# MACROMEDIA®



Terminology

On The

Desktop



Type Terminology on the Desktop contains definitions of type-related terms that are commonly used on the computer. We created this book because of confusion (and major debates amongst ourselves) when using terms like font and typeface. We decided it was time to set the record straight.

For instance, in traditional typography the term font originally referred to a complete set (or alphabet) of type in one size and style, like the font you are reading which is 10 point Goudy Oldstyle. On the Macintosh, however, the term "font" has come to represent a family of type which includes all the sizes and styles. Font is often confused with the term typeface, which originally referred to a set of characters that had the same design: Goudy, Bodoni, Garamond, and Caslon are just a few.

A font is simply a collection of symbols. We use icons (a form of symbol) after each term to indicate where it originated. The pen  $\P$  indicates that the word is a "traditional" type term; the disk  $\square$  indicates that the word is "modern" and originated with the advent and use of desktop typography. If there are two symbols, it means that the word has withstood the march of time to become a desktop term.

We probably won't change anyone's opinion regarding the distinction between a font and a typeface, but we do hope that this book will be useful when you need a quick definition. DESKTOP

Traditional Electronic



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Credits

This book was researched and compiled by Claudia Buisson and Katharine Green from the sources listed in the Bibliography. We had lots of assistance from Andrew Meit who became our "in-house" typographic consultant. J. Stewart Huey created the illustrations as Fontographer fonts and Aldus FreeHand EPS files. We'd also like to give our special thanks to our friends Richard Beatty, David Berlow, and Richard Mitchell for their invaluable assistance and expertise.

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#### AFM



(Adobe Font Metrics) A specification for storing (in a text file) font metrics information such as character widths, kerning pairs, and character bounding boxes.

#### alphabet



abcde αβγδε The characters of a given language, arranged in a traditional order.

#### apex



Where strokes come together at the uppermost point of a character.

#### arm





The short, upward-sloping stroke or horizontal projection of characters like the 'X' and 'L.'

#### ascender





The part of upward-reaching letters, such as 'b,' 'd,' 'f,' 'h,' 'k,' and 'l,' that extends up above the x-height. An ascender should be in proportion with the x-height for legibility. (See ascender line.)

#### ascender line





The imaginary horizontal line that represents the uppermost point of an ascender.

#### ascent



A font's maximum distance above the baseline.

#### **ASCII**



(American Standard Code for Information Interchange) A computerized numbering scheme used to represent text characters. Pronounced "ask-ee."

#### ATM



(Adobe Type Manager) A program that improves your screen display by imaging fonts directly from their Type 1 PostScript language font files.

#### bar





The enclosed horizontal stroke in characters like 'A,' 'H,' and 'e.'

#### baseline





The imaginary horizontal line on which all letters in a font rest. Leading is measured from baseline to baseline. Also known as the "reading line."

#### BCP



(Bézier Control Point) One of two points which guide a Bézier curve.

#### **Bézier curve**





Mathematical equations commonly used to describe the shapes of characters in electronic typography. The Bézier curve was named for Pierre Bézier, a French computer scientist who developed the mathematical representation used to describe that curve.

# bitmap... cap line

#### bitmap



A matrix of individual dots or pixels that makes up the graphic display. Each pixel (or picture element) corresponds to bits in the processor's memory.

A font which is made up of

outline fonts, with bitmap

outline fonts automatically

fonts being used on the

used in the printer. Also

known as a "screen font."

screen, and connected

pixels (or square dots).

Bitmap fonts typically

work in tandem with

#### bitmap font

bowl

bounce

8 日 curve of letters like 'D,' 'g,'

up and down position.

#### H



The enclosed oval or round 'b.' and 'o.'

Alternating characters in an



caching

The process that saves bitmaps in memory or on the printer's hard disk in order to minimize the amount of time spent generating bitmaps. The first time a particular letter is imaged, its bitmap is generated and cached. Subsequent uses of that letter can use the cached version for huge performance gains.

#### Blackletter

5 -



These heavy, black typefaces (whose capital letters are often ornate) were the very first metal type. The earliest of these were from the Gutenberg workshop and were copies of letters found in handwritten manuscripts. Also known as "Old English."

is determined by measuring

from the highest ascender

(plus any additional white space to the descender line).

to the lowest descender

### body size

calligraphic



In typography, this usually refers to Roman or Italic alphabets which appear to have been written with a pen or brush. Derived from the Greek word "kalligraphia," which means "beautiful writing."





cap line

8 1

The height of uppercase letters. (See cap line.)

