



The `unitipa` package

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 <https://ctan.org/pkg/unitipa>
 <https://gitlab.com/niruvt/unitipa>

This package is not maintained anymore and it has been removed from the \TeX -distributions as the package uses methods for converting rich Unicode input to poor T3 encoding for getting TIPA typefaces when this can actually be better done using a Unicode font (i.e. CMU-Serif). I tested the IPA characters with the Latin Modern font to find them absent in it, but mistakenly believed it to be CMU-Serif. For comparison see `CMU-Serif.tex` and its output. After rigorous testing I found out that only 4 characters are in different shape in CMU-Serif. Those differences are also not very significant. Hence I have decided to take this package back and let users use the better and the recommended Unicode-method. My sincere apologies for releasing a bad package in the community. The source code is still available as an obsolete package on CTAN and an archived repository on GitLab for backward compatibility purpose as well as for studying \LaTeX code for enthusiastic programmers.

\LaTeX package `unitipa`

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1 Implementation

```
1 <@=unitipa>
2 <*package>
3 \ProvidesPackage{unitipa}[2021/04/03 v0.3
4 TIPA typefaces with unicode characters]
5 \RequirePackage{tipa}
```

Provide package with its basic information and load package tipa.

```
6 \RequirePackage{newunicodechar}
7 \RequirePackage{fontspec}
8 \RequirePackage{pgfkeys}
9 \pgfkeys{%
10 unitipa/.is family, unitipa/.cd,%
11 ipafont/.code={\setfontfamily{\ipa}{#1}},%
12 ipafont=DoulosSIL%
13 }%
14 \DeclareTextFontCommand{\ipatext}{\ipa}
15 \def\unitipa@ipafont#1{\pgfkeys{unitipa/.cd,#1}}
16 \DeclareOption*{\expandafter\unitipa@ipafont\expandafter{\CurrentOption}}
```

Option ipafont provided using pgfkeys.

```
17 \newif\ifnodiacritics
18 \nodiacriticsfalse
19 \DeclareOption{nodiacritics}{\nodiacriticstrue}
20 \ProcessOptions\relax
21 \ifnodiacritics
22 \relax
23 \else
24 \RequirePackage{iftex}
25 \RequirePackage{luacode}
26 \RequireLuaTeX
27 %% Dependent diacritic marks
28 \begin{luacode}
29   function voiceless ( s )
30     s = unicode.utf8.gsub ( s , '(%a)', '\\textsubring{%1}' )
31     return s
32   end
33 \end{luacode}
34 \directlua{luatexbase.add_to_callback("process_input_buffer",
35   voiceless, "voiceless")}
36 \begin{luacode}
37   function voiced ( s )
38     s = unicode.utf8.gsub ( s , '(%a)', '\\textsubwedge{%1}' )
39     return s
40   end
41 \end{luacode}
42 \directlua{luatexbase.add_to_callback("process_input_buffer",
43   voiced, "voiced")}
44 \begin{luacode}
45   function morerounded ( s )
46     s = unicode.utf8.gsub ( s , '(%a)', '\\textsubrhalfring{%1}' )
47     return s
48   end
49 \end{luacode}
```

```

50 \directlua{luatexbase.add_to_callback("process_input_buffer",
51 morerounded, "morerounded")}
52 \begin{luacode}
53 function lessrounded ( s )
54 s = unicode.utf8.gsub ( s , '%a' , '\\textsublhalfring{%1}' )
55 return s
56 end
57 \end{luacode}
58 \directlua{luatexbase.add_to_callback("process_input_buffer",
59 lessrounded, "lessrounded")}
60 \begin{luacode}
61 function advanced ( s )
62 s = unicode.utf8.gsub ( s , '%a' , '\\textsubplus{%1}' )
63 return s
64 end
65 \end{luacode}
66 \directlua{luatexbase.add_to_callback("process_input_buffer",
67 advanced, "advanced")}
68 \begin{luacode}
69 function retracted ( s )
70 s = unicode.utf8.gsub ( s , '%a' , '\\textsubbar{%1}' )
71 return s
72 end
73 \end{luacode}
74 \directlua{luatexbase.add_to_callback("process_input_buffer",
75 retracted, "retracted")}
76 \begin{luacode}
77 function midcentralized ( s )
78 s = unicode.utf8.gsub ( s , '%a' , '\\textovercross{%1}' )
79 return s
80 end
81 \end{luacode}
82 \directlua{luatexbase.add_to_callback("process_input_buffer",
83 midcentralized, "midcentralized")}
84 \begin{luacode}
85 function syllabic ( s )
86 s = unicode.utf8.gsub ( s , '%a' , '\\textsyllabic{%1}' )
87 return s
88 end
89 \end{luacode}
90 \directlua{luatexbase.add_to_callback("process_input_buffer",
91 syllabic, "syllabic")}
92 \begin{luacode}
93 function nonsyllabic ( s )
94 s = unicode.utf8.gsub ( s , '%a' , '\\textsubarch{%1}' )
95 return s
96 end
97 \end{luacode}
98 \directlua{luatexbase.add_to_callback("process_input_buffer",
99 nonsyllabic, "nonsyllabic")}
100 \begin{luacode}
101 function breathyvoiced ( s )
102 s = unicode.utf8.gsub ( s , '%a' , '\\textsubumlaut{%1}' )
103 return s

