{%
94   \DeclareInputText{128}{\"A}%
95   \DeclareInputText{133}{\"O}%
96   \DeclareInputText{134}{\"U}%
97   \DeclareInputText{138}{\"a}%
98   \DeclareInputText{154}{\"o}%
99   \DeclareInputText{159}{\"u}%
100  \DeclareInputText{167}{\"s}%

```

```

101 }%
102 \shorthandoff{"}%
103 \gdef\umlautnotgerman{%
104   \DeclareInputText{128}{\"A}%
105   \DeclareInputText{133}{\"O}%
106   \DeclareInputText{134}{\"U}%
107   \DeclareInputText{138}{\"a}%
108   \DeclareInputText{154}{\"o}%
109   \DeclareInputText{159}{\"u}%
110   \DeclareInputText{167}{\ss}%
111 }%
112 \endgroup

```

4.3 ascii.gie

```

113 \begingroup
114 \gdef\umlautgerman{}%
115 \gdef\umlautnotgerman{}%
116 \endgroup

```

4.4 cp1250.gie

```

117 \begingroup
118 \shorthandon{"}%
119 \gdef\umlautgerman{%
120   \DeclareInputText{196}{\"A}%
121   \DeclareInputText{214}{\"O}%
122   \DeclareInputText{220}{\"U}%
123   \DeclareInputText{223}{\"s}%
124   \DeclareInputText{228}{\"a}%
125   \DeclareInputText{246}{\"o}%
126   \DeclareInputText{252}{\"u}%
127 }%
128 \gshorthandoff{"}%
129 \def\umlautnotgerman{%
130   \DeclareInputText{196}{\"A}%
131   \DeclareInputText{214}{\"O}%
132   \DeclareInputText{220}{\"U}%
133   \DeclareInputText{223}{\ss}%
134   \DeclareInputText{228}{\"a}%
135   \DeclareInputText{246}{\"o}%
136   \DeclareInputText{252}{\"u}%
137 }%
138 \endgroup

```

4.5 cp1252.gie

```

139 \begingroup
140 \shorthandon{"}%
141 \gdef\umlautgerman{%
142   \DeclareInputText{196}{\"A}%
143   \DeclareInputText{214}{\"O}%

```

```

144 \DeclareInputText{220}{\U}%
145 \DeclareInputText{223}{\s}%
146 \DeclareInputText{228}{\a}%
147 \DeclareInputText{246}{\o}%
148 \DeclareInputText{252}{\u}%
149 }%
150 \shorthandoff{"}%
151 \gdef\umlautnotgerman{%
152 \DeclareInputText{196}{\A}%
153 \DeclareInputText{214}{\O}%
154 \DeclareInputText{220}{\U}%
155 \DeclareInputText{223}{\ss}%
156 \DeclareInputText{228}{\a}%
157 \DeclareInputText{246}{\o}%
158 \DeclareInputText{252}{\u}%
159 }%
160 \endgroup

```

4.6 cp437.gie

```

161 \begingroup
162 \shorthandoff{"}%
163 \gdef\umlautgerman{%
164 \DeclareInputText{142}{\A}%
165 \DeclareInputText{153}{\O}%
166 \DeclareInputText{154}{\U}%
167 \DeclareInputText{132}{\a}%
168 \DeclareInputText{148}{\o}%
169 \DeclareInputText{129}{\u}%
170 }%
171 \shorthandoff{"}%
172 \gdef\umlautnotgerman{%
173 \DeclareInputText{142}{\A}%
174 \DeclareInputText{153}{\O}%
175 \DeclareInputText{154}{\U}%
176 \DeclareInputText{132}{\a}%
177 \DeclareInputText{148}{\o}%
178 \DeclareInputText{129}{\u}%
179 }%
180 \endgroup

```

4.7 cp437de.gie

```

181 \begingroup
182 \shorthandoff{"}%
183 \gdef\umlautgerman{%
184 \DeclareInputText{142}{\A}%
185 \DeclareInputText{153}{\O}%
186 \DeclareInputText{154}{\U}%
187 \DeclareInputText{225}{\s}%
188 \DeclareInputText{132}{\a}%

```

```

189   \DeclareInputText{"o}%
190   \DeclareInputText{"u}%
191 }%
192 \shorthandoff{"}%
193 \gdef\umlautnotgerman{%
194   \DeclareInputText{"A}%
195   \DeclareInputText{"O}%
196   \DeclareInputText{"U}%
197   \DeclareInputText{\ss}%
198   \DeclareInputText{"a}%
199   \DeclareInputText{"o}%
200   \DeclareInputText{"u}%
201 }%
202 \endgroup

```

4.8 cp850.gie

