

# Using T<sub>E</sub>X Fonts in the Gnuplot Postscript Terminal

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The Postscript terminal can embed Postscript Type1 fonts (with extensions `.pfa` and `.pfb`) and TrueType fonts (extension `.ttf`)<sup>1</sup> using the command

```
set terminal postscript fontfile '<filename>'
```

The `fontfile` option can be used multiple times. See the sections *set terminal postscript* and *set fontpath* in the Gnuplot documentation for further description.

The embedded font can be used by

```
set terminal postscript '<fontname>' <size>
```

or in postscript enhanced terminal as following example:

```
set xlabel '{/CMMI10 x}'
```

Among other things, the font embedding is useful for generating plots to be included in L<sup>A</sup>T<sub>E</sub>X documents. For normal text, the *cm-super* Postscript Type1 fonts are a good choice. They are available from CTAN servers, e.g.

```
ftp://ftp.dante.de/tex-archive/fonts/ps-type1/cm-super/
```

The normal upright font with serifs is defined in `sfrm1000.pfb`, and the font name is `SFRM1000`<sup>2</sup> (The 1000 means that this font is designed for 10pt). Replace the `rm` by `it`, `bx` or other combinations in both the file name and the font name (here, in uppercase letters) in order to get other font shapes. The encoding of these fonts is ordinary and thus is not described here. Table 1 shows some examples of fonts contained in the *cm-super* font bundle.

For mathematics the Type1 versions of the Computer Modern fonts are useful. They should be installed in most T<sub>E</sub>X implementations and are also available from CTAN servers, e.g.

```
ftp://ftp.dante.de/tex-archive/fonts/cm/ps-type1/bluesky/pfb/
```

Here, the font name is the base of the file name in uppercase letters, e.g. the file `cmmi10.pfb` contains the font `CMMI10`. Since the encoding of these fonts is strange, a table containing all characters for some fonts follows. The font `CMEX10` contains large symbols for mathematics. They overlap sometimes in the table. Since the baseline of the `CMEX10` font is at the top of the signs, Gnuplot defines a font `CMEX10-Baseline` with a different baseline if `CMEX10` is embedded (normally by using `fontfile 'cmex10.pfb'`). In contrast to the other fonts, `CMEX10` is only available in the design size 10pt.

You can access all characters of the fonts by typing their octal code. To get a ♥ symbol, you may type:

```
set label '{/CMSY10 \176}' at graph 0.5,0.5
```

---

<sup>1</sup>If `.pfb` and `.ttf` fonts really can be embedded depends on your gnuplot installation: It needs to be able to handle pipes.

<sup>2</sup>If you have an old version of the *cm-super* font, prior 2001-10-14, the font name is in lowercase letters: `sfrm1000`. You should update to a new version.

Table 1: Some fonts in the cm-super font bundle (for a designsizes of 10 pt)

| File name    | Full font name<br>(all preceded by Computer Modern) | Example               |
|--------------|---|-----------------------|
| sfrm1000.pfb | Roman   | Example               |
| sfbx1000.pfb | Bold Extended                                       | <b>Example</b>        |
| sfti1000.pfb | Italic  | <i>Example</i>        |
| sfb11000.pfb | Bold Extended Italic                                | <b><i>Example</i></b> |
| sfs11000.pfb | Slanted   | <i>Example</i>        |
| sfb11000.pfb | Bold Extended Slanted                               | <b><i>Example</i></b> |
| sfcc1000.pfb | Caps and Small Caps                                 | <b>EXAMPLE</b>        |
| sfss1000.pfb | Sans Serif  | Example               |
| sfsi1000.pfb | Sans Serif Slanted                                  | <i>Example</i>        |
| sfsx1000.pfb | Sans Serif Bold Extended                            | <b>Example</b>        |
| sfso1000.pfb | Sans Serif Bold Extended Slanted                    | <b><i>Example</i></b> |
| sftt1000.pfb | Typewriter  | Example               |
| sfit1000.pfb | Typewriter Italic                                   | <i>Example</i>        |
| sfst1000.pfb | Typewriter Slanted                                  | <i>Example</i>        |
| sftc1000.pfb | Typewriter Caps and Small Caps                      | <b>EXAMPLE</b>        |

