

type

course reader

introduction to typography

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Pages 12 through 44 show examples of 'classic' type families intended for use in Introduction to Typography. The intent is to familiarize introductory students with type faces and methodologies that are essential to the field of graphic design. In course projects, students will be challenged to work meaningfully and creatively within the immense range of basic serif and sans serif families.		
Pages 45 through 48 show examples of type classifications that are important to understand, but that are typically outside the scope of basic type usage, and are not for use in this course.	45	black letter type
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an introduction to typography

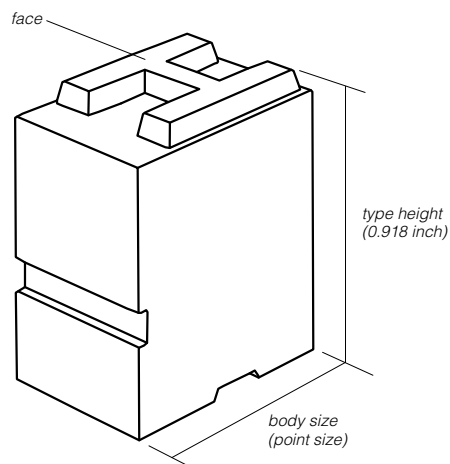
Typography is the arrangement of letters and words for the purpose of communication, as well as the design of the type and typographic elements used in this activity. Typographic communication spans the entire range of human communication—from detached utilitarianism to the intimately emotional. Typography exists in every imaginable medium—from print to screen to carved stone, brush, and spray-painted letters. Type and typography surround us.

Typography is part of the history and universe of visible language that begins and is intertwined with writing and alphabets. Alphabets arranged into words are the visual representation of spoken language, and typography can give those words a 'voice' tailored to a particular situation. It is the role and responsibility of the typographer and designer to make choices that clarify and expand the meaning of a text, often by very subtle means.

Typography is a complex subject that is interwoven with many other facets of human activity—from cognitive processes, social interaction, and cultural differences to technology and commerce. While typography can be a vocation, and is integral to the profession of graphic design, many of the tools of typography are accessible to nearly everyone. It is the informed and conscientious attention to meaning, form, and detail that distinguishes a typographer from one who simply uses type.

metal type (lead alloy)

Many of the terms we use in contemporary digital type (like font, face, uppercase, etc.) are derived from those used to describe metal type, first introduced over 500 years ago. On the following pages are basic type terms and an overview of milestones in type history.



basic design terminology

As with all aspects of design, typography employs the elements, principles and attributes of composition.

elements:

the items used to build a composition.

space the area in which all elements act.

line can divide, penetrate, enclose, or define space; can direct motion, force, opposition, or shape.

solid an unbroken area having definite shape.

mass the visual weight of an element or the collective weight of a group of elements.

tone shades of gray.

texture interwoven patterns of light and dark tones.

principles:

basic theories of how to work with elements.

relationship the connecting force between elements (harmony and proportion).

transition an orderly progression from one element to another; implies the concepts of direction, movement, or flow through space and time.

repetition the recurring use of the same element or theme.

opposition the attraction of extremes; used to stimulate excitement and tension.

hierarchy the order of dominance, or priority, of the various elements within a composition.

attributes:

qualities or characteristics inherent in any composition.

balance a distribution of elements which visually equal each other. balance may be symmetrical or asymmetrical. symmetrical balance is equal in weight and tone on both sides of a composition. asymmetrical balance is unequal in position and intensity and uses the tension between positive elements and negative space to achieve parity.

contrast an abrupt shift in weight and intensity.

rhythm the moving force, or flow, which connects elements within a composition.

basic type terminology

character an individual letter, numeral, punctuation mark, or symbol in a typeface. also called a **glyph**.

face/typeface one particular type style (“futura light” is a typeface, “futura bold” is another). the term is derived from the top “face” of metal type which is inked for printing.

family a group of variations of a typeface (**roman**, **italic**, light, **bold**, **bold condensed**, **bold condensed italic**, etc).

font all the characters of one size of a typeface: 8 point garamond is a font; 7 point garamond is another font. since digital type is derived from a single size, typefaces in software form are usually referred to as “fonts.”

roman type that is upright, not slanted.

italic *type that slants to the right; also called oblique.*

regular the original roman version of a face. sometimes called medium or with no name beside that of the face.

