

# The pmboxdraw package

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## Abstract

Package `pmboxdraw` declares box drawings characters of old code pages, e.g. cp437. It uses rules instead of using a font.

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## 1 User interface



## 1.1 Introduction

In old code pages (CP 437, ...) many slots are occupied by graphical characters. The definition files for the input encodings that come with L<sup>A</sup>T<sub>E</sub>X's package `inputenc` ignore these characters. This package tries to close this gap. Package `inputenx` provides more complete definition files of input encodings ([1]).

The graphical characters are available in some fonts, mostly some derivatives of Courier. However, the symbols are usually used to generate some kind of ASCII art. Thus it should fit with the current typewriter font in use. That means:

- Same and constant symbol width.
- Use of the full line height. Vertical lines should not be interrupted if the symbols that contribute to that line are in adjacent text lines.

Therefore I decided to generate the symbols by rules. Parameters such as rule width and box dimensions are accessible at macro level. This avoids to generate many fonts for the used typewriter fonts (Courier, LuxiMono, Computer/Latin Modern, ...).

The disadvantage is that there are no characters in the output file, just rules. Thus operations such as cut and paste or text search will not detect these graphical characters.

## 1.2 Setup

Usually the box drawings symbols of this package derive its parameters from the current font. But they can be set explicitly.

`\pmboxdrawbox {<template>}`

The `<template>` is used as size template for the symbols. It is initialized by `\strut0`. (Usually `\strut` carries the information about the `\baselineskip` and 0 the symbol width.)

`\pmboxdrawrulewidth {<dimen>}`

This macro allows the setup of the rule width used in the symbols. It is initialized with `0.1\width`, that means 10% of the symbol width. `\width`, `\height`, and `\depth` can be used here and are set to the corresponding symbol box parameter.

`\pmboxdrawdoublerulesep {<dimen>}`

Some symbols have double lines. The distance between the lines is configured by this macro. It is set to `0.25\width`, a quarter of the symbol width. Also `\height` and `\depth` are available.

## 1.3 Symbol list

The macro names for the symbols in L<sup>A</sup>T<sub>E</sub>X (LICR) are derived from Adobe's glyph names for these characters ([2]). Example:

U+2580 (■) with glyph name `upblock`: `\textupblock`

Some glyph names start with `SF`, two individual digits follow and the name is closed by four digits zero. For the LICR name the two individual digits form a number that is converted to lowercase roman number. The trailing zeros are dropped. Example:

U+2556 (⌌) with glyph name `SF210000`: `\textSFxxi`

The three gray symbols require package `color`:

U+2591  light shade: `\textltshade`  
 U+2592  medium shade: `\textshade`  
 U+2593  dark shade: `\textdkshade`

It follows a list with all graphical symbols provided by this package:

Symbol	Unicode	Glyph name	LICR
	U+2500	SF100000	<code>\textSFx</code> box drawings light horizontal
	U+2502	SF110000	<code>\textSFxi</code> box drawings light vertical
	U+250C	SF010000	<code>\textSFi</code> box drawings light down and right
	U+2510	SF030000	<code>\textSFiii</code> box drawings light down and left
	U+2514	SF020000	<code>\textSFii</code> box drawings light up and right
	U+2518	SF040000	<code>\textSFiv</code> box drawings light up and left
	U+251C	SF080000	<code>\textSFviii</code> box drawings light vertical and right
	U+2524	SF090000	<code>\textSFix</code> box drawings light vertical and left
	U+252C	SF060000	<code>\textSFvi</code> box drawings light down and horizontal
	U+2534	SF070000	<code>\textSFvii</code> box drawings light up and horizontal
	U+253C	SF050000	<code>\textSFv</code> box drawings light vertical and horizontal
	U+2550	SF430000	<code>\textSFxliii</code> box drawings double horizontal
	U+2551	SF240000	<code>\textSFxxiv</code> box drawings double vertical
	U+2552	SF510000	<code>\textSFli</code> box drawings down single and right double
	U+2553	SF520000	<code>\textSFlii</code> box drawings down double and right single
	U+2554	SF390000	<code>\textSFxxxix</code> box drawings double down and right
	U+2555	SF220000	<code>\textSFxxii</code> box drawings down single and left double
	U+2556	SF210000	<code>\textSFxxi</code> box drawings down double and left single
	U+2557	SF250000	<code>\textSFxxv</code> box drawings double down and left
	U+2558	SF500000	<code>\textSF1</code> box drawings up single and right double
	U+2559	SF490000	<code>\textSFlix</code> box drawings up double and right single

Symbol	Unicode	Glyph name	LICR
	U+255A	SF380000	<code>\textSFxxxviii</code> box drawings double up and right
	U+255B	SF280000	<code>\textSFxxviii</code> box drawings up single and left double
	U+255C	SF270000	<code>\textSFxxvii</code> box drawings up double and left single
	U+255D	SF260000	<code>\textSFxxvi</code> box drawings double up and left
	U+255E	SF360000	<code>\textSFxxxvi</code> box drawings vertical single and right double
	U+255F	SF370000	<code>\textSFxxxvii</code> box drawings vertical double and right single
	U+2560	SF420000	<code>\textSFxlii</code> box drawings double vertical and right
	U+2561	SF190000	<code>\textSFxix</code> box drawings vertical single and left double
	U+2562	SF200000	<code>\textSFxx</code> box drawings vertical double and left single
	U+2563	SF230000	<code>\textSFxxiii</code> box drawings double vertical and left
	U+2564	SF470000	<code>\textSFxlvi</code> box drawings down single and horizontal double
	U+2565	SF480000	<code>\textSFxlvi</code> box drawings down double and horizontal single
	U+2566	SF410000	<code>\textSFxli</code> box drawings double down and horizontal
	U+2567	SF450000	<code>\textSFxlv</code> box drawings up single and horizontal double
	U+2568	SF460000	<code>\textSFxlvi</code> box drawings up double and horizontal single
	U+2569	SF400000	<code>\textSFxl</code> box drawings double up and horizontal
	U+256A	SF540000	<code>\textSFliv</code> box drawings vertical single and horizontal double
	U+256B	SF530000	<code>\textSFliii</code> box drawings vertical double and horizontal single
	U+256C	SF440000	<code>\textSFxliv</code> box drawings double vertical and horizontal
	U+2580	upblock	<code>\textupblock</code> upper half block
	U+2584	dnblock	<code>\textdnblock</code> lower half block
	U+2588	block	<code>\textblock</code> full block
	U+258C	lfblock	<code>\textlfblock</code> left half block
	U+2590	rtblock	<code>\textrtblock</code> right half block

Symbol	Unicode	Glyph name	LICR
	U+2591	ltshade light shade	<code>\textltshade</code>
	U+2592	shade medium shade	<code>\textshade</code>
	U+2593	dkshade dark shade	<code>\textdkshade</code>

## 2 Implementation

### 2.1 Identification

```

1 \langle *package\rangle
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pmboxdraw}%
4 [2006/05/03 v1.0 Poor man's box drawing characters (HO)]%
```

### 2.2 Dummy font encoding

Using a dummy font encoding because of

```

\usepackage[utf8]{inputenc}

5 \DeclareFontEncoding{pmboxdraw}{}{}
6 \DeclareFontFamily{pmboxdraw}{pmboxdraw}{}
7 \DeclareFontShape{pmboxdraw}{pmboxdraw}{m}{n}{<-> cmr10 }{}
8 \DeclareFontSubstitution{pmboxdraw}{pmboxdraw}{m}{n}
```