```

```

104     end
105 \end{luacode}
106 \directlua{luatexbase.add_to_callback("process_input_buffer",
107     breathyvoiced, "breathyvoiced")}
108 \begin{luacode}
109     function linguolabial ( s )
110     s = unicode.utf8.gsub ( s , '(%a)', '\\textseagull{%1}' )
111     return s
112     end
113 \end{luacode}
114 \directlua{luatexbase.add_to_callback("process_input_buffer",
115     linguolabial, "linguolabial")}
116 \begin{luacode}
117     function velarized ( s )
118     s = unicode.utf8.gsub ( s , '(%a)', '\\textsuperimposetilde{%1}' )
119     return s
120     end
121 \end{luacode}
122 \directlua{luatexbase.add_to_callback("process_input_buffer",
123     velarized, "velarized")}
124 \begin{luacode}
125     function raised ( s )
126     s = unicode.utf8.gsub ( s , '(%a)', '\\textraising{%1}' )
127     return s
128     end
129 \end{luacode}
130 \directlua{luatexbase.add_to_callback("process_input_buffer",
131     raised, "raised")}
132 \begin{luacode}
133     function lowered ( s )
134     s = unicode.utf8.gsub ( s , '(%a)', '\\textlowering{%1}' )
135     return s
136     end
137 \end{luacode}
138 \directlua{luatexbase.add_to_callback("process_input_buffer",
139     lowered, "lowered")}
140 \begin{luacode}
141     function advancedtr ( s )
142     s = unicode.utf8.gsub ( s , '(%a)', '\\textadvancing{%1}' )
143     return s
144     end
145 \end{luacode}
146 \directlua{luatexbase.add_to_callback("process_input_buffer",
147     advancedtr, "advancedtr")}
148 \begin{luacode}
149     function retractedtr ( s )
150     s = unicode.utf8.gsub ( s , '(%a)', '\\textretracting{%1}' )
151     return s
152     end
153 \end{luacode}
154 \directlua{luatexbase.add_to_callback("process_input_buffer",
155     retractedtr, "retractedtr")}
156 \begin{luacode}
157     function dental ( s )