light a light version of a typeface.

bold a **heavy** version of a typeface.

condensed a narrow version of a typeface.

extended a **wide** version of a typeface.

uppercase the large letters, capitals (caps). This word originated with metal type—capitals were kept in the top or “upper” drawers of type cases: **ABCDEFGH**

lowercase the small letters, named for the lower drawers of type cases: **abcdefg**

U&lc abbreviation for upper and lowercase type set together using standard capitalization.

stroke any single line, straight or curved, within a character of type: this **C** has 1 stroke; this **B** has 3.

serif the small stroke that projects from the top or bottom of a main stroke of a letter. Serifs are thought to have originated with Roman masons who terminated strokes in stone with a serif to obscure uneven angles made by their tools. **this is serif type.**

sans-serif type without serifs. **this is sans-serif type.**

baseline imaginary line upon which the base of characters stand.

x-height the height of the central body of lowercase letters, named for the only lowercase character limited to this height that is flat on both its top and bottom.

ascender the part of a lowercase letter that rises above the x-height. **b, d, f, h, k, l, t** have ascenders.

descender the part of a lowercase letter that falls below the baseline. **g, j, p, q, y** have descenders.

counter/counterform a partly or completely enclosed space within a letter, such as the hollow center of an **o**.

alignment imaginary vertical line that type is set to. the alignment of this type is “flush left,” with rag to the right.

rag shape created by the varied ends of lines of type opposite the aligned side of a column of type.

line breaks the ending of lines of type creating the rag.

margin unprinted space around columns of type.

copy unformatted hard copy or digital manuscript not yet incorporated into a layout.

typeset copy that has been set in a typeface and columns for a particular design.

output proofs and other digital printouts of type.

dpi dots per inch, the resolution of digital output. most laser printers print 1200 dpi; professional imagesetters print over 4000 dpi. The visual effect of dpi differs between technologies, for example type will print sharper on a 600 dpi laser than on a 1400 dpi inkjet.

some characters you might find in a font:

ligature two letterforms designed together on one body, such as the combinations “**fl**” and “**fi**”

old style figures numerals with ascenders and descenders, also called ranging figures: **1234567890**

lining figures numerals uniform in height: **1234567890**

small caps capital letters that are about the same size as the font’s x-height.

ampersand “&,” ligature of the Latin *et*, meaning “and.”

em dash — an “em” is a square the height and width of the point size of a font, so an 8 point font has an 8 point wide em dash. an “em space” and an “em dash” (also called the long dash) are both the width of an em. the em dash is a common punctuation mark, often typed incorrectly as two hyphens in a row (--). another common error is the typing of a space around dashes in text.

en dash — an en space is half the width of an em. also called the medium dash, it is most used for time (1–2pm).

hyphen - the shortest dash; used to break words.

some words for measurement of type:

point the sizes of fonts and leading are expressed in the point and pica system. the point size of a font encompasses the entire potential height of all characters, from the lowest descender to the highest ascender—not the height of any one character (see lead type diagram pg 10). there are approximately 72 points in an inch. this system and the english system are not related, but most layout applications allow you to force 72 points to equal 1 inch.

pica the length of a line of type is measured in picas. there are 12 points in a pica; and about 6 picas in an inch.

leading the amount of space, measured from one baseline to the next baseline below, within lines of type.

text type type set below 14 points, also called body type.

display type type that is set 14 points and above.