#### **boldface**





The imaginary line which represents the uppermost part of capital letters and some character's ascenders.



A dark typeface used for emphasis, usually heavier in weight.

#### character

9 1

Zo? £%\$

A symbol in writing. A letter, punctuation mark. or figure.

#### character set

AaBbCc 123?!:."

A single font's characters, symbols, and numbers.

#### condensed

8 🖫



Characters which are narrower to fit into a compact space. A properly condensed character should fit into a smaller space without making it too thin or reducing the character's height.

#### contrast

\$ H

An indication of the difference between the thicker and thinner parts of characters in a typeface. Bodoni, with its thin serifs and horizontal strokes and thick verticals, is a high contrast face. Helvetica (and most Egyptians) is a low contrast face.

counter





The enclosed (or partially enclosed) space within letters such as 'c,' 'e,' 's,' 'H,' and 'g.' Often confused with "bowl."

#### cross stroke



The part of the letter that cuts horizontally across the stem, like in the letters 't' and 'f.' Also known as the "cross bar."

#### cursive

9 🗔

# carsive

First used in the 16th century, these typefaces imitate handwriting. Script letters and cursive typefaces appear to be drawn with pen and ink. Unlike script, however, cursive letters are not joined.

#### descender

\$ E



The lowest portion of letters such as 'g,' 'j,' 'p,' 'q,' and 'y' that extends below the baseline, or reading line of type. (See descender line.)

#### descender line 🕴 🖃



The lowest line that a character's descender extends to, like the bottom stem of the lowercase 'j' and 'y.'

#### descent

A font's maximum distance below the baseline.

#### diacritic



A mark, like a circumflex. accent mark, cedilla, or umlaut, which is added to a letter to give it a special phonetic value, or to distinguish words which are otherwise graphically identical. Also called "accent."

#### dingbats

6 H



Once known as "printer's flowers," these are the small decorative marks, bullets, or symbols that usually make up a specialty face. Zapf Dingbats is one well-known example of a dingbat font.

# display face... em square

#### display face

6 E

A larger and bolder version of a text face (14 points or more) which is used for headlines and sub-headlines.

#### downloadable font

A font file that contains character descriptions that are copied from the computer and temporarily stored in the printer's memory while a document is printing.

#### dpi





(Dots per inch) The measure of resolution for a video monitor or printer. High-resolution printers are usually at least 1000 dpi. Laser printers typically have a resolution of 300 dpi; monitors are usually 72 dpi.

### drop cap

rop caps can be very effective at the beginning of paragraphs.

An oversized capital letter used at the start of a paragraph. Drop caps occupy two or more lines of body copy.

#### ear





The projection on letters like the lowercase 'g' and 'p.'

#### **Egyptian**





A typeface style with slab or square serifs, these lack contrast (i.e., in a serif face, thick serifs and stems that are normally thin are fat). Also known as "Western" faces since they are reminiscent of the old American West, these are

sometimes made up of human forms and floral figures, and are one of the oldest reminders of the craftsmanship of the 19th century — before modern journalism and printing techniques came into being. Still with us today, some of these faces are so bold and condensed that they hardly have any white space between the letters.

#### em



A unit of measure, which is the square of a face's point size. Traditionally, the width of a face's widest letter, the capital 'M.' For instance, if the 'M' is 10 points wide, an em is equal to 10 points.

#### em dash

#### 5 日



One em wide, the em dash indicates missing material or a break in thought. Spaces may be added to both sides of the em dash.

#### em square



A square the size of a capital letter 'M,' which extends to the descender line. The em square received its name from the capital 'M' that filled the piece of metal used to form the type body in early printing days.

#### em space

8 日

A space equal to the width of a typeface's point size.

A space equal to the width of a typeface's point size. Often used for paragraph indentions. Traditionally, the em space was created by non-printing blocks of metal used to add space between words.

#### em units

-

Dimensionless distancemeasuring units used in Altsys' software program Fontographer.