```

```

158     s = unicode.utf8.gsub ( s , '%a' , '\\textsubbridge{%1}' )
159     return s
160     end
161 \end{luacode}
162 \directlua{luatexbase.add_to_callback("process_input_buffer",
163     dental, "dental")}
164 \begin{luacode}
165     function apical ( s )
166     s = unicode.utf8.gsub ( s , '%a' , '\\textinvsubbridge{%1}' )
167     return s
168     end
169 \end{luacode}
170 \directlua{luatexbase.add_to_callback("process_input_buffer",
171     apical, "apical")}
172 \begin{luacode}
173     function laminal ( s )
174     s = unicode.utf8.gsub ( s , '%a' , '\\textsubsquare{%1}' )
175     return s
176     end
177 \end{luacode}
178 \directlua{luatexbase.add_to_callback("process_input_buffer",
179     laminal, "laminal")}
180 \begin{luacode}
181     function unaudible ( s )
182     s = unicode.utf8.gsub ( s , '%a' , '%1\\textcorner' )
183     return s
184     end
185 \end{luacode}
186 \directlua{luatexbase.add_to_callback("process_input_buffer",
187     unaudible, "unaudible")}
188 %% Tie bars
189 \begin{luacode}
190     function tiebarup ( s )
191     s = unicode.utf8.gsub ( s , '%a (%a)', '\\texttoptiebar{%1%2}' )
192     return s
193     end
194 \end{luacode}
195 \directlua{luatexbase.add_to_callback("process_input_buffer",
196     tiebarup, "tiebarup")}
197 \begin{luacode}
198     function tiebardown ( s )
199     s = unicode.utf8.gsub ( s , '%a (%a)', '\\textbottomtiebar{%1%2}' )
200     return s
201     end
202 \end{luacode}
203 \directlua{luatexbase.add_to_callback("process_input_buffer",
204     tiebardown, "tiebardown")}
205 \begin{luacode}
206     function risefall ( s )
207     s = unicode.utf8.gsub ( s , '%a' , '\\textrisefall{%1}' )
208     return s
209     end
210 \end{luacode}
211 \directlua{luatexbase.add_to_callback("process_input_buffer",

```

```

212   risefall, "risefall"}}
213 \begin{luacode}
214   function rising ( s )
215     s = unicode.utf8.gsub ( s , '(%a) ', '\\\texthighrise{%1}' )
216     return s
217   end
218 \end{luacode}
219 \directlua{luatexbase.add_to_callback("process_input_buffer",
220   rising, "rising")}
221 \begin{luacode}
222   function falling ( s )
223     s = unicode.utf8.gsub ( s , '(%a) ', '\\\textlowrise{%1}' )
224     return s
225   end
226 \end{luacode}
227 \directlua{luatexbase.add_to_callback("process_input_buffer",
228   falling, "falling")}
229 \fi

```

Option `nodiacritics` provided for using the package without Lua^ATeX. Enabling this option won't print any diacritics. Help from Samcarter and Mico Loretan on different platforms¹ gave a right direction to this code.

```

230 %% Pulmonic Consonants
231 %% Plosives
232 \newunicodechar{}{\textrtailt}
233 \newunicodechar{}{\textrtaild}
234 \newunicodechar{}{\textbardotlessj}
235 \newunicodechar{}{\textscg}
236 \newunicodechar{}{\textglotstop}
237 %% Nasals
238 \newunicodechar{}{\textltailm}
239 \newunicodechar{}{\textrtailn}
240 \newunicodechar{}{\textltailn}%% Added in v0.2
241 \newunicodechar{}{\textscn}
242 %% Trills
243 \newunicodechar{}{\textscb}
244 \newunicodechar{}{\textscr}
245 %% Taps or flaps
246 \newunicodechar{}{\ipatext{}}%% Sorry for the bad typography!
247 \newunicodechar{}{\textfishhookr}
248 \newunicodechar{}{\textrtailr}
249 %% Fricatives
250 \newunicodechar{}{\textphi}
251 \newunicodechar{}{\textbeta}
252 \newunicodechar{}{\texttheta}
253 \newunicodechar{}{\textesh}
254 \newunicodechar{}{\textyogh}
255 \newunicodechar{}{\textrtails}
256 \newunicodechar{}{\textrtailz}
257 \newunicodechar{}{\textctj}
258 \newunicodechar{}{\textgamma}
259 \newunicodechar{}{\textchi}
260 \newunicodechar{}{\textinvscr}