Since characters with an octal number below \040 can't be displayed by some postscript interpreters, these characters are repeated in the Computer Modern Fonts with a larger code. Thus, you should use the larger number, where two octal numbers are given (e.g. \000, \241). For example, you better use

```
set xlabel '{/CMR10 \242}'
```

than

```
set xlabel '{/CMR10 \001}'
```

to get an upright uppercase Delta  $\Delta$ .

| Oct        | CMR10 | CMTI10 | CMTT10 | CMML10 | CMU10 | CMSS10 | CMTEX10 | CMFF10 | CMSY10 | LASY10 | CMEX10-Baseline | Oct        | Dec    |
|------------|-------|--------|--------|--------|-------|--------|---------|--------|--------|--------|-----------------|------------|--------|
| \000, \241 | Γ     | Γ      | Γ      | Γ      | Γ     | Γ      | ·       | Γ      | —      |        | (               | \000, \241 | 0, 161 |
| \001, \242 | Δ     | Δ      | Δ      | Δ      | Δ     | Δ      | ↓       | Δ      | ·      | Δ      | )               | \001, \242 | 1, 162 |
| \002, \243 | Θ     | Θ      | Θ      | Θ      | Θ     | Θ      | α       | Θ      | ×      | Δ      | [               | \002, \243 | 2, 163 |
| \003, \244 | Λ     | Λ      | Λ      | Λ      | Λ     | Λ      | β       | Λ      | *      | ▽      | ]               | \003, \244 | 3, 164 |
| \004, \245 | Ξ     | Ξ      | Ξ      | Ξ      | Ξ     | Ξ      | Λ       | Ξ      | ÷      | ▽      | [               | \004, \245 | 4, 165 |
| \005, \246 | Π     | Π      | Π      | Π      | Π     | Π      | ¬       | Π      | ◇      |        | ]               | \005, \246 | 5, 166 |
| \006, \247 | Σ     | Σ      | Σ      | Σ      | Σ     | Σ      | ε       | Σ      | ±      |        | [               | \006, \247 | 6, 167 |
| \007, \250 | Υ     | Υ      | Υ      | Υ      | Υ     | Υ      | π       | Υ      | ≠      |        | ]               | \007, \250 | 7, 168 |
| \010, \251 | Φ     | Φ      | Φ      | Φ      | Φ     | Φ      | λ       | Φ      | ⊕      |        | {               | \010, \251 | 8, 169 |