#### en

8 L



A unit of measure which is equal to half of a typeface's point size. Traditionally, an en was half the width of an em.

#### en dash

₽ 🖃



One en wide, the en dash indicates duration, "to" or "through" such as, "refer to pages 4–9." It may also be used in compound adjectives (as in post–World War II). A space can be added to both sides of the en dash.

#### en space

₽ 日

A space which is equal to half an em space.

#### **EPS**

(Encapsulated PostScript) A computer document file format jointly developed by Altsys, Aldus, Adobe, and Quark, which expedites the exchange of PostScript graphics files between applications. Also known as "EPSF."

#### graphics files bety

expanded



R

A typeface whose letters have been made wider without visually adding weight.

#### extended

7 8



A typeface whose letters are stretched (or expanded) horizontally while still retaining their original height.

#### family

\$ E

Times
Times Italic
Times Bold
Times Bold Italic

All the type sizes and styles of one typeface. A complete character set of a font. The group shares a common design but can differ in attributes such as character width, weight, and posture (i.e., Roman vs. Italic). A typical computer family unit frequently contains four fonts — Roman, Italic, Bold, and BoldItalic — in all sizes.

#### flex



A means of automatically suppressing small details such as cupped serifs that would print poorly at small sizes. At large sizes or high resolutions, the details are automatically reinstated.

#### FOND... Gothic

#### FOND

(FONt family Descriptor) FONDs define the relationship between a plain Macintosh font and its styles (such as Bold, Italic, and BoldItalic). The FOND groups a family of fonts and contains the family name, the style, and size, as well as metrics information like fractional width tables and kerning tables.

#### FONT

Old Macintosh bitmap font size resource name. (See NFNT.)

#### font

8 日

In modern usage, the term "font" is often confused with "typeface" and "family." Traditionally, the term "font" represents a complete set of characters or symbols, which share the same size and style. For example, 12 point Goudy Oldstyle Bold is a font. Fonts can be as small as the basic alphabet or up to hundreds of characters. Some languages, like Japanese, can exceed these numbers, which make them more difficult to access from the standard keyboard. Derived from the word "found" as in typefoundry.

#### **Fontastic Plus**



Altsys Corporation's specialized bitmap font editor designed to create bitmap fonts and customize existing bitmap character sets with distinctive characters, logos, and graphics. Fontastic Plus can also be used to add kerning pairs to any font.

#### **Fontographer**

 $\Box$ 

Altsys Corporation's specialized graphics editor designed to simplify the editing and creation of high-quality fonts, logos, typefaces, and other intricate PostScript and TrueType artwork. In addition to generating EPS outlines for use in Post-Script illustration programs, Fontographer generates Type I PostScript-language fonts (for the Macintosh, IBM-compatible PCs, and NeXT) as well as TrueType and Type 3 PostScript fonts (for IBM-compatible PCs and the Macintosh).

#### Gothic

5 L

Letter Gothic

Gothic

In modern usage, Gothic refers to sans serif monoweight letters (for example, Letter Gothic). These have little contrast of thick and thin lines, and no ornamentation, yet still retain the intensive boldness of the traditional Gothic. After the invention of typography by Gutenberg in AD 1450, the traditional Gothic style of lettering fell into the shadow of Venetian Old Style typography.

# geometric... leading

#### geometric

8 H

# **Futura** Lubalin

Serif or sans serif designs composed of visually geometric character shapes. Some good examples are Lubalin Graph, Avant Garde, and Futura.

#### hints

Computer algorithms which enhance the appearance of characters printed or imaged at low resolutions (72-600 dpi). ATM can take advantage of hints in Type 1 PostScript fonts to render more uniformly shaped screen fonts across the character set.

#### initial cap



Large, capital letters (often ornamental) which are found at the beginning of paragraphs or chapters. These date back to the early days of European manuscripts where they were (and still are) considered works of art. Before printing presses replaced handlettering, a few talented scribes drew the characters into spaces left in the manuscripts for that purpose.

#### italic



Best used to set off quotes, special phrases, and foreign words, italic letters have a redesigned structure that allows them to slant to the right. The first italic type was designed by Aldus Manutius in AD 1501 and was based on the handwriting style of that time.

Furthermore, lowercase letters were in italics while capital letters were Roman (or vertical stance).