selected milestones in the history of type

3200bc	oldest known hieroglyphic symbols, although marks and drawings on cave walls and objects such as bones date back as far as 37,000bc		metal type to print the 42-line bible, beginning five centuries of Western metal type, Germany
2500bc	ink (in stick form) China and Egypt	1460	Albrecht Pfister prints the first book with both type and woodcut illustrations, Germany
2300bc	paper-like sheets from papyrus plant, Egypt	1464	first roman type printed (as opposed to black letter), Italy
2000bc	symbols transition from representational to abstract with hieratic script	1468	printing in Switzerland
1800bc	Phoenicians reason that symbols can represent sounds; creating an alphabet by 1600bc	1470	printing in France; "roman" first used to describe type
1500bc	Chinese develop ideograms	1476	William Caxton sets up England's first press; Erhard Ratdolt produces the first ornamental title page for a book, Venice
850bc	Semites use vertical strokes between phrases—the first punctuation	1478	moveable type illustrations of flowers are introduced for use as borders and embellishments
800bc	Greeks adopt, and by 400bc, modify the Phoenician alphabet; adding word spaces and punctuation	1500	italic type, inspired by cursive writing, is created for publisher Aldus Manutius to fit more text on pages for inexpensive printing of Latin classics, Italy; typecast matrices allow letters to be made in molds for faster production, Prague
700bc	Romans adopt, and by 200bc, modify the Greek alphabet		
400bc	Anglo-Saxons adopt and modify the Roman alphabet	1504	first known etching
250bc	camel hair brush for lettering, China; parchment made from sheep and goat skins, present day Turkey; parchment is used to make the first folded book with facing pages	1508	layered color printing (superimposition with woodcuts), Europe
200bc	paper from plant fibers, Ts'ai Lun, China	1535	Claude Garamont opens the first type foundry established to sell type to other printers, France
72ad	earliest known Roman monumental capitals, the origin of serif typefaces	1539	first printing in the Americas (religious material from Spain) by Juan Pablos, Mexico City
250	zero is invented and the first numerals developed, India; introduced in Spain by 950ad, in France by 990ad, and in England in 1253ad	1553	camera obscura built (based on earlier drawings and descriptions)
500	ornamental initial caps used by scribes; after the fall of the Roman Empire, writing is rarely practiced outside of monasteries, and by 1300 every monastery would have a scriptorium	1605	first public library, Rome; first newspaper, Holland
700	block printing, China	1611	complimentary colors first described
704	Arabian paper from linen, cotton, and hemp; Chinese and Persians were known to produce cotton papers earlier	1640	Stephen Day sets up the first printing press in the American Colonies, Cambridge
1041	Pi Sheng invents moveable type made of clay and glued to a metal sheet for printing, China; in 1221 the Chinese develop moveable type from carved wood	1666	Isaac Newton describes color spectrum of light, England
1150	first European paper, Spain	1692	type based on a grid commissioned by the French Academy of Sciences; based on the results, Philippe Grandjean introduces Romain du Roi in 1700, the first roman and italic type designed to be used together
1234	first metal-based movable type credited to Choe Yun-ui, Korea	1714	patent issued in England for a typewriter
1270	paper made in Italy	1719	French physicist Rene de Réaumur proposes making paper from wood pulp
1331	earliest book illustration (woodcut), China	1720s	German printer Jakob Le Blon, working in the Netherlands, shows that color images can be printed using 3-colors (red, yellow, blue)
1377	Korean Buddhist book (Jikji) printed with moveable metal type (earliest still-existing example)	1734	William Caslon introduces a specimen sheet of 38 fonts after 14 years of production; the types dominate printing in England and its colonies
1400	individual (humanistic) lettering styles begin, as opposed to national styles	1739	stereotyping allows duplicate plates to be made
1450	engraving	1757	John Baskerville uses wove (smooth) paper, allowing the printing of hairlines and fine serifs
1455	Johannes Gutenberg casts and uses moveable	1790	patent issued in England for a cylinder press
		1795	Thomas Wedgwood begins experiments using stencils to create the first photograms, England