| Oct        | CMR10          | CMTI10         | CMTT10         | CMIMI10           | CMU10          | CMSS10         | CMTEX10        | CMFF10         | CMSY10            | LASY10         | CMEX10-Baseline | Oct        | Dec     |
|------------|----------------|----------------|----------------|-------------------|----------------|----------------|----------------|----------------|-------------------|----------------|-----------------|------------|---------|
| \011, \252 | $\Psi$         | $\Psi$         | $\Psi$         | $\Psi$            | $\Psi$         | $\Psi$         | $\gamma$       | $\psi$         | $\ominus$         |                | }               | \011, \252 | 9, 170  |
| \012, \255 | $\Omega$       | $\Omega$       | $\Omega$       | $\Omega$          | $\Omega$       | $\Omega$       | $\delta$       | $\Omega$       | $\otimes$         |                | <               | \012, \255 | 10, 173 |
| \013, \256 | $\mathfrak{f}$ | $\mathfrak{f}$ | $\uparrow$     | $\alpha$          | $\mathfrak{f}$ | $\mathfrak{f}$ | $\uparrow$     | $\pi$          | $\otimes$         |                | >               | \013, \256 | 11, 174 |
| \014, \257 | $\mathfrak{f}$ | $\mathfrak{f}$ | $\downarrow$   | $\beta$           | $\mathfrak{f}$ | $\mathfrak{f}$ | $\pm$          | $\pi$          | $\odot$           |                |                 | \014, \257 | 12, 175 |
| \015, \260 | $\mathfrak{f}$ | $\mathfrak{f}$ | $\cdot$        | $\gamma$          | $\mathfrak{f}$ | $\mathfrak{f}$ | $\oplus$       | $\pi$          | $\bigcirc$        |                |                 | \015, \260 | 13, 176 |
| \016, \261 | $\mathfrak{f}$ | $\mathfrak{f}$ | $\cdot$        | $\delta$          | $\mathfrak{f}$ | $\mathfrak{f}$ | $\otimes$      | $\mathfrak{m}$ | $\circ$           |                | /               | \016, \261 | 14, 177 |
| \017, \262 | $\mathfrak{f}$ | $\mathfrak{f}$ | $\cdot$        | $\epsilon$        | $\mathfrak{f}$ | $\mathfrak{f}$ | $\partial$     | $\mathfrak{m}$ | $\bullet$         |                | \               | \017, \262 | 15, 178 |
| \020, \263 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\zeta$           | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\times$          |                | (               | \020, \263 | 16, 179 |
| \021, \264 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\eta$            | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\equiv$          |                | )               | \021, \264 | 17, 180 |
| \022, \265 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\theta$          | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\sqsubset$       |                | (               | \022, \265 | 18, 181 |
| \023, \266 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\iota$           | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\sqcup$          |                | )               | \023, \266 | 19, 182 |
| \024, \267 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\kappa$          | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\sqcap$          |                | [               | \024, \267 | 20, 183 |
| \025, \270 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\lambda$         | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\sqsupset$       |                | [               | \025, \270 | 21, 184 |
| \026, \271 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mu$             | $\mathfrak{r}$ | $\mathfrak{r}$ | $\otimes$      | $\mathfrak{r}$ | $\sqcup$          |                | [               | \026, \271 | 22, 185 |
| \027, \272 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\nu$             | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\sqcup$          |                | [               | \027, \272 | 23, 186 |
| \030, \273 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\xi$             | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\sim$            |                | [               | \030, \273 | 24, 187 |
| \031, \274 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\pi$             | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\approx$         |                | [               | \031, \274 | 25, 188 |
| \032, \275 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\rho$            | $\mathfrak{r}$ | $\mathfrak{r}$ | $\neq$         | $\mathfrak{r}$ | $\cap$            |                | }               | \032, \275 | 26, 189 |
| \033, \276 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\sigma$          | $\mathfrak{r}$ | $\mathfrak{r}$ | $\diamond$     | $\mathfrak{r}$ | $\cup$            |                | }               | \033, \276 | 27, 190 |
