

FRACTION FONTS

Fraction Fonts enable you to view and print true fractions that match your PostScript Type 1 fonts. Designed to reap all the benefits of Adobe Type Manager[®], ***Fraction Fonts*** can be used with ATM[®] in any Macintosh application.

Fraction Fonts will work on any system that will support ATM[®]. They've been tested with 6.0.7 and 7.0.1. Although not required, I strongly recommend the use of Suitcase II. (I can't imagine using Type 1 fonts on a Macintosh without it.)

Fraction Fonts are available in two distinct types--*Baseline* and *Extended*. In *Baseline Fraction Fonts*, the denominator sits on the baseline and the top of the numerator is the height of the lower-case ascender in its companion font. In *Extended Fraction Fonts*, the bottom of the denominator extends below the baseline and the top of the numerator extends slightly above the height of the lower-case ascender.

These are Baseline Fraction Fonts -- 1/2, #/4, %/8.

These are Extended Fraction Fonts -- 1/2, #/4, %/8.

Which is better? Neither, really. They have different purposes. *Extended Fraction Fonts* are more legible in text sizes, but tend to look bulky in display sizes. *Baseline Fraction Fonts* may cause a little eyestrain below 12 points, but appear balanced with conventional numerals in titles, headers, or other display applications. Both types have been included in FF-MT1.SEA, so you be the judge.

FRACTION FILE NAMES

It's easy to differentiate between *Baseline* and *Extended Fraction Fonts* and conventional fonts in the folder where they're stored. There will be a capital FB or an FE somewhere in the font name. For example, the ***Fraction Fonts*** that are companions to Times Roman and similar serif fonts are named TmsFB and TmsFE. ***Fraction Fonts*** that are companions to Helvetica and other sans serif fonts are HelvFB and HelvFE.

Fraction Fonts are similarly coded internally so you can identify them in the font selection scroll boxes in various applications. The last two characters in the font name again will be either "FB" or "FE". If you're using Suitcase II, you'll find the fonts will appear just once. That's because they're grouped by families. To apply styles such as bold, italic, etc., just highlight the selection and apply that type style.

TYPING FRACTIONS

The ***Fraction Font*** character set is short, but complete. Adapting to the key assignments should become almost instinctive.

When working with ***Fraction Fonts***, don't regard the "!", the "@", and all their keyboard neighbors positioned above the numerals as punctuation marks and symbols. Instead, think of these keys as SHIFT 1, SHIFT 2, etc.

Fraction numerators are generated by typing a SHIFT+NUMERAL combination (the keyboard numbers--not the numeric keypad numbers). Fraction denominators are generated by typing the unshifted numerals. And the fraction bar is assigned to the “/”. (That’s the slash beneath the question mark, not the backslash.)

To create a fraction, just type in the characters, highlight the *Fraction Font* characters with the text-selection cursor, then choose the appropriate *Fraction Font* from the application’s font selection scroll box.

OTHER KEYS

There are no alphabetic keys in *Fraction Fonts*. However, a few specific keys have been given special assignments to help integrate the fractions with conventional fonts.

Fraction Fonts exist to make accurate representation of measurements possible. For this reason special inch (“), foot (‘), and two special degree (°) signs are included. These three characters are identical to their companion font counterparts with one exception. All three of these three marks are kerned in relation to denominator numerals for correct positioning when adjacent to a fraction. When typing conventional numbers the conventional counterparts of these signs should be used.

In *Fraction Fonts*, the quote mark is the inch mark; the apostrophe is the foot mark; and the keyboard equals sign and plus sign (above the = sign) each generate a degree sign. Actually, there are two degree signs due to differences in the way ATM, PostScript printers, and PCL and dot matrix printers interpret this character. When outputting to a PostScript device, the *Fraction Font* equals sign (=) will generate a degree sign to match the degree sign in the companion font. When printing to a PCL or dot matrix printer, you’ll find the *Fraction Font* plus sign (+) generates a degree sign to match the degree sign in the companion font.

Note: ATM’s on-screen representation of a typical Type 1 font’s degree sign closely matches that of a PCL or dot matrix printer. A PostScript degree sign is about twice the size of the ATM (screen) or non-PostScript printer’s degree sign.