1798	lithography, Bavaria	1917	dada movement begins, Switzerland
1798	paper made in a continuous web (rolls) in a mill owned by Didot family printers and typographers	1918	Guillaume Apollinaire influenced surrealists by joining type and form in visual poems
1804	paper made using rollers	1919	the Bauhaus opens, furthering graphic design as a distinct academic discipline; Filippo Marinetti's <i>Words in Freedom</i> , furthers type composition as a means of expression
1810	steam driven cylinder press (for <i>London Times</i>)	1922	Stanley Morison begins his long program of type releases for British Monotype
1816	first sans serif type is published for printing—"Egyptian" in caps only by William Caslon	1925	Jan Tschichold writes <i>elementare typographie</i> , an article advocating simplicity and clarity through dynamic asymmetric typography; Futura is introduced, popularizing sans serif type
1818	based on work begun around 1760, Giambattista Bodoni's <i>Manuale Tipografico</i> is posthumously published, ushering in modern serif type design	1926	television is introduced by John Logie Baird, England
1822	first photomechanical printing plate	1949	photographic scanners for color separations built by the Austin Company
1822	type casting (3000 pieces of type an hour), Boston	1957	Univers, the first type family completely planned as a system before it was drawn, and New Haas Grottesque (later named Helvetica) are both released
1826	Joseph Nicéphore Niépce creates a heliograph, the first fixed photograph, France	1960	Bell Labs produces a laser
1827	Darius Wells invents a mass production method for wood type, making the printing of large scale type practical; press built for <i>London Times</i> prints 4000 impressions per hour	1962	computer hyphenation and justification, IBM and RCA; transfer lettering sheets are introduced, allowing designers to arrange type at their desks
1830	first lower-case sans-serif and first use of the term sans-serif	1966	first CRT phototypesetter, Linotype/Hell
1839	photography made practical by the work of Daguerre, Niepce, and Talbot is announced	1967	CBS develops typefaces for screen
1843	manufacture of paper from wood pulp, Germany	1968	Compugraphic Phototype machine released at under \$10,000 spurring its widespread use, later models generate 10,000 characters per second
1847	rotary press prints 8000 impressions per hour, Philadelphia	1969	first digital typesetting machine, by Linotype and CBS, installed in U.S. Government Printing Office
1853	offset printing patented in England	1971	Harris Corp. introduces an integrated input, editing, and phototypesetting machine
1856	phototypesetting patented in England	1972	a CRT (video monitor) is introduced at MIT capable of showing type in sizes and position
1859	Scottish physicist James Maxwell describes color separation	1974	Ikarus software introduces digital vector type
1862	halftone plates for printing photographs	1975	various companies introduce desktop printers that generate low-resolution (bitmap) type
1864	Lewis Carroll's <i>Alice's Adventures in Wonderland</i> is published, an early example of type layout used to emphasize meaning	1979	digitized halftone photos are introduced
1871	R.L. Maddox' fast, dry, light-sensitive emulsion makes hand-held cameras possible, England	1985	Adobe Postscript page description language allows preparation and printout of text and graphics across a wide variety of machines; to employ the technology, Apple introduces the LaserWriter desktop printer; and Aldus introduces PageMaker for the Macintosh
1873	first typewriter is available from Remington	1986	Altsys Fontographer software enables anyone with a Macintosh computer to create digital fonts
1878	John Marder introduces American system of points and picas	1989	Canon introduces color laser printer; Apple introduces color computer and monitor
1884	Linn Boyd Benton's automated punch cutting machine makes mechanical type composition practical, Milwaukee	1993	individuals gain access to the internet and its World Wide Web
1886	Linotype machines are introduced that are operated with keyboards and cast entire lines of type at once to replace letter-by-letter typesetting		
1899	animated type on film, Georges Méliès, France		
1907	Auguste and Louis Lumière introduce color photography, France; patent issued for silk screening, England		
1908	News Gothic, the first type family with different weights is designed by Morris Fuller Benton		
1915	first phototypesetting machine built		

sources: *A History of Lettering*, Nicolette Gray, 1986, David R. Godine
Letters, James Hutchinson, 1983, Van Nostrand Reinhold
A Short History of the Printed Word, Warren Chappell, 1970, Dorset
Thinking In Type, Alex W. White, 2005, Allworth Press
A History of Graphic Design, Philip B. Meggs, 1983, Van Nostrand Reinhold
Compton's Encyclopedia Online; wikipedia.org; adobe.com; gammag.com

observations on type:

on letterspacing:

The adjustment of one letterspace at a time is called “kerning.” The overall, global adjustment of spacing is called “tracking.” Different software and individuals use different terms to express amounts of tracking and kerning. “Units,” “tracks,” and “ems” are a few, and people often use the terms: loose, normal, tight, very tight, and touching. But what is “tight” to one person could seem “normal” to another, and to appear the same at different sizes, small type might be tracked slightly looser while large type might be tracked tighter. Kerning and tracking are measured in fractions of em spaces, and different applications have different default tracking and kerning units from 1/1000th of an em to 1/200th of an em. Print out spacing samples with the software and typefaces you are using to see what looks most appropriate.

Tracking can be adjusted for more even perception of type spacing at different type sizes and in different type styles. Most software defaults are set for 12 point type. Smaller type may need a bit more tracking, and larger type a bit less, to visually appear the same for each. Avoid overcompensation: overly wide letterspacing slows reading by disintegrating the distinct shapes of words, and overly tight letterspacing makes it hard to distinguish the shapes of individual letters.