#### justified text

This is text that lines up at both the left and right margins. Also known as fully justified.

Text that lines up at both the left and right margins. Also known as "fully justified."

#### kerning

The process of improving appearance and legibility by adjusting the white space between certain paired characters, such as 'Ty,' 'To,' or 'Ye,' which are known as "kerning pairs." Manual kerning allows the desktop publisher to move letters either closer or farther apart to adjust and improve the space between them. Automatic kerning on the computer is done by using a kerning table (an AFM file) that contains predefined font-specific kerning pairs. Sometimes incorrectly referred to as "minus setting."

### leading

9 🖫

abc def 12/12

abc def 12/14

abc

def 12/16

Pronounced "ledding," this is the space (measured in points) between rows of text, from baseline to baseline (i.e., 12 on 12 means there is no additional leading; 12 on 13 is 12 point type with one additional point of leading). This term is taken from the days when thin strips of lead were placed between lines of

type to space them apart.

# left justified... Modern

#### left justified

This is type that is aligned with its left margin. Also called flush left.

#### ₽ =

Type that is aligned with its left margin. Also called "flush left."

#### letterspacing

### 7 6

# letter

Separating all the letters in a word with spaces. Best used to modify headings, this should be applied with caution since too much letterspacing makes copy difficult to read. Some programs automatically add letterspacing when the text is justified. (See tracking.)

### ligated



#### 8 E

A typeface that has connections between letters. Formal and informal scripts are the most common examples of ligated typefaces. Characters like 'fi,' 'fl,' or 'st' may be ligated in typefaces that are otherwise unconnected.

#### ligature



#### 8 🗆

One character that is made up of two or more letters.

#### **lowercase**



#### 6 E

These are the small letters of a typeface. Originally, small letters were stored in the lower section of the printer's typecase, hence the term "lowercase." Once known as "minuscules."

#### mean line





The top (imaginary) point of all lowercase characters without ascenders. Also called "x-height."

### Metamorphosis Professional

Altsys Corporation's complete font conversion utility which creates editable outlines and other computer font formats from PostScript, as well as, TrueType fonts. Meta Pro has the ability to convert entire PostScript and TrueType typefaces and specific lines of text into PICT, EPS outlines, automatically-hinted TrueType fonts (for the Macintosh and PC-Windows), Type 1 PostScript fonts (Macintosh, PC-Windows, and NeXT), Type 3 PostScript fonts (Macintosh and PC-Windows), and Fontographer database files.

#### metrics



Font information such as ascent, descent, leading, character widths, and kerning.

#### Modern



# Modern

A modified version of Old Style, these high contrast letters have heavy, untapered stems and light serifs. Originally developed by Firmin Didot and Giambattista Bodoni during the late 18th and early 19th centuries.

# monospaced type... pixel

#### monospaced type 🐬 🖃



just MONO Like typewritten characters. these all have the same width and take up the same amount of space. Use of this type allows figures to be set in vertical rows without leaving a ragged appearance (as opposed to proportional type).



(New FoNT) The Macintosh font resource which contains your bitmap screen font. NFNTs have a wider range of font identification numbers than the older FONTs. NFNTs opened up another 16,000 FOND ID numbers when they were introduced by Apple with the Macintosh Plus.

#### **Oblique**





A right slanted version of a Roman typeface without changes to the letter's design. Often confused with Italic.

#### **Old Style**



# Garamond Caslon

Characterized by variations in stroke width, bracketed serifs, high contrast, and a diagonal stroke. Some popular Old Styles include Bembo, Garamond, Janson, and Caslon. Originally developed during the Renaissance and adopted by Venetian printers in the 15th century, these were based on pen-drawn forms.

#### outline font





A font that is defined by drawing the black contour of the white space that makes up each character. It is made up typically of Bézier curves for PostScript fonts and quadratic splines for TrueType fonts. Both these fonts can be scaled to any size; therefore, one set of outlines can be used for any size in a typeface.

#### permanent font



A font which is downloaded to the printer, onto a hard disk, or in ROM, and resides there until the power is turned off.

#### pica



A typographic measurement that has survived the digital revolution. A computer pica is equal to 12 points (one-sixth of an inch). 12 points = 1 pica; 6 picas = 1 inch; 72 points = 1 inch.