```

203 \begingroup
204 \shorthandon{"}%
205 \gdef\umlautgerman{%
206   \DeclareInputText{"A}%
207   \DeclareInputText{"O}%
208   \DeclareInputText{"U}%
209   \DeclareInputText{"s}%
210   \DeclareInputText{"a}%
211   \DeclareInputText{"o}%
212   \DeclareInputText{"u}%
213 }%
214 \shorthandoff{"}%
215 \gdef\umlautnotgerman{%
216   \DeclareInputText{"A}%
217   \DeclareInputText{"O}%
218   \DeclareInputText{"U}%
219   \DeclareInputText{\ss}%
220   \DeclareInputText{"a}%
221   \DeclareInputText{"o}%
222   \DeclareInputText{"u}%
223 }%
224 \endgroup

```

4.9 cp852.gie

```

225 \begingroup
226 \shorthandon{"}%
227 \gdef\umlautgerman{%
228   \DeclareInputText{"A}%
229   \DeclareInputText{"O}%
230   \DeclareInputText{"U}%
231   \DeclareInputText{"s}%
232   \DeclareInputText{"a}%
233   \DeclareInputText{"o}%

```

```

234   \DeclareInputText{129}{\"u}%
235 }%
236 \shorthandoff{"}%
237 \gdef\umlautnotgerman{%
238   \DeclareInputText{142}{\"A}%
239   \DeclareInputText{153}{\"O}%
240   \DeclareInputText{154}{\"U}%
241   \DeclareInputText{225}{\ss}%
242   \DeclareInputText{132}{\"a}%
243   \DeclareInputText{148}{\"o}%
244   \DeclareInputText{129}{\"u}%
245 }%
246 \endgroup

```

4.10 cp865.gie

```

247 \begingroup
248 \shorthandon{"}%
249 \gdef\umlautgerman{%
250   \DeclareInputText{142}{\"A}%
251   \DeclareInputText{153}{\"O}%
252   \DeclareInputText{154}{\"U}%
253   \DeclareInputText{225}{\ss}%
254   \DeclareInputText{132}{\"a}%
255   \DeclareInputText{148}{\"o}%
256   \DeclareInputText{129}{\"u}%
257 }%
258 \shorthandoff{"}%
259 \gdef\umlautnotgerman{%
260   \DeclareInputText{142}{\"A}%
261   \DeclareInputText{153}{\"O}%
262   \DeclareInputText{154}{\"U}%
263   \DeclareInputText{225}{\ss}%
264   \DeclareInputText{132}{\"a}%
265   \DeclareInputText{148}{\"o}%
266   \DeclareInputText{129}{\"u}%
267 }%
268 \endgroup

```

4.11 decmulti.gie

```

269 \begingroup
270 \shorthandon{"}%
271 \gdef\umlautgerman{%
272   \DeclareInputText{196}{\"A}%
273   \DeclareInputText{214}{\"O}%
274   \DeclareInputText{220}{\"U}%
275   \DeclareInputText{223}{\ss}%
276   \DeclareInputText{228}{\"a}%
277   \DeclareInputText{246}{\"o}%
278   \DeclareInputText{252}{\"u}%

```

```

279 }%
280 \shorthandoff{"}%
281 \gdef\umlautnotgerman{%
282   \DeclareInputText{196}{\"A}%
283   \DeclareInputText{214}{\"O}%
284   \DeclareInputText{220}{\"U}%
285   \DeclareInputText{223}{\ss}%
286   \DeclareInputText{228}{\"a}%
287   \DeclareInputText{246}{\"o}%
288   \DeclareInputText{252}{\"u}%
289 }%
290 \endgroup

```

4.12 latin1.gie

```

291 \begingroup
292 \shorthandon{"}%
293 \gdef\umlautgerman{%
294   \DeclareInputText{196}{\"A}%
295   \DeclareInputText{214}{\"O}%
296   \DeclareInputText{220}{\"U}%
297   \DeclareInputText{223}{s}%
298   \DeclareInputText{228}{\"a}%
299   \DeclareInputText{246}{\"o}%
300   \DeclareInputText{252}{\"u}%
301 }%
302 \shorthandoff{"}%
303 \gdef\umlautnotgerman{%
304   \DeclareInputText{196}{\"A}%
305   \DeclareInputText{214}{\"O}%
306   \DeclareInputText{220}{\"U}%
307   \DeclareInputText{223}{\ss}%
308   \DeclareInputText{228}{\"a}%
309   \DeclareInputText{246}{\"o}%
310   \DeclareInputText{252}{\"u}%
311 }%
312 \endgroup

```

4.13 latin2.gie