### 2.3 Setup

`\pmboxdrawbox`

```

9 \newcommand*{\pmboxdrawbox}[1]{%
10 \def\pmbd@box{#1}%
11 }
12 \pmboxdrawbox{\strut0}
```

`\pmboxdrawrulewidth`

```

13 \newcommand*{\pmboxdrawrulewidth}[1]{%
14 \def\pmbd@rulewidth{#1}%
15 }
16 \pmboxdrawrulewidth{.1\width}
```

`\pmboxdrawdoublerulesep`

```

17 \newcommand*{\pmboxdrawdoublerulesep}[1]{%
18 \def\pmbd@doublerulesep{#1}%
19 }
20 \pmboxdrawdoublerulesep{.25\width}
```

### 2.4 Block elements

```

21 \def\pmbd@begin{%
22 \begingroup
23 \setbox\z@\hbox{\pmbd@box}%
24 \leavevmode
25 \setbox\tw@\hb@xt@\wd\z@\bgroup
26 }
27 \def\pmbd@end{%
28 \egroup
29 \ht\tw@\ht\z@
30 \dp\tw@\dp\z@
```

```

31 \box\tw@
32 \endgroup
33 }

```

#### 2.4.1 U+2580

##### UPPER HALF BLOCK

```

34 \DeclareTextCommandDefault{\textupblock}{%
35 \pmbd@begin
36 \dimen@-\ht\z@
37 \advance\dimen@dp\z@
38 \vrule\@widthwd\z@\@depth.5\dimen@
39 \pmbd@end
40 }

```

#### 2.4.2 U+2584

##### LOWER HALF BLOCK

```

41 \DeclareTextCommandDefault{\textdnblock}{%
42 \pmbd@begin
43 \dimen@\ht\z@
44 \advance\dimen@-\dp\z@
45 \vrule\@widthwd\z@\@height.5\dimen@
46 \pmbd@end
47 }

```

#### 2.4.3 U+2588

##### FULL BLOCK

```

48 \DeclareTextCommandDefault{\textblock}{%
49 \pmbd@begin
50 \vrule\@widthwd\z@
51 \pmbd@end
52 }

```

#### 2.4.4 U+258C

##### LEFT HALF BLOCK

```

53 \DeclareTextCommandDefault{\textlfblock}{%
54 \pmbd@begin
55 \vrule\@width.5wd\z@
56 \hfill
57 \pmbd@end
58 }

```

#### 2.4.5 U+2590

##### RIGHT HALF BLOCK

```

59 \DeclareTextCommandDefault{\textrtblock}{%
60 \pmbd@begin
61 \hfill
62 \vrule\@width.5wd\z@
63 \pmbd@end
64 }

```

#### 2.4.6 U+2591

##### LIGHT SHADE

```

65 \DeclareTextCommandDefault{\textltshade}{%
66 \pmbd@begin
67 \@ifundefined{textcolor}{%
68 \pmbd@colorwarning\textltshade

```

```

69   }{%
70     \textcolor[gray]{.75}%
71   }{%
72     \vrule\@width\wd\z@
73   }%
74   \pmbd@end
75 }

```

#### 2.4.7 U+2592

##### MEDIUM SHADE

```

76 \DeclareTextCommandDefault{\textshade}{%
77   \pmbd@begin
78     \@ifundefined{textcolor}{%
79       \pmbd@colorwarning\textshade
80     }{%
81       \textcolor[gray]{.5}%
82     }{%
83       \vrule\@width\wd\z@
84     }%
85   \pmbd@end
86 }

```

#### 2.4.8 U+2593

##### DARK SHADE

```

87 \DeclareTextCommandDefault{\textdkshade}{%
88   \pmbd@begin
89     \@ifundefined{textcolor}{%
90       \pmbd@colorwarning\textdkshade
91     }{%
92       \textcolor[gray]{.25}%
93     }{%
94       \vrule\@width\wd\z@
95     }%
96   \pmbd@end
97 }

```

#### 2.4.9 Color warning

```

\pmbd@colorwarning
98 \def\pmbd@colorwarning#1{%
99   \PackageWarning{pmboxdraw}{%
100     \string#1\space requires package \string'color\string'\MessageBreak
101   }%
102 % \PackageWarningNoLine{pmboxdraw}{%
103 %   Package \string'color\string' is required for\MessageBreak
104 %   \string\textltshade, \string\textshade, and \string\textdkshade
105 % }%
106 % \global\let\pmbd@colorwarning\@secondoftwo
107 % \@firstofone
108 }

```

### 2.5 Box drawing, light single lines

```

\pmbd@beginA
109 \def\pmbd@beginA{%
110   \pmbd@begin
111   \def\width{\wd\z@}%
112   \def\height{\ht\z@}%
113   \def\depth{\dp\z@}%

```

```

114 \setlength{\dimen@}{\pmbd@rulewidth}%
115 \edef\pmbd@rulewidth{\number\dimen@ sp}%
116 }

```

### 2.5.1 U+2500

#### BOX DRAWINGS LIGHT HORIZONTAL

```

117 \DeclareTextCommandDefault{\textSFx}{%
118 \pmbd@beginA
119 \dimen@ht\z@
120 \advance\dimen@-\dp\z@
121 \dimen\tw@\dimen@
122 \advance\dimen@\pmbd@rulewidth
123 \advance\dimen\tw@-\pmbd@rulewidth
124 \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
125 \pmbd@end
126 }

```

### 2.5.2 U+2502

#### BOX DRAWINGS LIGHT VERTICAL

```

127 \DeclareTextCommandDefault{\textSFxi}{%
128 \pmbd@beginA
129 \hss
130 \vrule\@width\pmbd@rulewidth
131 \hss
132 \pmbd@end
133 }

```

### 2.5.3 U+250C

#### BOX DRAWINGS LIGHT DOWN AND RIGHT

```

134 \DeclareTextCommandDefault{\textSFii}{%
135 \pmbd@beginA
136 \dimen@ht\z@
137 \advance\dimen@-\dp\z@
138 \dimen\tw@\dimen@
139 \advance\dimen@\pmbd@rulewidth
140 \advance\dimen\tw@-\pmbd@rulewidth
141 \rlap{%
142 \hb@xt@\wd\z@{%
143 \hss
144 \vrule\@width\pmbd@rulewidth\@height.5\dimen@\@depth\dp\z@
145 \hss
146 }%
147 }%
148 \hfill
149 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
150 \pmbd@end
151 }

```

### 2.5.4 U+2510

#### BOX DRAWINGS LIGHT DOWN AND LEFT

```

152 \DeclareTextCommandDefault{\textSFiii}{%
153 \pmbd@beginA
154 \dimen@ht\z@
155 \advance\dimen@-\dp\z@
156 \dimen\tw@\dimen@
157 \advance\dimen@\pmbd@rulewidth
158 \advance\dimen\tw@-\pmbd@rulewidth

```



```

159 \rlap{%
160 \hb@xt@\wd\z@{%
161 \hss
162 \vrule\@width\pmbd@rulewidth\@height.5\dimen@\@depth\dp\z@
163 \hss
164 }%
165 }%
166 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
167 \hfill
168 \pmbd@end
169 }

