Fantastic Fonts

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Fonts

This chapter encompasses almost everything you think you don't need to know about fonts. The truth is, without an understanding of font families and font styles, you could end up with an amateurish nightmare that won't sell.

Font Types

Fonts have three sources: the printer's internal fonts (text mode or *hard* fonts), a font cartridge, and software (downloadable or *soft* fonts). Soft fonts are printed using the printer's graphic mode.

Fonts show themselves in two forms: hardcopy printout and screen. Printed fonts are described with dots; screen fonts are described with light pixels. Though most computers claim WYSIWYG (what-you-see-is-what-you-get), it is an illusion that you print out what's on the screen. Your printer resolution is usually much higher than screen resolution—at least if you're not limping along on a 9-pin dot matrix printer. Your screen resolution is approximately 72–96 dpi, whereas your printer may be as high as 1200 dpi (or higher on some inkjet printers), and PostScript fonts (the typesetting industry standard) are encoded with information to print out at up to 2540 dpi on a Linotronic imagesetter.

Fonts are stored on your hard drive in two parts. The *font data* are simple bits and bytes that describe the font. The *font header* is the information about the font at the beginning of a font file; this is where the font name, spacing, and kerning data are stored.

Fonts may be either of the *bitmap* or *vector* kind. Vector fonts are stored as mathematical equations describing the edges of the font. These fonts are *scalable* (can be resized without losing resolution) and very smooth.

Computer printers have varying abilities to smooth fonts. They do this in several ways:

- *Aliasing* improves the quality of the printed font by arranging the number of dots in a curve or diagonal stroke. The more dots, the smoother the edges.
- *Color-aliasing* uses grayscale technology to blur and smooth the edges of the font with shades of gray. Ink jet printers do this well.
- *Hinting* is a scaling intelligence that alters fonts at printout to improve the quality. This is especially noticeable with small fonts—the font is altered to keep letters such as *e* and *a* from closing up.

Other smoothing technologies that enhance edge definition may be specific to the brand of printer. Type management utilities—such as Adobe Type Manager®, allow PostScript fonts to print as high-resolution bitmaps on non-PostScript printers.

Parts of a Vector-Based Character

Each character in a vector-based font has certain attributes. The *stroke* of a character is the outline that defines the character. The *baseline* is where the base of an uppercase character sits. The *ascender* is the portion of the character that extends above the baseline. The *ascender space* extends above the *x-height* to make room for diacritical marks. The *descender* is the portion of a lowercase character that extends below the baseline.

Other Kinds of Fonts

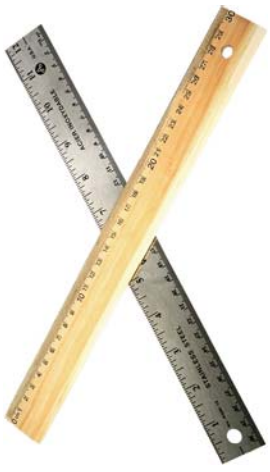
Bitmap fonts are rendered as dots or pixels. Though they can be magnified and smoothed, they are not scalable—resizing them greatly reduces resolution quality.

You may sometimes hear about *text fonts.* Text fonts are bitmap internal fonts found in some printers—especially the dot-matrix kind. They are not scalable and usually come in 10-point size in pica (10 characters per inch—cpi), and elite (12 cpi). They resemble typewriter output. The character width and spacing may further be manipulated by *condensing* and *expanding* pica or elite type. Condensed pica type is 15 cpi; expanded is 5 cpi. Condensed elite type is 17 cpi; expanded is 6 cpi.

Measurement Systems

Fonts are sized in *points*—either hardwired as in a bitmap font, or scalable to any size as in a vector-based font. One point is 1/72" or 0.1388888". Unfortunately for us, point size can be determined by two methods: by measuring the distance of the full caps size *plus* descenders and ascenders, or by full caps only. The most common method is the former.

To further confuse the issue, some measurement systems use the *pica*, which is equal to 1/6 of an inch (six picas make an inch). One point is 1/12 of a pica (6 picas make 72 points, which is an inch). Pica measurement is often used in page-layout programs for not only fonts, but even ruler-guide measurements. We won't be using picas; they scare people.