| \034, \277 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\tau$            | $\mathfrak{r}$ | $\mathfrak{r}$ | $\leq$         | $\mathfrak{r}$ | $\ll$             |                | }               | \034, \277 | 28, 191 |
| \035, \300 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\upsilon$        | $\mathfrak{r}$ | $\mathfrak{r}$ | $\geq$         | $\mathfrak{r}$ | $\gg$             |                | <               | \035, \300 | 29, 192 |
| \036, \301 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\phi$            | $\mathfrak{r}$ | $\mathfrak{r}$ | $\equiv$       | $\mathfrak{r}$ | $\lambda$         |                | <               | \036, \301 | 30, 193 |
| \037, \302 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\chi$            | $\mathfrak{r}$ | $\mathfrak{r}$ | $\vee$         | $\mathfrak{r}$ | $\gamma$          |                | <               | \037, \302 | 31, 194 |
| \040, \303 | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\psi$            | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\mathfrak{r}$ | $\uparrow$        |                | <               | \040, \303 | 32, 195 |
| \041       | $!$            | $!$            | $!$            | $\omega$          | $!$            | $!$            | $!$            | $!$            | $\rightarrow$     |                | <               | \041       | 33      |
| \042       | $"$            | $"$            | $"$            | $\varepsilon$     | $"$            | $"$            | $"$            | $"$            | $\uparrow$        |                | <               | \042       | 34      |
| \043       | $\#$           | $\#$           | $\#$           | $\vartheta$       | $\#$           | $\#$           | $\#$           | $\#$           | $\downarrow$      |                | <               | \043       | 35      |
| \044       | $\$$           | $\mathcal{L}$  | $\$$           | $\varpi$          | $\mathcal{L}$  | $\$$           | $\$$           | $\$$           | $\leftrightarrow$ |                | <               | \044       | 36      |
| \045       | $\%$           | $\%$           | $\%$           | $\varrho$         | $\%$           | $\%$           | $\%$           | $\%$           | $\nearrow$        |                | <               | \045       | 37      |
| \046       | $\&$           | $\mathcal{E}$  | $\&$           | $\varsigma$       | $\mathcal{E}$  | $\&$           | $\&$           | $\&$           | $\searrow$        |                | <               | \046       | 38      |
| \047       | $'$            | $'$            | $'$            | $\varphi$         | $'$            | $'$            | $'$            | $'$            | $\approx$         |                | <               | \047       | 39      |
| \050       | $($            | $($            | $($            | $\lrcorner$       | $($            | $($            | $($            | $($            | $\Leftarrow$      |                | <               | \050       | 40      |
| \051       | $)$            | $)$            | $)$            | $\top$            | $)$            | $)$            | $)$            | $)$            | $\Rightarrow$     |                | >               | \051       | 41      |
| \052       | $*$            | $*$            | $*$            | $\sqsupset$       | $*$            | $*$            | $*$            | $*$            | $\Uparrow$        |                | >               | \052       | 42      |
| \053       | $+$            | $+$            | $+$            | $\rightharpoonup$ | $+$            | $+$            | $+$            | $+$            | $\Downarrow$      |                | >               | \053       | 43      |
| \054       | $,$            | $,$            | $,$            | $\mathfrak{c}$    | $,$            | $,$            | $,$            | $,$            | $\Leftrightarrow$ |                | >               | \054       | 44      |
| \055       | $-$            | $-$            | $-$            | $\mathfrak{d}$    | $-$            | $-$            | $-$            | $-$            | $\nearrow$        |                | >               | \055       | 45      |
| \056       | $\cdot$        | $\cdot$        | $\cdot$        | $\triangleright$  | $\cdot$        | $\cdot$        | $\cdot$        | $\cdot$        | $\swarrow$        |                | >               | \056       | 46      |
| \057       | $/$            | $/$            | $/$            | $\triangleleft$   | $/$            | $/$            | $/$            | $/$            | $\propto$         |                | >               | \057       | 47      |
| \060       | $0$            | $0$            | $0$            | $o$               | $0$            | $0$            | $0$            | $0$            | $'$               | $\mathfrak{U}$ | >               | \060       | 48      |