```

### 2.5.5 U+2514

#### BOX DRAWINGS LIGHT UP AND RIGHT

```

170 \DeclareTextCommandDefault{\textSFii}{%
171 \pmbd@beginA
172 \dimen@\ht\z@
173 \advance\dimen@-\dp\z@
174 \dimen\tw@\dimen@
175 \advance\dimen@\pmbd@rulewidth
176 \advance\dimen\tw@-\pmbd@rulewidth
177 \rlap{%
178 \hb@xt@\wd\z@{%
179 \hss
180 \vrule\@width\pmbd@rulewidth\@height\ht\z@\@depth-.5\dimen\tw@
181 \hss
182 }%
183 }%
184 \hfill
185 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
186 \pmbd@end
187 }

```

### 2.5.6 U+2518

#### BOX DRAWINGS LIGHT UP AND LEFT

```

188 \DeclareTextCommandDefault{\textSFiv}{%
189 \pmbd@beginA
190 \dimen@\ht\z@
191 \advance\dimen@-\dp\z@
192 \dimen\tw@\dimen@
193 \advance\dimen@\pmbd@rulewidth
194 \advance\dimen\tw@-\pmbd@rulewidth
195 \rlap{%
196 \hb@xt@\wd\z@{%
197 \hss
198 \vrule\@width\pmbd@rulewidth\@height\ht\z@\@depth-.5\dimen\tw@
199 \hss
200 }%
201 }%
202 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
203 \hfill
204 \pmbd@end
205 }

```

### 2.5.7 U+251C

#### BOX DRAWINGS LIGHT VERTICAL AND RIGHT

```

206 \DeclareTextCommandDefault{\textSFviii}{%
207 \pmbd@beginA
208 \dimen@\ht\z@

```

```

209 \advance\dimen@-\dp\z@
210 \dimen\tw@\dimen@
211 \advance\dimen@\pmbd@rulewidth
212 \advance\dimen\tw@-\pmbd@rulewidth
213 \rlap{%
214 \hb@xt@\wd\z@{%
215 \hss
216 \vrule\@width\pmbd@rulewidth\@height\ht\z@\@depth\dp\z@
217 \hss
218 }%
219 }%
220 \hfill
221 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
222 \pmbd@end
223 }

```

### 2.5.8 U+2524

#### BOX DRAWINGS LIGHT VERTICAL AND LEFT

```

224 \DeclareTextCommandDefault{\textSFix}{%
225 \pmbd@beginA
226 \dimen@\ht\z@
227 \advance\dimen@-\dp\z@
228 \dimen\tw@\dimen@
229 \advance\dimen@\pmbd@rulewidth
230 \advance\dimen\tw@-\pmbd@rulewidth
231 \rlap{%
232 \hb@xt@\wd\z@{%
233 \hss
234 \vrule\@width\pmbd@rulewidth\@height\ht\z@\@depth\dp\z@
235 \hss
236 }%
237 }%
238 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
239 \hfill
240 \pmbd@end
241 }

```

### 2.5.9 U+252C

#### BOX DRAWINGS LIGHT DOWN AND HORIZONTAL

```

242 \DeclareTextCommandDefault{\textSFvi}{%
243 \pmbd@beginA
244 \dimen@\ht\z@
245 \advance\dimen@-\dp\z@
246 \dimen\tw@\dimen@
247 \advance\dimen@\pmbd@rulewidth
248 \advance\dimen\tw@-\pmbd@rulewidth
249 \rlap{%
250 \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
251 }%
252 \hss
253 \vrule\@width\pmbd@rulewidth\@height.5\dimen@
254 \hss
255 \pmbd@end
256 }

```

### 2.5.10 U+2534

#### BOX DRAWINGS LIGHT UP AND HORIZONTAL

```

257 \DeclareTextCommandDefault{\textSFvii}{%
258 \pmbd@beginA

```

```

259 \dimen@ht\z@
260 \advance\dimen@-\dp\z@
261 \dimen\tw@\dimen@
262 \advance\dimen@\pmbd@rulewidth
263 \advance\dimen\tw@-\pmbd@rulewidth
264 \rlap{%
265 \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
266 }%
267 \hss
268 \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
269 \hss
270 \pmbd@end
271 }

```

### 2.5.11 U+253C

#### BOX DRAWINGS LIGHT VERTICAL AND HORIZONTAL

```

272 \DeclareTextCommandDefault{\textSFv}{%
273 \pmbd@beginA
274 \dimen@ht\z@
275 \advance\dimen@-\dp\z@
276 \dimen\tw@\dimen@
277 \advance\dimen@\pmbd@rulewidth
278 \advance\dimen\tw@-\pmbd@rulewidth
279 \rlap{%
280 \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
281 }%
282 \hss
283 \vrule\@width\pmbd@rulewidth
284 \hss
285 \pmbd@end
286 }

```

## 2.6 Box drawing, double lines

\pmbd@beginB

```

287 \def\pmbd@beginB{%
288 \pmbd@beginA
289 \setlength{\dimen@}{\pmbd@doublerulesep}%
290 \edef\pmbd@doublesepH{\number\dimen@ sp}%
291 }

```

\pmbd@beginC

```

292 \def\pmbd@beginC{%
293 \pmbd@beginB
294 \advance\dimen@\pmbd@rulewidth
295 \edef\pmbd@doublesepV{\number\dimen@ sp}%
296 }

```

### 2.6.1 U+2550

#### BOX DRAWINGS DOUBLE HORIZONTAL

```

297 \DeclareTextCommandDefault{\textSFxliii}{%
298 \pmbd@beginC
299 \dimen@ht\z@
300 \advance\dimen@-\dp\z@
301 \dimen\tw@\dimen@
302 \advance\dimen@\pmbd@rulewidth
303 \advance\dimen\tw@-\pmbd@rulewidth
304 \rlap{%
305 \advance\dimen@\pmbd@doublesepV

```

```

306      \advance\dimen\tw@\pmbd@doublesepV
307      \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
308    }%
309    \advance\dimen@-\pmbd@doublesepV
310    \advance\dimen\tw@-\pmbd@doublesepV
311    \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
312  \pmbd@end
313 }

```

## 2.6.2 U+2551

### BOX DRAWINGS DOUBLE VERTICAL

```

314 \DeclareTextCommandDefault{\textSFxxiv}{%
315   \pmbd@beginB
316     \hss
317     \vrule\@width\pmbd@rulewidth
318     \kern\pmbd@doublesepH
319     \vrule\@width\pmbd@rulewidth
320     \hss
321   \pmbd@end
322 }

```

## 2.6.3 U+2552

### BOX DRAWINGS DOWN SINGLE AND RIGHT DOUBLE

```

323 \DeclareTextCommandDefault{\textSFlii}{%
324   \pmbd@beginC
325     \dimen@\ht\z@
326     \advance\dimen@-\dp\z@
327     \dimen\tw@\dimen@
328     \advance\dimen@\pmbd@rulewidth
329     \advance\dimen\tw@-\pmbd@rulewidth
330     \rlap{%
331       \kern.5\wd\z@
332       \advance\dimen@-\pmbd@doublesepV
333       \advance\dimen\tw@-\pmbd@doublesepV
334       \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
335     }%
336     \advance\dimen@\pmbd@doublesepV
337     \advance\dimen\tw@\pmbd@doublesepV
338     \rlap{%
339       \kern.5\wd\z@
340       \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
341     }%
342     \hss
343     \vrule\@width\pmbd@rulewidth\@height.5\dimen@
344     \hss
345   \pmbd@end
346 }

```

## 2.6.4 U+2553

### BOX DRAWINGS DOWN DOUBLE AND RIGHT SINGLE

```

347 \DeclareTextCommandDefault{\textSFlii}{%
348   \pmbd@beginB
349     \dimen@\ht\z@
350     \advance\dimen@-\dp\z@
351     \dimen\tw@\dimen@
352     \advance\dimen@\pmbd@rulewidth
353     \advance\dimen\tw@-\pmbd@rulewidth
354     \rlap{%
355       \dimen4 \wd\z@