Normally, all spaces between characters of type should be consistent. Once you establish an amount of space between two strokes, vertical and diagonal, diagonal and curve, etcetera, thereafter, whenever that combination of strokes occurs, the spacing should be the same. For overall evenness, try to match the amount of space used between each of these diverse combinations of strokes.

Kerning in large type, or small type where attention is focused like an address block, is the most critical. The varied shapes of letters makes mechanical measurement of the space between letters and words impractical. You must judge optically how individual spaces should be adjusted to produce the most even overall spacing.

Some letter combinations may need more attention in kerning than others. For example, when lowercase letters follow caps like T, V, W, and Y, they may need to be kerned closer to smooth spacing. In display type some combinations like “ry” or “TY” might be set very close to avoid the appearance of gaps in a word. Often, the space after commas and around quotation marks must be kerned to avoid gaps in sentences. Because numerals use uniform spacing for setting in columns, you must kern them carefully when set in sentences, addresses, and phone numbers—especially the numbers 1 and 7.

208-573-4198

default setting

208-573-4198

kerned, dashes adjusted up

Most digital fonts come embedded with “kerning pairs,” that layout applications access to smooth spacing. However, sets of kerning pairs are usually incomplete and inconsistent. “Auto-kerning” uses information programmed into some font software, but is limited by many factors including the original programmer’s ability and time. Designers and typographers—not computers or software—are ultimately responsible for type spacing.

on word spacing:

The amount of space between words must be consistent and balanced—use the same methods as in letterspacing. Inadequate word spacing makes it difficult to distinguish one word from the next. Too much word spacing makes it difficult for a reader to group words into sentences and phrases. Word space must be sufficient to distinguish one word from another, but not so wide that the eye must “jump” from one word to the next. Smooth, continuous reading should be the goal. Word spacing is adjustable in most page layout applications, but does not deal with evenness in regards to varied letter shapes or punctuation like commas and periods.

Keep word space optically even around punctuation such as periods and commas, especially when they appear in succession (Ave.,). The open space above these characters counts toward the word space. Place punctuation such as a comma closest to the word preceding it, and consider taking up some of the space following to help avoid uneven gaps.

Word spacing should appear less open than line spacing (leading), so that a reader can easily see and follow the horizontal flow of individual lines of type. Keep in mind that different typeface designs will require different relative amounts of spacing in order to maintain a horizontal flow.

Double-spacing at the end sentences is a holdover from the days of monospace typewriters that could not vary the spaces assigned to individual characters of type as today’s computers and software do. Double-spacing is not only unnecessary, but is distracting, hinders smooth reading, and is displeasing to the eye—correct it whenever you are confronted with it.

on leading:

The space between lines, and line length, have a great effect on reading. To maintain a horizontal flow across a page from line to line, leading must be optically greater than letter and word spacing. The longer the line of type, the more leading necessary to distinguish between lines in a column. When lines of type are too close and/or too long, readers have difficulty moving from the end of one line to the beginning of the next. When lines are too far apart, reading becomes choppy, and the message of the text can be diluted.

Typefaces with large x-heights require more leading than those with small x-heights. Faces with a strong vertical stress (like Bodoni) may need more leading. Print out and compare sample columns of the type you are using to determine what amount of leading looks appropriate.

Adjust leading for optical evenness in display type and address blocks. The leading in a block of type set in all caps will appear equal throughout because capital letters are usually even in height and lack descenders. When a small block of type is set in upper and lower case, the leading might look uneven, depending upon where ascenders and descenders occur. When the space between lines looks uneven, increase or decrease the leading of individual lines to compensate. Leading in U&lc address blocks (as on a business card) often appears uneven because cap-height address numbers and phone numbers take more vertical space. Although the leading in these lines may be mechanically equal, the optical unevenness should be corrected. Ranging figures (found in some oldstyle serif faces), small cap numerals, and slightly decreasing the point size of lining figures may also help to compensate for the uneven appearance of leading around numbers.

on alignment:

To vertically align the edge of display type, adjust alignment of flush letters optically to compensate for their irregular forms. Start by lining up all the vertical strokes, then “hang” curves and diagonals a small amount over the vertical margin to produce a good optical alignment.