Examples of Common Point Sizes

6 point

7 point

8 point

9 point

10 point

11 point

12 point

13 point

14 point

15 point

16 point

18 point

24 point

30 point

36 point

48 point

60 point

72 point

Points–to–Inches Conversion Table

Point	Inch	Point	Inch
2	0.03	52	0.72
4	0.06	54	0.75
6	0.08	56	0.78
8	0.11	58	0.81
10	0.14	60	0.83
12	0.17	62	0.86
14	0.19	64	0.89
16	0.22	66	0.92
18	0.25	68	0.95
20	0.28	70	0.97
22	0.31	72	1.00
24	0.33	74	1.03
26	0.36	76	1.06
28	0.39	78	1.08
30	0.42	80	1.11
32	0.44	82	1.14
34	0.47	84	1.17
36	0.50	86	1.20
38	0.53	88	1.22
40	0.56	90	1.25
42	0.58	92	1.28
44	0.61	94	1.31
46	0.64	96	1.33
48	0.67	98	1.36
50	0.70	100	1.39

Human-World Point–to–Inch Conversions

9 points = 1/8"
18 points = 1/4"
24 points = 1/3"
28 points = 3/8"
36 points = 1/2"
46 points = 5/8"
48 points = 2/3"
54 points = 3/4"
64 points = 7/8"
72 points = 1"
80 points = 1 1/4"
94 points = 1 1/3"

Font Families

A font is an entire type *family* having the same letter shape. Fonts impart emotional content. They can be elegant, romantic, humorous, or friendly, while others look cold, technical, or businesslike. Some fonts are a blend of emotions.

Courier—resembling typewriter output—is commonly used in the legal profession because it is familiar, straightforward, and is devoid of emotional content (unlike the courtrooms where Courier is used).

Old English, Park Avenue, and Boulevard are elegant fonts. They impart feelings of serious respect, even arrogance. These fonts are used on university degrees, certificates, and rich people's business cards.

The romantic fonts include Coronet, Brush Script and Zapf Chancery. They are elegant, beautiful fonts resembling calligraphy. They are suited well to formal invitations, personal announcements, and thank-you notes.

Comic Sans, Ransom, and Benguiat Frisky are playful fonts. They convey humor and a lighthearted feeling.

Poppl Laudatio, Hobo, Impress, and Dom Casual are friendly, relaxed, informal fonts.

Cold, technical fonts include Tech, LCD, and OCR fonts. They appear as if produced by a digital machine for other machines to read.

Gill Sans and Universe Condensed are often seen in business correspondence and spreadsheets.

All of the aforementioned fonts are unsuitable for typesetting books. Book fonts such as Times, Palatino, Garamond, Baskerville, New Century Schoolbook, and Bookman are no-nonsense fonts. They are time-honored and traditional body-text fonts developed for their readability.

Goudy Old Style is a common book font that blends a no-nonsense attitude with a nostalgic, old-fashioned flavor. Goudy Old Style looks as if it were printed in the late 1800s.

Helvetica and Avant Garde are serious but not-too-stuffy fonts that are best used as headings, rather than as body text in a book.

Your choice of fonts is critical to conveying the message. You wouldn't want to typeset a consumer-complaint letter in Old English, set a book in OCR,

invite guests to your wedding in Courier, or announce a funeral with Ransom. In short, your message is not just in the words, but in how the words *look.*

Dear Sirs:
I take exception with your policy regarding the finality of sales. "If it breaks, you own both parts" is not commensurate with acceptable business practices in this county.

You are cordially invited to witness the marriage of our daughter, Ms. Ella Vader to her beloved Mr. Oliver Clozeoff on February 29TH, 2002 at 2:00 P.M.

In Memoriam of Jason Katz
Service to be Held in the Bereavement Wing of the Our Lady of Eternal Anguish Church

Serif and Sans Serif Fonts

Serif fonts have little hooks and feet on them. Serif type leads the eye to the next letter and is easier to read than *sans serif* type—type without serifs. Serif fonts are used in the body text of most books.

Always choose type for readability and/or space conservation. Browse the lists on this page.

Popular Serif Fonts

Bookman
Bookman italic
Bookman bold
Bookman bold italic

Palatino
Palatino italic
Palatino bold
Palatino bold italic

Bernhard Modern
Bernhard Italic
Bernhard Bold
Bernhard Bold Italic

New Century Schoolbook
N. C. Schoolbook italic
N. C. Schoolbook bold
N.C. Schoolbook bold italic

Baskerville
Baskerville italic
Baskerville bold
Baskerville bold italic

Times
Times italic
Times bold
Times bold italic

Garamond
Garamond italic
Garamond bold
Garamond bold italic

Goudy Old Style
Goudy Old Style italic
Goudy Old Style bold
Goudy O.S. bold italic

Popular Sans Serif Fonts

Sans serif type is often used as *display* type. Display type is chapter headings, subheadings, artwork captions, and *callouts* (labels in a diagram or other graphic).

AvantGarde
AvantGarde italic
AvantGarde bold
AvantGarde bold italic

Gill Sans
GillSans italic
GillSans bold
GillSans bold italic

Helvetica
Helvetica italic
Helvetica bold
Helvetica bold italic
Helvetica Narrow

Univers
Univers oblique
Univers bold
Univers bold italic
Univers Condensed

Eurostile
Eurostile italic
Eurostile bold
Eurostile bold italic

Futura
Futura italic
Futura bold
Futura bold italic

Italics are actually a change in letter shape as well as posture. Sans serif fonts are set in *oblique*, rather than italics. Because of the angular strokes, bolding some sans serif fonts can close up the space between letters.