```

```

356      \advance\dimen4 \pmbd@doublesepH
357      \hb@xt@\wd\z@{%
358        \hfill
359        \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
360      }%
361    }%
362    \hss
363    \vrule\@width\pmbd@rulewidth\@height.5\dimen@
364    \kern\pmbd@doublesepH
365    \vrule\@width\pmbd@rulewidth\@height.5\dimen@
366    \hss
367    \pmbd@end
368  }

```

### 2.6.5 U+2554

#### BOX DRAWINGS DOUBLE DOWN AND RIGHT

```

369 \DeclareTextCommandDefault{\textSFxxxix}{%
370   \pmbd@beginC
371     \dimen@\ht\z@
372     \advance\dimen@-\dp\z@
373     \dimen\tw@\dimen@
374     \advance\dimen@\pmbd@rulewidth
375     \advance\dimen\tw@-\pmbd@rulewidth
376     \dimen4 \wd\z@
377     \begingroup
378       \advance\dimen@\pmbd@doublesepV
379       \advance\dimen\tw@\pmbd@doublesepV
380       \advance\dimen4 \pmbd@doublesepH
381       \rlap{%
382         \hb@xt@\wd\z@{%
383           \hss
384           \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
385         }%
386       }%
387       \rlap{%
388         \hb@xt@\wd\z@{%
389           \hss
390           \vrule\@width\pmbd@rulewidth\@height.5\dimen@\@depth\dp\z@
391           \kern\pmbd@doublesepH
392           \kern\pmbd@rulewidth
393           \hss
394         }%
395       }%
396     \endgroup
397     \advance\dimen@-\pmbd@doublesepV
398     \advance\dimen\tw@-\pmbd@doublesepV
399     \advance\dimen4 -\pmbd@doublesepH
400     \rlap{%
401       \hb@xt@\wd\z@{%
402         \hss
403         \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
404       }%
405     }%
406     \hss
407     \kern\pmbd@rulewidth
408     \kern\pmbd@doublesepH
409     \vrule\@width\pmbd@rulewidth\@height.5\dimen@
410     \hss
411     \pmbd@end
412  }

```

### 2.6.6 U+2555

#### BOX DRAWINGS DOWN SINGLE AND LEFT DOUBLE

```
413 \DeclareTextCommandDefault{\textSFxxii}{%
414   \pmbd@beginC
415     \dimen@ \ht \z@
416     \advance \dimen@ - \dp \z@
417     \dimen \tw@ \dimen@
418     \advance \dimen@ \pmbd@rulewidth
419     \advance \dimen \tw@ - \pmbd@rulewidth
420     \rlap{%
421       \advance \dimen@ - \pmbd@doublesepV
422       \advance \dimen \tw@ - \pmbd@doublesepV
423       \vrule \@width .5 \wd \z@ \@height .5 \dimen@ \@depth -.5 \dimen \tw@
424     }%
425     \advance \dimen@ \pmbd@doublesepV
426     \advance \dimen \tw@ \pmbd@doublesepV
427     \rlap{%
428       \vrule \@width .5 \wd \z@ \@height .5 \dimen@ \@depth -.5 \dimen \tw@
429     }%
430     \hss
431     \vrule \@width \pmbd@rulewidth \@height .5 \dimen@
432     \hss
433   \pmbd@end
434 }
```

### 2.6.7 U+2556

#### BOX DRAWINGS DOWN DOUBLE AND LEFT SINGLE

```
435 \DeclareTextCommandDefault{\textSFxxi}{%
436   \pmbd@beginB
437     \dimen@ \ht \z@
438     \advance \dimen@ - \dp \z@
439     \dimen \tw@ \dimen@
440     \advance \dimen@ \pmbd@rulewidth
441     \advance \dimen \tw@ - \pmbd@rulewidth
442     \rlap{%
443       \dimen4 \wd \z@
444       \advance \dimen4 \pmbd@doublesepH
445       \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
446     }%
447     \hss
448     \vrule \@width \pmbd@rulewidth \@height .5 \dimen@
449     \kern \pmbd@doublesepH
450     \vrule \@width \pmbd@rulewidth \@height .5 \dimen@
451     \hss
452   \pmbd@end
453 }
```

### 2.6.8 U+2557

#### BOX DRAWINGS DOUBLE DOWN AND LEFT

```
454 \DeclareTextCommandDefault{\textSFxxv}{%
455   \pmbd@beginC
456     \dimen@ \ht \z@
457     \advance \dimen@ - \dp \z@
458     \dimen \tw@ \dimen@
459     \advance \dimen@ \pmbd@rulewidth
460     \advance \dimen \tw@ - \pmbd@rulewidth
461     \dimen4 \wd \z@
462     \begingroup
463       \advance \dimen@ \pmbd@doublesepV
```

```

464 \advance\dimen\tw@\pmbd@doublesepV
465 \advance\dimen4 \pmbd@doublesepH
466 \rlap{%
467 \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
468 }%
469 \rlap{%
470 \hb@xt@\wd\z@{%
471 \hss
472 \kern\pmbd@rulewidth
473 \kern\pmbd@doublesepH
474 \vrule\@width\pmbd@rulewidth\@height.5\dimen@\@depth\dp\z@
475 \hss
476 }%
477 }%
478 \endgroup
479 \advance\dimen@-\pmbd@doublesepV
480 \advance\dimen\tw@-\pmbd@doublesepV
481 \advance\dimen4 -\pmbd@doublesepH
482 \rlap{%
483 \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
484 }%
485 \hss
486 \vrule\@width\pmbd@rulewidth\@height.5\dimen@
487 \kern\pmbd@doublesepH
488 \kern\pmbd@rulewidth
489 \hss
490 \pmbd@end
491 }

```

## 2.6.9 U+2558

### BOX DRAWINGS UP SINGLE AND RIGHT DOUBLE

```

492 \DeclareTextCommandDefault{\textSF1}{%
493 \pmbd@beginC
494 \dimen@\ht\z@
495 \advance\dimen@-\dp\z@
496 \dimen\tw@\dimen@
497 \advance\dimen@\pmbd@rulewidth
498 \advance\dimen\tw@-\pmbd@rulewidth
499 \rlap{%
500 \advance\dimen@\pmbd@doublesepV
501 \advance\dimen\tw@\pmbd@doublesepV
502 \kern.5\wd\z@
503 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
504 }%
505 \advance\dimen@-\pmbd@doublesepV
506 \advance\dimen\tw@-\pmbd@doublesepV
507 \rlap{%
508 \kern.5\wd\z@
509 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
510 }%
511 \hss
512 \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
513 \hss
514 \pmbd@end
515 }

```

## 2.6.10 U+2559

### BOX DRAWINGS UP DOUBLE AND RIGHT SINGLE

```

516 \DeclareTextCommandDefault{\textSFxlix}{%
517 \pmbd@beginB

```

```

518 \dimen@ \ht \z@
519 \advance \dimen@ - \dp \z@
520 \dimen \tw@ \dimen@
521 \advance \dimen@ \pmbd@rulewidth
522 \advance \dimen \tw@ - \pmbd@rulewidth
523 \rlap{%
524 \dimen4 \wd \z@
525 \advance \dimen4 \pmbd@doublesepH
526 \hb@xt@ \wd \z@ {%
527 \hfill
528 \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
529 }%
530 }%
531 \hss
532 \vrule \@width \pmbd@rulewidth \@depth -.5 \dimen \tw@
533 \kern \pmbd@doublesepH
534 \vrule \@width \pmbd@rulewidth \@depth -.5 \dimen \tw@
535 \hss
536 \pmbd@end
537 }