```

¹Samcarter's [answer](#) on TopAnswer & Mico Loretan's [answer](#) on TeX.SE.

```

261 \newunicodechar{ }\textrevglotstop}
262 \newunicodechar{ }\texthth}
263 %% Lateral fricatives
264 \newunicodechar{ }\textbeltl}
265 \newunicodechar{ }\textlyoghlig}
266 %% Approximants
267 \newunicodechar{ }\textscriptv}
268 \newunicodechar{ }\textturnr}
269 \newunicodechar{ }\textturnrrtail}
270 \newunicodechar{ }\textturnmrleg}
271 %% Lateral approximants
272 \newunicodechar{ }\textrrtail}
273 \newunicodechar{ }\textturny}
274 \newunicodechar{ }\textscl}
275 %% Affricates
276 \newunicodechar{ }\textteshlig}
277 \newunicodechar{ }\textdyoghlig}
278 \newunicodechar{ }\texttslig}
279 \newunicodechar{ }\textdzlig}
280 %% Vowels
281 %% Close
282 \newunicodechar{ }\textbari}
283 \newunicodechar{ }\textbaru}
284 \newunicodechar{ }\textturnm}
285 %% Near-close
286 \newunicodechar{ }\textsci}
287 \newunicodechar{ }\textscy}
288 \newunicodechar{ }\textupsilon}
289 %% Close-mid
290 \newunicodechar{ }\textbaro}
291 \newunicodechar{ }\textramshorns}
292 %% Open-mid
293 \newunicodechar{ }\textepsilon}
294 \newunicodechar{ }\textrevepsilon}
295 \newunicodechar{ }\textcloserevepsilon}
296 \newunicodechar{ }\textturnv}
297 \newunicodechar{ }\textopeno}
298 %% Near-open
299 \newunicodechar{ }\textturna}
300 \newunicodechar{ }\textskoelig}
301 \newunicodechar{ }\textturnscripta}
302 %% Open
303 %% Reported and added by Heller, Thomas on 2021/03/13
304 %% Bug report - https://gitlab.com/niruvt/unitipa/-/issues/1
305 %% MR - https://gitlab.com/niruvt/unitipa/-/merge\_requests/1
306 \newunicodechar{ }\textscripta}
307 %% Non-Pulmonic
308 \newunicodechar{ }\textbullseye}
309 \newunicodechar{ }\textpipe}
310 \newunicodechar{ }\textipa{!}}
311 \newunicodechar{ }\textdoublebarpipe}
312 \newunicodechar{ }\textdoublepipe}
313 %% Voiced Implosives
314 \newunicodechar{ }\texthtb}

```

```

315 \newunicodechar{ }\texthtd}
316 \newunicodechar{ }\texthtbardotlessj}
317 \newunicodechar{ }\texthtg}
318 \newunicodechar{ }\texthtscg}
319 \newunicodechar{ }{'}
320 %% Suprasegmentals
321 \newunicodechar{ }\textprimstress}
322 \newunicodechar{ }\textsecstress}
323 \newunicodechar{ }\textlengthmark}
324 \newunicodechar{ }\texthalflength}
325 \newunicodechar{ }\textturnw}
326 \newunicodechar{ }\textturnh}
327 \newunicodechar{ }\textschi}
328 \newunicodechar{ }\textbarrevglotstop}
329 \newunicodechar{ }\textbarglotstop}
330 \newunicodechar{ }\textctc}
331 \newunicodechar{ }\textctz}
332 \newunicodechar{ }\textturnlonglegr}
333 \newunicodechar{ }\textthheng}
334 %% Diacritics
335 \newunicodechar{ }\textsuperscript{h}}
336 \newunicodechar{ }\textsuperscript{ } }
337 \newunicodechar{ }\textsuperscript{w}}
338 \newunicodechar{ }\textsuperscript{j}}
339 \newunicodechar{ }\textsuperscript{ } }
340 \newunicodechar{ }\textsuperscript{ } }
341 %% Tones independent diacritics
342 \newunicodechar{ }\textdownstep}
343 \newunicodechar{ }\textupstep}
344 %% \newunicodechar{ }\textglobrise}%% Not working :(
345 %% \newunicodechar{ }\textglobfall}%% Need help here
346 </package>

```

Change History

| | | | |
|------|---|------|--|
| v0.1 | General: Initial version 8 | v0.4 | General: Removed the package from TeX-distributions and changed the license to GPLv3+GFDLv1.3. |
| v0.2 | General: Added characters ‘ ’ and ‘ ’ . . 8 | | This is the last release of the package. 8 |
| v0.3 | General: Updated repository path 8 | | |

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