| Oct  | CMR10    | CMTI10   | CMTT10 | CMIMI10    | CMU10    | CMSS10   | CMTEX10 | CMFF10   | CMSY10        | LASY10      | CMEX10-Baseline | Oct  | Dec |
|------|----------|----------|--------|------------|----------|----------|---------|----------|---------------|-------------|-----------------|------|-----|
| \061 | 1        | <i>1</i> | 1      | 1          | 1        | 1        | 1       | 1        | $\infty$      | $\boxtimes$ | $\backslash$    | \061 | 49  |
| \062 | 2        | <i>2</i> | 2      | 2          | 2        | 2        | 2       | 2        | $\in$         | $\square$   | $\lceil$        | \062 | 50  |
| \063 | 3        | <i>3</i> | 3      | 3          | 3        | 3        | 3       | 3        | $\ni$         | $\diamond$  | $\rfloor$       | \063 | 51  |
| \064 | 4        | <i>4</i> | 4      | 4          | 4        | 4        | 4       | 4        | $\triangle$   |             | $\lfloor$       | \064 | 52  |
| \065 | 5        | <i>5</i> | 5      | 5          | 5        | 5        | 5       | 5        | $\nabla$      |             | $\rfloor$       | \065 | 53  |
| \066 | 6        | <i>6</i> | 6      | 6          | 6        | 6        | 6       | 6        | $/$           |             | $\lceil$        | \066 | 54  |
| \067 | 7        | <i>7</i> | 7      | 7          | 7        | 7        | 7       | 7        | $\prime$      |             | $\lceil$        | \067 | 55  |
| \070 | 8        | <i>8</i> | 8      | 8          | 8        | 8        | 8       | 8        | $\forall$     |             | $\lceil$        | \070 | 56  |
| \071 | 9        | <i>9</i> | 9      | 9          | 9        | 9        | 9       | 9        | $\exists$     |             | $\rceil$        | \071 | 57  |
| \072 | :        | :        | :      | .          | :        | :        | :       | :        | $\neg$        | $\sim$      | $\lceil$        | \072 | 58  |
| \073 | ;        | ;        | ;      | ,          | ;        | ;        | ;       | ;        | $\emptyset$   | $\leadsto$  | $\rceil$        | \073 | 59  |
| \074 | <i>i</i> | <i>i</i> | <      | <          | <i>i</i> | <i>i</i> | <       | <i>i</i> | $\Re$         | $\sqcap$    | $\}$            | \074 | 60  |
| \075 | =        | =        | =      | /          | =        | =        | =       | =        | $\Im$         | $\sqcap$    | $\}$            | \075 | 61  |
| \076 | <i>i</i> | <i>i</i> | >      | >          | <i>i</i> | <i>i</i> | >       | <i>i</i> | $\top$        |             | $\lceil$        | \076 | 62  |
| \077 | ?        | ?        | ?      | *          | ?        | ?        | ?       | ?        | $\perp$       |             | $\lceil$        | \077 | 63  |
| \100 | @        | @        | @      | $\partial$ | @        | @        | @       | @        | $\aleph$      |             | $\lceil$        | \100 | 64  |
| \101 | A        | <i>A</i> | A      | <i>A</i>   | A        | A        | A       | A        | $\mathcal{A}$ |             | $\rceil$        | \101 | 65  |
| \102 | B        | <i>B</i> | B      | <i>B</i>   | B        | B        | B       | B        | $\mathcal{B}$ |             | $\lceil$        | \102 | 66  |
| \103 | C        | <i>C</i> | C      | <i>C</i>   | C        | C        | C       | C        | $\mathcal{C}$ |             | $\lceil$        | \103 | 67  |