```

## 2.6.11 U+255A

### BOX DRAWINGS DOUBLE UP AND RIGHT

```

538 \DeclareTextCommandDefault{\textSFxxxviii}{%
539 \pmbd@beginC
540 \dimen@ \ht \z@
541 \advance \dimen@ - \dp \z@
542 \dimen \tw@ \dimen@
543 \advance \dimen@ \pmbd@rulewidth
544 \advance \dimen \tw@ - \pmbd@rulewidth
545 \dimen4 \wd \z@
546 \begingroup
547 \advance \dimen@ \pmbd@doublesepV
548 \advance \dimen \tw@ \pmbd@doublesepV
549 \advance \dimen4 - \pmbd@doublesepH
550 \rlap{%
551 \hb@xt@ \wd \z@ {%
552 \hss
553 \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
554 }%
555 }%
556 \rlap{%
557 \hb@xt@ \wd \z@ {%
558 \hss
559 \kern \pmbd@rulewidth
560 \kern \pmbd@doublesepH
561 \vrule \@width \pmbd@rulewidth \@height \ht \z@ \@depth -.5 \dimen \tw@
562 \hss
563 }%
564 }%
565 \endgroup
566 \advance \dimen@ - \pmbd@doublesepV
567 \advance \dimen \tw@ - \pmbd@doublesepV
568 \advance \dimen4 \pmbd@doublesepH
569 \rlap{%
570 \hb@xt@ \wd \z@ {%
571 \hss
572 \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
573 }%
574 }%
575 \hss

```



```

576 \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
577 \kern\pmbd@doublesepH
578 \kern\pmbd@rulewidth
579 \hss
580 \pmbd@end
581 }

```

## 2.6.12 U+255B

### BOX DRAWINGS UP SINGLE AND LEFT DOUBLE

```

582 \DeclareTextCommandDefault{\textSFxxviii}{%
583 \pmbd@beginC
584 \dimen@ht\z@
585 \advance\dimen@-\dp\z@
586 \dimen\tw@\dimen@
587 \advance\dimen@\pmbd@rulewidth
588 \advance\dimen\tw@-\pmbd@rulewidth
589 \rlap{%
590 \advance\dimen@\pmbd@doublesepV
591 \advance\dimen\tw@\pmbd@doublesepV
592 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
593 }%
594 \advance\dimen@-\pmbd@doublesepV
595 \advance\dimen\tw@-\pmbd@doublesepV
596 \rlap{%
597 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
598 }%
599 \hss
600 \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
601 \hss
602 \pmbd@end
603 }

```

## 2.6.13 U+255C

### BOX DRAWINGS UP DOUBLE AND LEFT SINGLE

```

604 \DeclareTextCommandDefault{\textSFxxvii}{%
605 \pmbd@beginB
606 \dimen@ht\z@
607 \advance\dimen@-\dp\z@
608 \dimen\tw@\dimen@
609 \advance\dimen@\pmbd@rulewidth
610 \advance\dimen\tw@-\pmbd@rulewidth
611 \rlap{%
612 \dimen4 \wd\z@
613 \advance\dimen4 \pmbd@doublesepH
614 \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
615 }%
616 \hss
617 \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
618 \kern\pmbd@doublesepH
619 \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
620 \hss
621 \pmbd@end
622 }

```

## 2.6.14 U+255D

### BOX DRAWINGS DOUBLE UP AND LEFT

```

623 \DeclareTextCommandDefault{\textSFxxvi}{%
624 \pmbd@beginC
625 \dimen@ht\z@

```

```

626 \advance\dimen@-\dp\z@
627 \dimen\tw@\dimen@
628 \advance\dimen@\pmbd@rulewidth
629 \advance\dimen\tw@-\pmbd@rulewidth
630 \dimen4 \wd\z@
631 \begingroup
632 \advance\dimen@\pmbd@doublesepV
633 \advance\dimen\tw@\pmbd@doublesepV
634 \advance\dimen4 -\pmbd@doublesepH
635 \rlap{%
636 \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
637 }%
638 \rlap{%
639 \hb@xt@\wd\z@{%
640 \hss
641 \vrule\@width\pmbd@rulewidth\@height\ht\z@\@depth-.5\dimen\tw@
642 \kern\pmbd@doublesepH
643 \kern\pmbd@rulewidth
644 \hss
645 }%
646 }%
647 \endgroup
648 \advance\dimen@-\pmbd@doublesepV
649 \advance\dimen\tw@-\pmbd@doublesepV
650 \advance\dimen4 \pmbd@doublesepH
651 \rlap{%
652 \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
653 }%
654 \hss
655 \kern\pmbd@rulewidth
656 \kern\pmbd@doublesepH
657 \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
658 \hss
659 \pmbd@end
660 }

```

## 2.6.15 U+255E

### BOX DRAWINGS VERTICAL SINGLE AND RIGHT DOUBLE

```

661 \DeclareTextCommandDefault{\textSFxxxvi}{%
662 \pmbd@beginC
663 \dimen@\ht\z@
664 \advance\dimen@-\dp\z@
665 \dimen\tw@\dimen@
666 \advance\dimen@\pmbd@rulewidth
667 \advance\dimen\tw@-\pmbd@rulewidth
668 \rlap{%
669 \kern.5\wd\z@
670 \advance\dimen@\pmbd@doublesepV
671 \advance\dimen\tw@\pmbd@doublesepV
672 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
673 }%
674 \rlap{%
675 \kern.5\wd\z@
676 \advance\dimen@-\pmbd@doublesepV
677 \advance\dimen\tw@-\pmbd@doublesepV
678 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
679 }%
680 \hss
681 \vrule\@width\pmbd@rulewidth
682 \hss
683 \pmbd@end

```

684 }

## 2.6.16 U+255F

### BOX DRAWINGS VERTICAL DOUBLE AND RIGHT SINGLE

```
685 \DeclareTextCommandDefault{\textSFxxxvii}{%
686   \pmbd@beginB
687     \dimen@ \ht \z@
688     \advance \dimen@ - \dp \z@
689     \dimen \tw@ \dimen@
690     \advance \dimen@ \pmbd@rulewidth
691     \advance \dimen \tw@ - \pmbd@rulewidth
692     \rlap{%
693       \dimen4 \wd \z@
694       \advance \dimen4 - \pmbd@doublesepH
695       \hb@xt@ \wd \z@ {%
696         \hfill
697         \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
698       }%
699     }%
700     \hss
701     \vrule \@width \pmbd@rulewidth
702     \kern \pmbd@doublesepH
703     \vrule \@width \pmbd@rulewidth
704     \hss
705   \pmbd@end
706 }
```