```

313 \begingroup
314 \shorthandon{"}%
315 \gdef\umlautgerman{%
316   \DeclareInputText{196}{\"A}%
317   \DeclareInputText{214}{\"O}%
318   \DeclareInputText{220}{\"U}%
319   \DeclareInputText{223}{s}%
320   \DeclareInputText{228}{\"a}%
321   \DeclareInputText{246}{\"o}%
322   \DeclareInputText{252}{\"u}%
323 }%

```

```

324 \shorthandoff{"}%
325 \gdef\umlautnotgerman{%
326   \DeclareInputText{196}{\"A}%
327   \DeclareInputText{214}{\"O}%
328   \DeclareInputText{220}{\"U}%
329   \DeclareInputText{223}{\ss}%
330   \DeclareInputText{228}{\"a}%
331   \DeclareInputText{246}{\"o}%
332   \DeclareInputText{252}{\"u}%
333 }%
334 \endgroup

```

4.14 latin3.gie

```

335 \begingroup
336 \shorthandoff{"}%
337 \gdef\umlautgerman{%
338   \DeclareInputText{196}{\"A}%
339   \DeclareInputText{214}{\"O}%
340   \DeclareInputText{220}{\"U}%
341   \DeclareInputText{223}{\"s}%
342   \DeclareInputText{228}{\"a}%
343   \DeclareInputText{246}{\"o}%
344   \DeclareInputText{252}{\"u}%
345 }%
346 \shorthandoff{"}%
347 \gdef\umlautnotgerman{%
348   \DeclareInputText{196}{\"A}%
349   \DeclareInputText{214}{\"O}%
350   \DeclareInputText{220}{\"U}%
351   \DeclareInputText{223}{\ss}%
352   \DeclareInputText{228}{\"a}%
353   \DeclareInputText{246}{\"o}%
354   \DeclareInputText{252}{\"u}%
355 }%
356 \endgroup

```

4.15 latin5.gie

```

357 \begingroup
358 \shorthandoff{"}%
359 \gdef\umlautgerman{%
360   \DeclareInputText{196}{\"A}%
361   \DeclareInputText{214}{\"O}%
362   \DeclareInputText{220}{\"U}%
363   \DeclareInputText{223}{\"s}%
364   \DeclareInputText{228}{\"a}%
365   \DeclareInputText{246}{\"o}%
366   \DeclareInputText{252}{\"u}%
367 }%
368 \shorthandoff{"}%

```

```

369 \gdef\umlautnotgerman{%
370   \DeclareInputText{196}{\"A}%
371   \DeclareInputText{214}{\"O}%
372   \DeclareInputText{220}{\"U}%
373   \DeclareInputText{223}{\ss}%
374   \DeclareInputText{228}{\"a}%
375   \DeclareInputText{246}{\"o}%
376   \DeclareInputText{252}{\"u}%
377 }%
378 \endgroup

```

4.16 latin9.gie

```

379 \begingroup
380 \shorthandon{"}%
381 \gdef\umlautgerman{%
382   \DeclareInputText{196}{\"A}%
383   \DeclareInputText{214}{\"O}%
384   \DeclareInputText{220}{\"U}%
385   \DeclareInputText{223}{\s}%
386   \DeclareInputText{228}{\"a}%
387   \DeclareInputText{246}{\"o}%
388   \DeclareInputText{252}{\"u}%
389 }%
390 \shorthandoff{"}%
391 \gdef\umlautnotgerman{%
392   \DeclareInputText{196}{\"A}%
393   \DeclareInputText{214}{\"O}%
394   \DeclareInputText{220}{\"U}%
395   \DeclareInputText{223}{\ss}%
396   \DeclareInputText{228}{\"a}%
397   \DeclareInputText{246}{\"o}%
398   \DeclareInputText{252}{\"u}%
399 }%
400 \endgroup

```

4.17 next.gie

```

401 \begingroup
402 \shorthandon{"}%
403 \gdef\umlautgerman{%
404   \DeclareInputText{133}{\"A}%
405   \DeclareInputText{150}{\"O}%
406   \DeclareInputText{154}{\"U}%
407   \DeclareInputText{217}{\"a}%
408   \DeclareInputText{240}{\"o}%
409   \DeclareInputText{246}{\"u}%
410   \DeclareInputText{251}{\s}%
411 }%
412 \shorthandoff{"}%
413 \gdef\umlautnotgerman{%

```

```

414 \DeclareInputText{133}{\"A}%
415 \DeclareInputText{150}{\"O}%
416 \DeclareInputText{154}{\"U}%
417 \DeclareInputText{217}{\"a}%
418 \DeclareInputText{240}{\"o}%
419 \DeclareInputText{246}{\"u}%
420 \DeclareInputText{251}{\"s}%
421 }%
422 \endgroup

```

Change History

1.00	1.01
General: First official version 1	General: Write version and date explicitly into sty file 1

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