#### pixel



(Stands for PICture ELement) Pixels are square dots that represent the smallest units displayed on a computer screen. The standard Macintosh monitor displays about 72 pixels per inch. Characters. or graphics are created by turning pixels on or off.

# point... resolution

#### point

8 H

In modern desktop publishing, one point is defined to be equal to 1/72 of an inch. The traditional point measurement was slightly more or less than 72 points to the inch (depending on the typesetting measurement system).

#### point size

The height of the type body. A standard type measurement system was originally developed by the Parisian type founder Pierre Fournier le jeune in 1737. In the days of metal type, the point size was the total number of points in the height of metal type, including the ascent and descent of the letters. and the metal above and below the letters (i.e., builtin leading).

#### **PostScript**

Adobe System's page description language. Programs like Aldus FreeHand use PostScript to create complex pages, text, and graphics onscreen. This language is then sent to the printer to produce highquality printed text and graphics.

#### printer font



A font (i.e., Helvetica or Times) that can be downloaded to the printer, onto a hard disk or in ROM, that then resides in the printer.

#### proportionally spaced type $\cite{p}$

iust

Type whose character widths vary according to the features of the letters (as opposed to monospaced type).

#### RAM

(Random Access Memory) The computer or printer's temporary place for storing data. When the computer or printer is turned off, the information in RAM is erased.

#### rasterization



The process of converting outlines into bitmaps. The outlines are scaled to the desired size and filled by turning on pixels inside the outline. (See pixel.)

#### rendering



The actual placement of rasterized pixels on the monitor's display. Refers both to graphic objects and type, particularly for fonts using hints. Also called "rasterization."

#### resident font



A font that resides permanently in the ROM of a printer.

#### resolution



The number of dots in an image's screen display or printed output. A monitor's resolution refers to the number of pixels per linear inch. Printed resolution refers to dots per linear inch. (See dpi.)

# reverse type... side bearing

#### reverse type

Keverse

# cise cype

White characters on a dark background. A good way to grab the reader's attention.

### right justified

# 8 D

This is type aligned with its right margin. Also known as flush right. Type aligned with its right margin. Also known as "flush right."

#### RIP



(Raster Image Processor) Converts fonts and graphics into raster images, which are used by the printer to draw onto the page.

#### Roman

#### ₽ FJ

# Roman

In Macintosh font menus, this is called Plain, meaning text that has no style applied to it (i.e., Italic, Bold, BoldItalic). Roman fonts are upright, thick-and-thin weighted, and usually serifed type. The classical Roman letter style began in A.D. 114 with letters chiseled in the stone of the Trajan Columns in Rome.

#### sans serif





A typeface without serifs. Sans serif type is more legible in headings than in a long passage of text. Helvetica is an example of a sans serif typeface. First designed by William Caslon IV in 1816, it was originally referred to as "English Egyptian." Also known as "Gothic" in the United States and "Grotesque" in Europe.

#### screen font

Bitmap fonts used for computer screen display.

#### Script



Script

Script letters are joined and should not be confused with cursive, which are not connected. Since script is difficult to read, its use should be limited to a few lines at a time. Early script typefaces were developed in the sixteenth century, and were based upon formal cursive handwriting.

#### serif





Small, finishing strokes on the arms, stems, and tails of characters. Serif typefaces are usually used for text, since the serifs form a link between letters that leads the eye across a line of type.

#### set-width



The width of a letter and its surrounding space; the space needed to set a line of text in a specific typeface. Some programs have tracking to adjust the typeface to make it set looser or tighter. Also known as "advance width."

#### side bearing





The space between the origin of a character and its leftmost point (left side bearing), or the space between the rightmost point and width line (right side bearing).

# square serif... text face

### square serif



8 1

Originally designed at the beginning of the 19th century, these typefaces have squared-off serifs on the characters' end strokes. Also called "slab serif" or "Egyptian."

#### small caps

Мтм



Capital letters that are the same (or nearly the same) height as the typeface's x-height. Some software programs automatically create their own small caps, but true small caps (with correct proportions and weight) are usually only

found in expert typefaces.

#### spacing

#### 8 13

# To be

The amount of unused space that exists between words, letters, and lines in text. Spacing provides a means to avoid overlapping shapes and letters in order to improve readability.