## 2.6.17 U+2560

### BOX DRAWINGS DOUBLE VERTICAL AND RIGHT

```
707 \DeclareTextCommandDefault{\textSFxlii}{%
708   \pmbd@beginC
709     \dimen@ \ht \z@
710     \advance \dimen@ - \dp \z@
711     \dimen \tw@ \dimen@
712     \advance \dimen@ \pmbd@rulewidth
713     \advance \dimen \tw@ - \pmbd@rulewidth
714     \dimen4 \wd \z@
715     \advance \dimen4 - \pmbd@doublesepH
716     \begingroup
717       \advance \dimen@ \pmbd@doublesepV
718       \advance \dimen \tw@ \pmbd@doublesepV
719       \rlap{%
720         \hb@xt@ \wd \z@ {%
721           \hss
722           \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
723         }%
724       }%
725       \rlap{%
726         \hb@xt@ \wd \z@ {%
727           \hss
728           \kern \pmbd@rulewidth
729           \kern \pmbd@doublesepH
730           \vrule \@width \pmbd@rulewidth \@height \ht \z@ \@depth -.5 \dimen \tw@
731           \hss
732         }%
733       }%
734     \endgroup
735     \advance \dimen@ - \pmbd@doublesepV
736     \advance \dimen \tw@ - \pmbd@doublesepV
737     \rlap{%
```

```

738      \hb@xt@\wd\z@{%
739      \hss
740      \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
741      }%
742      }%
743      \hss
744      \vrule\@width\pmbd@rulewidth
745      \kern\pmbd@doublesepH
746      \vrule\@width\pmbd@rulewidth\@height.5\dimen@
747      \hss
748      \pmbd@end
749      }

```

## 2.6.18 U+2561

### BOX DRAWINGS VERTICAL SINGLE AND LEFT DOUBLE

```

750 \DeclareTextCommandDefault{\textSFxix}{%
751 \pmbd@beginC
752 \dimen@\ht\z@
753 \advance\dimen@-\dp\z@
754 \dimen\tw@\dimen@
755 \advance\dimen@\pmbd@rulewidth
756 \advance\dimen\tw@-\pmbd@rulewidth
757 \rlap{%
758 \advance\dimen@\pmbd@doublesepV
759 \advance\dimen\tw@\pmbd@doublesepV
760 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
761 }%
762 \rlap{%
763 \advance\dimen@-\pmbd@doublesepV
764 \advance\dimen\tw@-\pmbd@doublesepV
765 \vrule\@width.5\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
766 }%
767 \hss
768 \vrule\@width\pmbd@rulewidth
769 \hss
770 \pmbd@end
771 }

```

## 2.6.19 U+2562

### BOX DRAWINGS VERTICAL DOUBLE AND LEFT SINGLE

```

772 \DeclareTextCommandDefault{\textSFxx}{%
773 \pmbd@beginB
774 \dimen@\ht\z@
775 \advance\dimen@-\dp\z@
776 \dimen\tw@\dimen@
777 \advance\dimen@\pmbd@rulewidth
778 \advance\dimen\tw@-\pmbd@rulewidth
779 \rlap{%
780 \dimen4 \wd\z@
781 \advance\dimen4 -\pmbd@doublesepH
782 \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
783 }%
784 \hss
785 \vrule\@width\pmbd@rulewidth
786 \kern\pmbd@doublesepH
787 \vrule\@width\pmbd@rulewidth
788 \hss
789 \pmbd@end
790 }

```

## 2.6.20 U+2563

### BOX DRAWINGS DOUBLE VERTICAL AND LEFT

```
791 \DeclareTextCommandDefault{\textSFxxiii}{%
792   \pmbd@beginC
793     \dimen@ \ht \z@
794     \advance \dimen@ - \dp \z@
795     \dimen \tw@ \dimen@
796     \advance \dimen@ \pmbd@rulewidth
797     \advance \dimen \tw@ - \pmbd@rulewidth
798     \dimen4 \wd \z@
799     \advance \dimen4 - \pmbd@doublesepH
800     \begingroup
801       \advance \dimen@ \pmbd@doublesepV
802       \advance \dimen \tw@ \pmbd@doublesepV
803       \rlap{%
804         \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
805       }%
806       \rlap{%
807         \hb@xt@ \wd \z@ {%
808           \hss
809           \vrule \@width \pmbd@rulewidth \@height \ht \z@ \@depth -.5 \dimen \tw@
810           \kern \pmbd@doublesepH
811           \kern \pmbd@rulewidth
812           \hss
813         }%
814       }%
815     \endgroup
816     \advance \dimen@ - \pmbd@doublesepV
817     \advance \dimen \tw@ - \pmbd@doublesepV
818     \rlap{%
819       \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
820     }%
821     \hss
822     \vrule \@width \pmbd@rulewidth \@height .5 \dimen@
823     \kern \pmbd@doublesepH
824     \vrule \@width \pmbd@rulewidth
825     \hss
826   \pmbd@end
827 }
```

## 2.6.21 U+2564

### BOX DRAWINGS DOWN SINGLE AND HORIZONTAL DOUBLE

```
828 \DeclareTextCommandDefault{\textSFxlvi}{%
829   \pmbd@beginC
830     \dimen@ \ht \z@
831     \advance \dimen@ - \dp \z@
832     \dimen \tw@ \dimen@
833     \advance \dimen@ \pmbd@rulewidth
834     \advance \dimen \tw@ - \pmbd@rulewidth
835     \rlap{%
836       \advance \dimen@ \pmbd@doublesepV
837       \advance \dimen \tw@ \pmbd@doublesepV
838       \vrule \@width \wd \z@ \@height .5 \dimen@ \@depth -.5 \dimen \tw@
839     }%
840     \advance \dimen@ - \pmbd@doublesepV
841     \advance \dimen \tw@ - \pmbd@doublesepV
842     \rlap{%
843       \vrule \@width \wd \z@ \@height .5 \dimen@ \@depth -.5 \dimen \tw@
844     }%
845     \hss
```

```

846 \vrule\@width\pmbd@rulewidth\@height.5\dimen@
847 \hss
848 \pmbd@end
849 }

```

## 2.6.22 U+2565

### BOX DRAWINGS DOWN DOUBLE AND HORIZONTAL SINGLE

```

850 \DeclareTextCommandDefault{\textSFxlvi}{%
851 \pmbd@beginB
852 \dimen@ \ht \z@
853 \advance \dimen@ - \dp \z@
854 \dimen \tw@ \dimen@
855 \advance \dimen@ \pmbd@rulewidth
856 \advance \dimen \tw@ - \pmbd@rulewidth
857 \rlap{%
858 \vrule\@width\wd \z@ \@height.5\dimen@ \@depth-.5\dimen \tw@
859 }%
860 \hss
861 \vrule\@width\pmbd@rulewidth\@height.5\dimen@
862 \kern \pmbd@doublesepH
863 \vrule\@width\pmbd@rulewidth\@height.5\dimen@
864 \hss
865 \pmbd@end
866 }

```

## 2.6.23 U+2566

### BOX DRAWINGS DOUBLE DOWN AND HORIZONTAL

```

867 \DeclareTextCommandDefault{\textSFxli}{%
868 \pmbd@beginC
869 \dimen@ \ht \z@
870 \advance \dimen@ - \dp \z@
871 \dimen \tw@ \dimen@
872 \advance \dimen@ \pmbd@rulewidth
873 \advance \dimen \tw@ - \pmbd@rulewidth
874 \dimen4 \wd \z@
875 \advance \dimen4 - \pmbd@doublesepH
876 \rlap{%
877 \advance \dimen@ \pmbd@doublesepV
878 \advance \dimen \tw@ \pmbd@doublesepV
879 \vrule\@width\wd \z@ \@height.5\dimen@ \@depth-.5\dimen \tw@
880 }%
881 \advance \dimen@ - \pmbd@doublesepV
882 \advance \dimen \tw@ - \pmbd@doublesepV
883 \rlap{%
884 \hb@xt@ \wd \z@ {%
885 \vrule\@width.5\dimen4 \@height.5\dimen@ \@depth-.5\dimen \tw@
886 \hss
887 \vrule\@width.5\dimen4 \@height.5\dimen@ \@depth-.5\dimen \tw@
888 }%
889 }%
890 \hss
891 \vrule\@width\pmbd@rulewidth\@height.5\dimen@
892 \kern \pmbd@doublesepH
893 \vrule\@width\pmbd@rulewidth\@height.5\dimen@
894 \hss
895 \pmbd@end
896 }