| \104 | D        | <i>D</i> | D      | <i>D</i>   | D        | D        | D       | D        | $\mathcal{D}$ |             | $\lceil$        | \104 | 68  |
| \105 | E        | <i>E</i> | E      | <i>E</i>   | E        | E        | E       | E        | $\mathcal{E}$ |             | $\lceil$        | \105 | 69  |
| \106 | F        | <i>F</i> | F      | <i>F</i>   | F        | F        | F       | F        | $\mathcal{F}$ |             | $\sqcup$        | \106 | 70  |
| \107 | G        | <i>G</i> | G      | <i>G</i>   | G        | G        | G       | G        | $\mathcal{G}$ |             | $\sqcup$        | \107 | 71  |
| \110 | H        | <i>H</i> | H      | <i>H</i>   | H        | H        | H       | H        | $\mathcal{H}$ |             | $\mathfrak{f}$  | \110 | 72  |
| \111 | I        | <i>I</i> | I      | <i>I</i>   | I        | I        | I       | I        | $\mathcal{I}$ |             | $\mathfrak{f}$  | \111 | 73  |
| \112 | J        | <i>J</i> | J      | <i>J</i>   | J        | J        | J       | J        | $\mathcal{J}$ |             | $\odot$         | \112 | 74  |
| \113 | K        | <i>K</i> | K      | <i>K</i>   | K        | K        | K       | K        | $\mathcal{K}$ |             | $\odot$         | \113 | 75  |
| \114 | L        | <i>L</i> | L      | <i>L</i>   | L        | L        | L       | L        | $\mathcal{L}$ |             | $\oplus$        | \114 | 76  |
| \115 | M        | <i>M</i> | M      | <i>M</i>   | M        | M        | M       | M        | $\mathcal{M}$ |             | $\oplus$        | \115 | 77  |
| \116 | N        | <i>N</i> | N      | <i>N</i>   | N        | N        | N       | N        | $\mathcal{N}$ |             | $\otimes$       | \116 | 78  |
| \117 | O        | <i>O</i> | O      | <i>O</i>   | O        | O        | O       | O        | $\mathcal{O}$ |             | $\otimes$       | \117 | 79  |
| \120 | P        | <i>P</i> | P      | <i>P</i>   | P        | P        | P       | P        | $\mathcal{P}$ |             | $\Sigma$        | \120 | 80  |
| \121 | Q        | <i>Q</i> | Q      | <i>Q</i>   | Q        | Q        | Q       | Q        | $\mathcal{Q}$ |             | $\Pi$           | \121 | 81  |
| \122 | R        | <i>R</i> | R      | <i>R</i>   | R        | R        | R       | R        | $\mathcal{R}$ |             | $\int$          | \122 | 82  |
| \123 | S        | <i>S</i> | S      | <i>S</i>   | S        | S        | S       | S        | $\mathcal{S}$ |             | $\cup$          | \123 | 83  |
| \124 | T        | <i>T</i> | T      | <i>T</i>   | T        | T        | T       | T        | $\mathcal{T}$ |             | $\cap$          | \124 | 84  |
| \125 | U        | <i>U</i> | U      | <i>U</i>   | U        | U        | U       | U        | $\mathcal{U}$ |             | $\uplus$        | \125 | 85  |
| \126 | V        | <i>V</i> | V      | <i>V</i>   | V        | V        | V       | V        | $\mathcal{V}$ |             | $\wedge$        | \126 | 86  |
| \127 | W        | <i>W</i> | W      | <i>W</i>   | W        | W        | W       | W        | $\mathcal{W}$ |             | $\vee$          | \127 | 87  |
| \130 | X        | <i>X</i> | X      | <i>X</i>   | X        | X        | X       | X        | $\mathcal{X}$ |             | $\Sigma$        | \130 | 88  |