#### spur



A finishing stroke like the ones on certain uppercase 'G's.

#### stem



8 1

The upright element of a letter or character.

#### stress



₽ H

The vertical, horizontal, or diagonal emphasis on the stroke of a letter.

### style



Plain Bold

Italic BoldItalic A visual variation of a basic typeface used to create emphasis. Typestyle is important since it can attract (or repel) the reader's eye. The four basic computer styles are Plain,

Bold, Italic, and BoldItalic.

#### Style Merger



The Altsys utility that takes individual styled fonts and merges them into one font family.

#### swash capitals 🕴 🔙



Uppercase letters that have flourishes added to them. Originally designed to go with Italic typefaces.

#### tail



A character's downward projection such as on the letter 'Q.'

#### terminals





Not serifs but ends of certain letter shapes such as the letters 'f,' 'j,' 'y,' 'r,' and 'a.'

#### text



The main body of a printed document or book. Also called "copy."

#### text face



Usually serifed fonts set in sizes from 9 to 12 points, these typefaces are easier to read in large sections than display faces. Some examples include Times and Goudy Oldstyle. Also called "bookface."

# thin space... typeface

#### thin space

9 1

A space equal to one-fifth of an en space.

#### tracking

8 H

The overall letterspacing in text. Tracking can also be used to tighten or loosen a block of type. Some programs have automatic tracking options which can add or remove small increments of space between the characters. (See letterspacing.)

#### transient font

A font which stays in the printer's memory until the current document is finished being printed.

#### **Transitional**

New Baskerville A typestyle which is characterized by moderate variations in stroke weight, smoothly-joined serifs, high contrast, and an almost vertical stress. First introduced in the late 18th

century by John Baskerville.

### TrueType



An outline font format developed by Apple Computer (for use with System 7) and adopted by Microsoft Corporation (for use with versions of the Windows graphical user interface). These fonts can be used for both the screen display and printing, thereby eliminating the need to have two font files for each typeface.

#### type

9 🗔

Printed or typewritten letters or characters. As early as AD 400, the Chinese printed entire pages of characters through the use of wooden blocks. Johann Gutenberg cast the first metal type in the 15th century.

# Type 1 PostScript font 📃

Adobe's encrypted font format which may or may not contain hints. Faster to render, more compact in file space, and better aesthetically than Type 3 fonts, these are compatible with ATM.

### Type 3 PostScript font

Sometimes referred to as user-defined fonts, these are non-encrypted fonts. Type 3 PostScript fonts can contain grayscale fills, complex characters, and stroked characters. ATM does not render Type 3 fonts onscreen.

#### typeface



Often named after a designer, a typeface or "face" (e.g., Goudy Oldstyle) is an interpretation of a character set that shares a similar appearance and design. The character set includes letters, numbers, punctuation, and symbols. On computers, "typeface" is used interchangeably with the term "font."

# typography... x-height

#### typography



Typography is the study and process of typefaces; how to select, size, arrange, and use them in general. In modern terms, typography includes computer display and output. Traditionally, typography was the use of metal types with raised letterforms that were inked and then pressed onto paper.

#### Uncial

# UNCIAL

A calligraphic typestyle that combines attributes of upper and lowercase letters, using large, rounded letterforms. Derived from "uncus." which in Latin means crooked. The halfuncial is another related typestyle.

#### uppercase

# **ABC** DFF

The large, capital letters of a typeface. Once called "majuscules," these letters were stored in the upper section of the printer's typecase, hence the term "uppercase."

#### vertex

₹ H



Where the stems join at the lowest joint of a character.

#### weight

8 H

### Light Book Bold Black

The measurement of a stroke's width. Common names for weights include demibold, light, and bold. Some typeface families have several weights, including ultra-bold and extra-light.

#### word spacing 🐬 🗔

In a line of text, this is the amount of space between each word. It can be varied to adjust line length without affecting readability, unlike letterspacing.

#### WYSIWYG

(What You See Is What You Get) Refers to a relatively accurate screen representation of the final printer output.

#### x-height

8 -



The height of a face's lowercase letters, or the size from mean line to baseline of the lowercase 'x.' The lowercase 'x' is used for measurement since it usually sits squarely on the baseline and has no ascenders or descenders.