Decorative Fonts

As with all fonts, decorative type imparts *attitude*, expressing the unconscious emotional intention of the writing. Decorative fonts are rarely used in book making. They are best reserved for flyers, brochures, newsletters, and wedding invitations. Decorative fonts also lend themselves well to book covers.

ANNA
ALGERIAN
Asimov
Mistral
OregonWet
PepperMint
Poseidon
Ransom Paste
Satanick
Staccato
STEELWOLF
STONE AGE
Dancin
Arriba Arriba
IGLOO
Jurassic
BLOODY
Broadway
Comic Sans
CAVEMAN
CHILI PEPPER
Certificate
KUNIAFONT
SCRIBA
Giddyup
GREECE
HEADHUNTER
UMBRA

Script Fonts

Author
Commercial Script
Black Chancery
Marigold
Matura
Park Avenue
Script
Vivaldi
Brush Script
Coronet
Arabian
Marriage Script
Staccato555
Pepita
Signet Roundhand
Zapf Chancery

Avoid italicizing decorative or script fonts—it makes them grotesque. Also avoid using all caps in decorative fonts—they are much too hard to read:

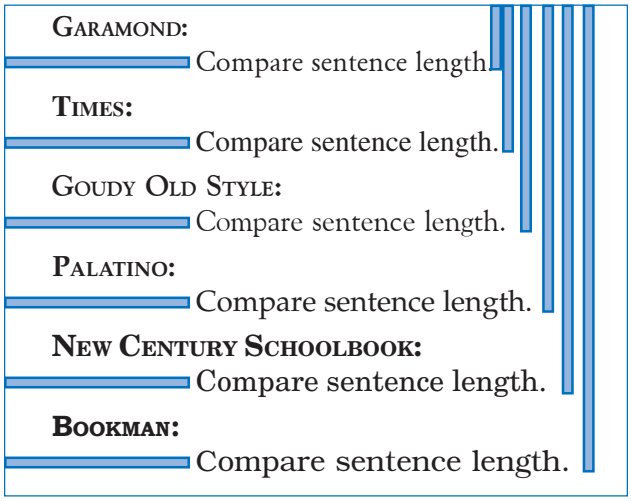
Brush Script
BRUSH SCRIPT

Old English
OLD ENGLISH

How Thrifty is Your Font?

Some fonts take up more space than others. An important factor in choosing fonts is not only readability, but space constraints. Will the book need to be padded-out, or slimmed down? The more pages your book has, the higher the production costs. The slimmer your book, the lower the perceived value and the lower the cover price will have to be to sell it. Find a font that will allow a nice balance between these two concerns.

Garamond (PostScript version) is the most space-conservative font, hence its popularity. Using Garamond as a standard, compare the space requirements of other popular serif fonts, set in 11-point type:



Font	% More Space Used than with Garamond			
	10 Pt	11 Pt	12 Pt	Averages
Times	2.5%	2%	9%	4.5%
Goudy Old Style	2.5%	4.5%	10%	5.5%
Palatino	7.5%	11%	12%	10%
N. C. Schoolbook	15%	13%	12%	12%
Bookman	15%	15%	21%	17%

From these tables we can easily see that Times is the next space-conservative font (compared to Garamond), followed by Goudy Old Style, Palatino, and New Century Schoolbook.

Bookman is a space hog. If you need to pad-out your book, this is the font to use. Twelve-point Bookman will eat up pages if the word count is so low that your book would look like a brochure if set in 10-point Garamond. You'd have to sell such a "brochure" at a cover price higher than its perceived value to buyers. Use fonts wisely—it'll pay off in the end.

Type Styles

Fonts can further be subclassified by *weight, posture,* and *tracking.* These subclasses are commonly referred to collectively as *type styles*.

The weight of a font is the thickness of the stroke as compared to normal or regular weight. The posture of the font describes whether it leans or not, and how much. Small caps is sometimes considered a posture because it is a squatty version of normal type. Tracking refers to the spacing between the letters. In PageMaker, it is adjustable by percent, whereas in most word processors, you get three choices: normal, expanded, and condensed. Tracking is detailed in Part 4—Banzai Typesetting.

Weight	Posture	Tracking
regular	*italic*	normal
medium	roman	condensed
bold	*oblique*	expanded
light	Small Caps	narrow

These type styles all have their specific uses in bookmaking. As with font families, type styles should not be used indiscriminately, but with care as described in Part 4—Banzai Typesetting.