| Oct        | CMR10 | CMTI10 | CMTT10 | CMIMI10 | CMU10 | CMSS10 | CMTEX10 | CMFF10 | CMSY10 | LASY10 | CMEX10-Baseline | Oct        | Dec      |
|------------|-------|--------|--------|---------|-------|--------|---------|--------|--------|--------|-----------------|------------|----------|
| \131       | Y     | Y      | Y      | Y       | Y     | Y      | Y       | Y      | Y      |        | Π               | \131       | 89       |
| \132       | Z     | Z      | Z      | Z       | Z     | Z      | Z       | Z      | Z      |        | ∫               | \132       | 90       |
| \133       | [     | [      | [      | b       | [     | [      | [       | [      | U      |        | U               | \133       | 91       |
| \134       | “     | “      | \      | h       | “     | “      | \       | “      | U      |        | U               | \134       | 92       |
| \135       | ]     | /      | ]      | #       | ]     | ]      | ]       | ]      | ⊕      |        | ⊕               | \135       | 93       |
| \136       | ^     | ^      | ^      | (       | ^     | ^      | ^       | ^      | ^      |        | ^               | \136       | 94       |
| \137       | .     | .      | -      | )       | .     | .      | -       | .      | ∇      |        | ∇               | \137       | 95       |
| \140       | ‘     | ‘      | ‘      | ℓ       | ‘     | ‘      | ‘       | ‘      | ⊥      |        | Π               | \140       | 96       |
| \141       | a     | a      | a      | a       | a     | a      | a       | a      | ⊥      |        | Π               | \141       | 97       |
| \142       | b     | b      | b      | b       | b     | b      | b       | b      | ⊥      |        | Π               | \142       | 98       |
| \143       | c     | c      | c      | c       | c     | c      | c       | c      | ⊥      |        | ⊥               | \143       | 99       |
| \144       | d     | d      | d      | d       | d     | d      | d       | d      | ⊥      |        | ~               | \144       | 100      |
| \145       | e     | e      | e      | e       | e     | e      | e       | e      | ⊥      |        | ~               | \145       | 101      |
| \146       | f     | f      | f      | f       | f     | f      | f       | f      | {      |        | ~               | \146       | 102      |
| \147       | g     | g      | g      | g       | g     | g      | g       | g      | }      |        |                 | \147       | 103      |
| \150       | h     | h      | h      | h       | h     | h      | h       | h      | <      |        | ⊥               | \150       | 104      |
| \151       | i     | i      | i      | i       | i     | i      | i       | i      | >      |        | ⊥               | \151       | 105      |
| \152       | j     | j      | j      | j       | j     | j      | j       | j      |        |        | ⊥               | \152       | 106      |
| \153       | k     | k      | k      | k       | k     | k      | k       | k      |        |        | ⊥               | \153       | 107      |
| \154       | l     | l      | l      | l       | l     | l      | l       | l      | ↑↓     |        | ⊥               | \154       | 108      |
| \155       | m     | m      | m      | m       | m     | m      | m       | m      | ⇕      |        | ⊥               | \155       | 109      |
| \156       | n     | n      | n      | n       | n     | n      | n       | n      | \      |        | {               | \156       | 110      |
| \157       | o     | o      | o      | o       | o     | o      | o       | o      | ?      |        | }               | \157       | 111      |
| \160       | p     | p      | p      | p       | p     | p      | p       | p      | √      |        | √               | \160       | 112      |
| \161       | q     | q      | q      | q       | q     | q      | q       | q      | Π      |        | √               | \161       | 113      |
| \162       | r     | r      | r      | r       | r     | r      | r       | r      | ∇      |        | √               | \162       | 114      |
| \163       | s     | s      | s      | s       | s     | s      | s       | s      | ∫      |        | √               | \163       | 115      |
| \164       | t     | t      | t      | t       | t     | t      | t       | t      | ⊥      |        | √               | \164       | 116      |
| \165       | u     | u      | u      | u       | u     | u      | u       | u      | ⊥      |        | √               | \165       | 117      |
| \166       | v     | v      | v      | v       | v     | v      | v       | v      | ⊥      |        | ⊥               | \166       | 118      |
| \167       | w     | w      | w      | w       | w     | w      | w       | w      | ⊥      |        |                 | \167       | 119      |
| \170       | x     | x      | x      | x       | x     | x      | x       | x      | §      |        | ↑               | \170       | 120      |
| \171       | y     | y      | y      | y       | y     | y      | y       | y      | †      |        | ↓               | \171       | 121      |
| \172       | z     | z      | z      | z       | z     | z      | z       | z      | ‡      |        | ˘               | \172       | 122      |
| \173       | -     | -      | {      | ι       | -     | -      | {       | -      | ¶      |        | ˘               | \173       | 123      |
| \174       | —     | —      |        | ℓ       | —     | —      |         | —      | ♣      |        | ˘               | \174       | 124      |
| \175       | "     | "      | }      | ∅       | "     | "      | }       | -      | ♦      |        | ˘               | \175       | 125      |
| \176       | ~     | ~      | ~      | →       | ~     | ~      | ~       | -      | ♥      |        | ↑               | \176       | 126      |
| \177, \304 | ..    | ..     | ..     | ∘       | ..    | ..     | ∫       | -      | ♠      |        | ↕               | \177, \304 | 127, 196 |