Quotes and other small punctuation marks, which occupy very little optical space, should hang completely outside the vertical margin.

When setting centered type, optically balance an equal amount of type on either side of the vertical center axis of the type. After kerning, adjust the lines to the right or left to compensate for the horizontal space taken by quotes and other small punctuation.

In most large columns with many lines of text type the fine point of hanging punctuation may be ignored, because the eye will see a mass of type rather than individual lines.

“Move to the right or left?” “Move to the right or left?”

default flush left alignment

adjusted

Very low-end desktop publishing relies on computer default settings and is referred to as the “mechanical” setting of type. “Optical” adjustment of type is part of well designed typography.

on other characters:

In properly typeset material, opening and closing quotation marks curve or slant towards and away from the text they contain. While most layout applications offer an option called “smart punctuation,” some require the use of key combinations (see page 57) to set the proper symbols. This also applies to single quote marks and apostrophes. Conscientious, professional designers always replace typewriter-style inch or foot marks with proper quotation marks and apostrophes.

“	”	’	”
“	”	/	”
“	”	’	”
opening quote marks	closing quote marks	apostrophe	inch marks

Trademark (™), registered (®), and copyright (©) symbols always impede reading and look awful. Just because they might be required doesn’t mean they have to be huge. Use the lightest weight and smallest size possible. If you’re forced to “read” one of these symbols as part of a word, then it is too large. These marks are usually placed only on “first usage” of a trademarked word, and need not appear throughout a document.

Hyphens and dashes are positioned in the center of a font’s x-height. When set with caps, dashes must be moved up in order to center with the cap height (use “baseline shift” in most software). The effect is most noticeable in display type and phone numbers (without kerning or adjustment: **8-1**; adjusted: **8-1**).

Parentheses sometimes place too much emphasis on their contents. In phone numbers, they are usually distracting, uneven-looking, and should be avoided.

In lines of U&lc type, when an entire word must appear in all caps (some product names, etc.), try small caps. The size and weight of small caps are close to lower case letters. In faces that do not have small caps, try a slightly reduced point size to achieve smoother overall reading.

Ligatures are character combinations designed into single units for letterspacing effects. Most common in serif faces, some ligatures are well designed while others are awkward and distracting. As with any glyphs, ligatures are accessed by keyboard combinations, but overall use can be set in the type preferences of applications. Look closely at the characters of a typeface, and compare samples, before deciding what is appropriate for a project.

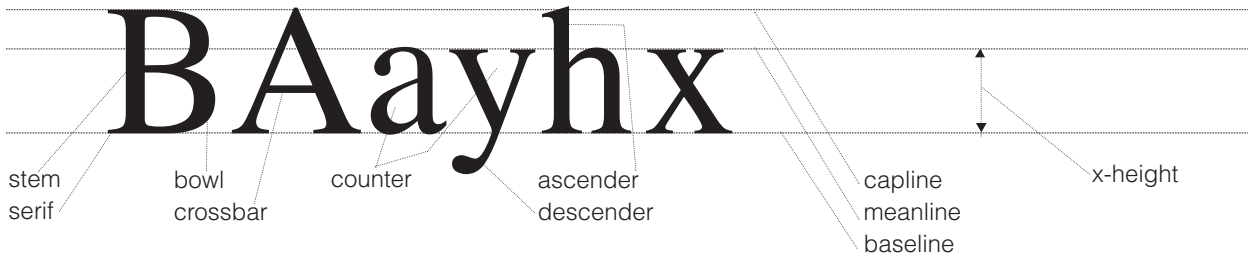
fi fl ff ffi m

ligatures from adobe garamond

st fh R O N K V U

ligatures from mrs.eaves (emigre fonts)

parts of letterforms



a comparison of Helvetica (sans serif), Times (modern serif), and Garamond (oldstyle), all at 60 point



a comparison of letterspacing

typography
typography
typography
typography
typography

very tight
tight
normal
loose
very loose

examples of type without and with kerning to make spacing appear more even. tracking remains the same in each example:

Tucked.”
Tucked.”