```

### 2.6.24 U+2567

#### BOX DRAWINGS UP SINGLE AND HORIZONTAL DOUBLE

```
897 \DeclareTextCommandDefault{\textSFxlV}{%
898   \pmbd@beginC
899     \dimen@ht\z@
900     \advance\dimen@-\dp\z@
901     \dimen\tw@\dimen@
902     \advance\dimen@\pmbd@rulewidth
903     \advance\dimen\tw@-\pmbd@rulewidth
904     \rlap{%
905       \advance\dimen@-\pmbd@doublesepV
906       \advance\dimen\tw@-\pmbd@doublesepV
907       \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
908     }%
909     \advance\dimen@\pmbd@doublesepV
910     \advance\dimen\tw@\pmbd@doublesepV
911     \rlap{%
912       \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
913     }%
914     \hss
915     \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
916     \hss
917   \pmbd@end
918 }
```

### 2.6.25 U+2568

#### BOX DRAWINGS UP DOUBLE AND HORIZONTAL SINGLE

```
919 \DeclareTextCommandDefault{\textSFxlvI}{%
920   \pmbd@beginB
921     \dimen@ht\z@
922     \advance\dimen@-\dp\z@
923     \dimen\tw@\dimen@
924     \advance\dimen@\pmbd@rulewidth
925     \advance\dimen\tw@-\pmbd@rulewidth
926     \rlap{%
927       \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
928     }%
929     \hss
930     \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
931     \kern\pmbd@doublesepH
932     \vrule\@width\pmbd@rulewidth\@depth-.5\dimen\tw@
933     \hss
934   \pmbd@end
935 }
```

### 2.6.26 U+2569

#### BOX DRAWINGS DOUBLE UP AND HORIZONTAL

```
936 \DeclareTextCommandDefault{\textSFxl}{%
937   \pmbd@beginC
938     \dimen@ht\z@
939     \advance\dimen@-\dp\z@
940     \dimen\tw@\dimen@
941     \advance\dimen@\pmbd@rulewidth
942     \advance\dimen\tw@-\pmbd@rulewidth
943     \dimen4 \wd\z@
944     \advance\dimen4 -\pmbd@doublesepH
945     \begingroup
946       \advance\dimen@\pmbd@doublesepV
947       \advance\dimen\tw@\pmbd@doublesepV
```

```

948 \rlap{%
949 \hb@xt@\wd\z@{%
950 \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
951 \hss
952 \vrule\@width.5\dimen4 \@height.5\dimen@\@depth-.5\dimen\tw@
953 }%
954 }%
955 \rlap{%
956 \hb@xt@\wd\z@{%
957 \hss
958 \vrule\@width\pmbd@rulewidth\@height\ht\z@\@depth-.5\dimen\tw@
959 \kern\pmbd@doublesepH
960 \vrule\@width\pmbd@rulewidth\@height\ht\z@\@depth-.5\dimen\tw@
961 \hss
962 }%
963 }%
964 \endgroup
965 \advance\dimen@-\pmbd@doublesepV
966 \advance\dimen\tw@-\pmbd@doublesepV
967 \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
968 \pmbd@end
969 }

```

## 2.6.27 U+256A

BOX DRAWINGS VERTICAL SINGLE AND HORIZONTAL DOUBLE

```

970 \DeclareTextCommandDefault{\textSFliiv}{%
971 \pmbd@beginC
972 \dimen@\ht\z@
973 \advance\dimen@-\dp\z@
974 \dimen\tw@\dimen@
975 \advance\dimen@\pmbd@rulewidth
976 \advance\dimen\tw@-\pmbd@rulewidth
977 \rlap{%
978 \advance\dimen@\pmbd@doublesepV
979 \advance\dimen\tw@\pmbd@doublesepV
980 \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
981 }%
982 \rlap{%
983 \advance\dimen@-\pmbd@doublesepV
984 \advance\dimen\tw@-\pmbd@doublesepV
985 \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
986 }%
987 \hss
988 \vrule\@width\pmbd@rulewidth
989 \hss
990 \pmbd@end
991 }

```

## 2.6.28 U+256B

BOX DRAWINGS VERTICAL DOUBLE AND HORIZONTAL SINGLE

```

992 \DeclareTextCommandDefault{\textSFliii}{%
993 \pmbd@beginB
994 \dimen@\ht\z@
995 \advance\dimen@-\dp\z@
996 \dimen\tw@\dimen@
997 \advance\dimen@\pmbd@rulewidth
998 \advance\dimen\tw@-\pmbd@rulewidth
999 \rlap{%
1000 \vrule\@width\wd\z@\@height.5\dimen@\@depth-.5\dimen\tw@
1001 }%

```



```

1002 \hss
1003 \vrule\@width\pmbd@rulewidth
1004 \kern\pmbd@doublesepH
1005 \vrule\@width\pmbd@rulewidth
1006 \hss
1007 \pmbd@end
1008 }

```

## 2.6.29 U+256C

### BOX DRAWINGS DOUBLE VERTICAL AND HORIZONTAL

```

1009 \DeclareTextCommandDefault{\textSFxliv}{%
1010 \pmbd@beginC
1011 \dimen@ \ht \z@
1012 \advance \dimen@ - \dp \z@
1013 \dimen \tw@ \dimen@
1014 \advance \dimen@ \pmbd@rulewidth
1015 \advance \dimen \tw@ - \pmbd@rulewidth
1016 \dimen4 \wd \z@
1017 \advance \dimen4 - \pmbd@doublesepH
1018 \begingroup
1019 \advance \dimen@ \pmbd@doublesepV
1020 \advance \dimen \tw@ \pmbd@doublesepV
1021 \rlap{%
1022 \hb@xt@ \wd \z@ {%
1023 \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
1024 \hss
1025 \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
1026 }%
1027 }%
1028 \rlap{%
1029 \hb@xt@ \wd \z@ {%
1030 \hss
1031 \vrule \@width \pmbd@rulewidth \@height \ht \z@ \@depth -.5 \dimen \tw@
1032 \kern \pmbd@doublesepH
1033 \vrule \@width \pmbd@rulewidth \@height \ht \z@ \@depth -.5 \dimen \tw@
1034 \hss
1035 }%
1036 }%
1037 \endgroup
1038 \advance \dimen@ - \pmbd@doublesepV
1039 \advance \dimen \tw@ - \pmbd@doublesepV
1040 \rlap{%
1041 \hb@xt@ \wd \z@ {%
1042 \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
1043 \hss
1044 \vrule \@width .5 \dimen4 \@height .5 \dimen@ \@depth -.5 \dimen \tw@
1045 }%
1046 }%
1047 \hss
1048 \vrule \@width \pmbd@rulewidth \@height .5 \dimen@
1049 \kern \pmbd@doublesepH
1050 \vrule \@width \pmbd@rulewidth \@height .5 \dimen@
1051 \hss
1052 \pmbd@end
1053 }
1054 \</package>