45° uses the font's own
degree sign

22 !/2= uses the Fraction
Font equals (=) sign

22 !/2+ uses the Fraction
Font plus (+) sign

CHARACTER WIDTH, OFFSET, AND KERNING

A word about character width and kerning (specific intercharacter spatial relationships) is appropriate here. The numeral set in all fonts is monospaced. In other words, the space allocated to a 1 is the same width as the space allocated to a 3 or a 5, even though the character widths vary. This is to allow the numerals to align in columns. For example . . .

1234567890
0987654321
9151813114

Fractions are different. For the best appearance, the numeral pairs used in both the numerator and the denominator are regarded as units -- almost as though they were ligatures. So, the relationships of the 1 and 3 and the 6 and 4 in $1/64$ or $3/64$ are considerably different than their relationships when used as conventional numerals.

Fraction Font font box width and character offset often are compromises. The primary spatial relationship is between the numerator or denominator and the fraction bar. In other words, the numerator 7 has a font box narrower than the glyph itself so it can slide over the fraction bar. The denominator 4 has negative offset on the left so it can tuck under the fraction bar. This makes fractions like $7/16$ and $1/4$ pleasing to look at.

The secondary spatial relationship is between two adjacent numerals. In the fraction $1/64$, the numerator 1 is kerned so that a pair of 1s gives a balanced appearance. The denominator numerals 6 and 4 present a different case. Because the 4 has negative offset on the left to slide under the fraction bar, the 6 has positive kerning on the right when positioned next to the 4 so the numerals won't touch or overprint.

The character font metrics in ***Fraction Fonts*** are optimized for all commonly-used fractions. However, character spacing is a matter of taste. To allow for customization, all characters are kerned on the "tight" side. To loosen them up, kerning controls are built into the font itself.

KERNING CONTROLS

To make optimizing fractions possible, the kerning controls are built into *Fraction Fonts* are as follows:

The Comma inserts $@/1000$ EM

The Period inserts %)/1000 EM

The Spacebar inserts !))/1000 EM

The “N” inserts %))/1000 EM

The “M” inserts !))/1000 EM, or one EM

To “loosen” a fraction, first type the fraction characters . . .

&&/44

Then, insert the cursor between the numerals where a small amount of space is desired and type one of the kerning control keys.

&.,&/4,4

In this case, typing a *Fraction Font* comma and period between the 7s and a comma between the 4s transformed the original fraction into the second. In general use (text sizes) you’ll find this procedure is rarely necessary.

FONT IDENTIFICATION CHARACTER

A font identification character is embedded in each *Fraction Font*. Presently, the purpose is for cross-platform compatibility with Windows. When working with Windows applications that offer a Font Preview window (Ami, Excel, WinWord, WordStar, and CorelDRAW! for example) a special character in the selected *Fraction Font* will be shown. In the case of TmsFB or TmsFE, it will look like this:

A or A

As the gap between the Macintosh and Windows worlds is bridged, I'm hoping many of the best ideas from each platform will find a place on the other--*without fear of litigation on the part of software developers!* At any rate, the

A character is in each ***Fraction Font*** waiting for something to do in a future Macintosh application.

FRACTION FONT COMPANION SETS

Fraction Fonts are available in a complete set to work with genuine Adobe PostScript Type 1 fonts or their counterparts from other foundries. The names assigned to individual ***Fraction Fonts*** are intended to position these fonts with their brand-name counterparts in font selection list boxes. However, there is no intent to imply any relationship with Adobe or any other foundry, nor to infringe upon registered trademarks or copyrights.

Fraction Font Set (Baseline and Extended) consists of 66 fonts and includes:

AvGard	(N,O,B,BO)
BMan	(N,I,B,BI)
Courier	(N,O,B,BO)
Helv	(N,O,B,BO)
HelvNar	(N,O,B,BO)
NewCent	(N,I,B,BI)
Pal	(N,I,B,BI)
Tms	(N,I,B,BI)
ZChan	(I)

The complete set of ***Fraction Fonts*** costs just \$25.00 (see attached order form). The TMS and HELV ***Fraction Fonts*** you've downloaded are ShareWare. I'd appreciate \$10.00 as a token of

your own appreciation for the opportunity to use them. If you pass them on to a friend, please be kind enough to share the documentation and order form that accompany the fonts. (Just share the self-extracting archive, FF-MT1.SEA.)

NOTE: *Fraction Fonts* also are available in TrueType format for those Macintosh users who don't have a PostScript printer or a need for ATM®. And, for Windows 3.1 users, *Fraction Fonts* also are available in both PostScript Type 1 and TrueType formats.