```

## 2.7 Unicode support file

```

1055 \<utf8>
1056 \ProvidesFile{pmboxdrawenc.dfu}%

```

```

1057 [2006/05/03 v1.0 UTF-8 support for box drawing characters]%
1058 \DeclareUnicodeCharacter{2500}{\textSFx}
1059 \DeclareUnicodeCharacter{2502}{\textSFxi}
1060 \DeclareUnicodeCharacter{250C}{\textSFfi}
1061 \DeclareUnicodeCharacter{2510}{\textSFiii}
1062 \DeclareUnicodeCharacter{2514}{\textSFii}
1063 \DeclareUnicodeCharacter{2518}{\textSFiv}
1064 \DeclareUnicodeCharacter{251C}{\textSFviii}
1065 \DeclareUnicodeCharacter{2524}{\textSFix}
1066 \DeclareUnicodeCharacter{252C}{\textSFvi}
1067 \DeclareUnicodeCharacter{2534}{\textSFvii}
1068 \DeclareUnicodeCharacter{253C}{\textSFv}
1069 \DeclareUnicodeCharacter{2550}{\textSFxliii}
1070 \DeclareUnicodeCharacter{2551}{\textSFxxiv}
1071 \DeclareUnicodeCharacter{2552}{\textSFli}
1072 \DeclareUnicodeCharacter{2553}{\textSFlii}
1073 \DeclareUnicodeCharacter{2554}{\textSFxxxix}
1074 \DeclareUnicodeCharacter{2555}{\textSFxxii}
1075 \DeclareUnicodeCharacter{2556}{\textSFxxi}
1076 \DeclareUnicodeCharacter{2557}{\textSFxxv}
1077 \DeclareUnicodeCharacter{2558}{\textSFl}
1078 \DeclareUnicodeCharacter{2559}{\textSFlix}
1079 \DeclareUnicodeCharacter{255A}{\textSFxxxviii}
1080 \DeclareUnicodeCharacter{255B}{\textSFxxviii}
1081 \DeclareUnicodeCharacter{255C}{\textSFxxvii}
1082 \DeclareUnicodeCharacter{255D}{\textSFxxvi}
1083 \DeclareUnicodeCharacter{255E}{\textSFxxxvi}
1084 \DeclareUnicodeCharacter{255F}{\textSFxxxvii}
1085 \DeclareUnicodeCharacter{2560}{\textSFxlii}
1086 \DeclareUnicodeCharacter{2561}{\textSFxix}
1087 \DeclareUnicodeCharacter{2562}{\textSFxx}
1088 \DeclareUnicodeCharacter{2563}{\textSFxxiii}
1089 \DeclareUnicodeCharacter{2564}{\textSFxlvi}
1090 \DeclareUnicodeCharacter{2565}{\textSFxlvi}
1091 \DeclareUnicodeCharacter{2566}{\textSFxli}
1092 \DeclareUnicodeCharacter{2567}{\textSFxlv}
1093 \DeclareUnicodeCharacter{2568}{\textSFxlvi}
1094 \DeclareUnicodeCharacter{2569}{\textSFl}
1095 \DeclareUnicodeCharacter{256A}{\textSFliv}
1096 \DeclareUnicodeCharacter{256B}{\textSFliii}
1097 \DeclareUnicodeCharacter{256C}{\textSFxliv}
1098 \DeclareUnicodeCharacter{2580}{\textupblock}
1099 \DeclareUnicodeCharacter{2584}{\textdnblock}
1100 \DeclareUnicodeCharacter{2588}{\textblock}
1101 \DeclareUnicodeCharacter{258C}{\textlfbblock}
1102 \DeclareUnicodeCharacter{2590}{\textrtblock}
1103 \DeclareUnicodeCharacter{2591}{\textlttshade}
1104 \DeclareUnicodeCharacter{2592}{\textshade}
1105 \DeclareUnicodeCharacter{2593}{\textdkshade}
1106 </utf8>

```

## 3 Installation

### 3.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

[CTAN:macros/latex/contrib/oberdiek/pmboxdraw.dtx](http://ftp.ctan.org/tex-archive/macros/latex/contrib/oberdiek/pmboxdraw.dtx) The source file.

[CTAN:macros/latex/contrib/oberdiek/pmboxdraw.pdf](http://ftp.ctan.org/tex-archive/macros/latex/contrib/oberdiek/pmboxdraw.pdf) Documentation.

---

<sup>1</sup><http://ftp.ctan.org/tex-archive/>

**Bundle.** All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

[CTAN:install/macros/latex/contrib/oberdiek.tds.zip](#)

*TDS* refers to the standard “A Directory Structure for T<sub>E</sub>X Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

## 3.2 Bundle installation

**Unpacking.** Unpack the `oberdiek.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

**Script installation.** Check the directory `TDS:scripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

## 3.3 Package installation

**Unpacking.** The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain-T<sub>E</sub>X:

```
tex pmboxdraw.dtx
```

**TDS.** Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```
pmboxdraw.sty    → tex/latex/oberdiek/pmboxdraw.sty
pmboxdrawenc.dfu → tex/latex/oberdiek/pmboxdrawenc.dfu
pmboxdraw.pdf    → doc/latex/oberdiek/pmboxdraw.pdf
pmboxdraw.dtx    → source/latex/oberdiek/pmboxdraw.dtx
```

If you have a `docstrip.cfg` that configures and enables `docstrip`’s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

## 3.4 Refresh file name databases

If your T<sub>E</sub>X distribution (teT<sub>E</sub>X, mikT<sub>E</sub>X, ...) relies on file name databases, you must refresh these. For example, teT<sub>E</sub>X users run `texhash` or `mktexlsr`.

## 3.5 Some details for the interested

**Attached source.** The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk pmboxdraw.pdf unpack_files output .
```

**Unpacking with L<sup>A</sup>T<sub>E</sub>X.** The .dtx chooses its action depending on the format:

**plain-T<sub>E</sub>X:** Run docstrip and extract the files.

**L<sup>A</sup>T<sub>E</sub>X:** Generate the documentation.

If you insist on using L<sup>A</sup>T<sub>E</sub>X for docstrip (really, docstrip does not need L<sup>A</sup>T<sub>E</sub>X), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{pmboxdraw.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

**Generating the documentation.** You can use both the .dtx or the .drv to generate the documentation. The process can be configured by the configuration file ltxdoc.cfg. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfL<sup>A</sup>T<sub>E</sub>X:

```
pdflatex pmboxdraw.dtx
makeindex -s gind.ist pmboxdraw.idx
pdflatex pmboxdraw.dtx
makeindex -s gind.ist pmboxdraw.idx
pdflatex pmboxdraw.dtx
```

## 4 References

- [1] Heiko Oberdiek, The inputenx Package (Enhanced input encoding handling), 2006/03/05 v1.0, <ftp://ftp.ctan.org/tex-archive/macros/latex/contrib/oberdiek/inputenx.pdf>.
- [2] Adobe Systems Incorporated, Adobe Glyph List for New Fonts (AGLFN), version 1.5, 2005/09/18, <http://partners.adobe.com/public/developer/en/opentype/aglfn13.txt>.
- [3] Unicode Inc., The Unicode Standard, Version 4.1, Box Drawing, Range: 2500–257F, 2005. <http://www.unicode.org/charts/PDF/U2500.pdf>
- [4] Unicode Inc., The Unicode Standard, Version 4.1, Block Elements, Range: 2580–259F, 2005. <http://www.unicode.org/charts/PDF/U2580.pdf>

## 5 History

[2006/05/03 v1.0]

- First version.

## 6 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

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