Dr. Jane Marshall
Dr. Jane Marshall

a comparison of wordspacing

the space between words
the space between words
the space between words
the space between words
the space between words

very tight
tight
normal
loose
very loose

on paragraphs:

Readers must be able to distinguish one paragraph from the next. There are two traditional methods of indicating a new paragraph: indenting the first line or additional leading between paragraphs. There are no set rules for amounts of either, but indents are traditionally one em-space or greater and additional leading is usually one-half to one full line space. Since the goal is to be able to tell one paragraph from the next, it is unnecessary to indent a lone paragraph or the first paragraph in a story or chapter. Use only one method of indicating new paragraphs—not both in combination (see page 11).

on line length:

Lines too long or too short can hinder smooth reading. Studies have shown that reading a line of 50 to 70 characters (set U&lc) is the most comfortable. There are many instances, including this text, where setting outside these numbers is appropriate and readable.

Break lines of type, not only to achieve a good column shape or arrangement, but to improve reading. Read the text you have set to make sure line breaks are not confusing. In flush-left columns of text, try to keep the “rag,” the right (non-aligned) side of the column, somewhat random. Avoid noticeably long or short lines within the body of paragraphs. Also avoid “widows”—single, short words alone in the last line of a paragraph.

When designing with narrow column widths, be wary of justified setting. In justified type, spacing is often very uneven, and confusing gaps will often occur as in this exaggerated example.

on underscores:

Underscores often distract from the type they are meant to emphasize; they also clog leading and cross over descenders (paper). Use another form of emphasis such as *italics* whenever possible.

on legibility:

Legibility of a typeface is not only a characteristic of its design, but is also dependent upon whether or not one is used to reading text set in that typeface.

Words set in U&lc have a more distinctive outline THAN THE SAME WORDS SET IN ALL CAPS. These distinctive shapes make words set in lowercase more recognizable.

Italics reduce legibility. Extreme contrast of thick and thin strokes impairs legibility. Condensed type is less legible than regular type. Smaller counterforms (**as in bold type**) reduce legibility. Of course, you should try all of these when appropriate to a specific concept—balance these concerns with your communication objectives.

on readability:

Readability depends on such factors as line length, leading, margin width, printing techniques, paper, etcetera.

Highest readability is with black type on yellow background (high contrast); poorest is red with black (low contrast). Black type on white is easier to read than white on black. Reversed type can “sparkle,” distracting the eye and slowing the reading of longer text.

Flush-left text type is generally easier to read than justified, flush-right, centered, or asymmetric settings.

Keep in mind the medium you plan to use and likely reading conditions when designing with type. For example, road signage is read from a distance while moving, compounding readability problems. Printing high-speed on porous newsprint often makes fine lines, fine serifs, and reverse type difficult to see.

Always make sure that production methods are appropriate to subject matter, and that a design is accessible to its audience.

rules for hyphenation:

Hyphenation can sometimes improve “rag,” but can disrupt reading and appearance if overused or misused.

When using hyphens:

- do not break words less than six letters long
- minimum of three letters on either side of a hyphen
- maximum of two lines in a row with hyphens
- do not hyphenate already hyphenated words or words next to an em dash or en dash
- do not hyphenate a word between columns of type
- avoid breaking capitalized names like those of people, organizations, cities, etc.

Page layout applications allow you to adjust all these hyphenation parameters. Always use proper spelling—words may only be hyphenated between syllables—consult a dictionary when in doubt.

basic characters in a typical digital font:

A B C D E F G H I J K L M N O
P Q R S T U V W X Y Z a b c d
e f g h i j k l m n o p q r s
t u v w x y z 1 2 3 4 5 6 7 8 9 0
& ! ; ? % ' () * + - , . : ; ' " ' []
{ } () \ | / — — — — = ≠ + ±
÷ ≤ ≥ √ ∞ ∫ ∫ ∫ ∫ ∫ ∫ ∫ ∫ ∫ ∫
° ∙
∞ ∫
∞ ∫

paragraph examples

with line spaces or indents between paragraphs

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonnumy eiusmod tempor incididunt ut labore et dolore er repudiand sint et molestia non recusand. Itaque earud rerum hic tenetur sapiente delectus au aut prefer endis dolorib asperiore repellat.

Hanc ego cum tene sententiam, quid est cur verear ne ad eam non possing ecommmodare nost rosnw quos tu paulo ante memorite tum etia ergat. Duis autem vel eum irure dolor in reprehenderit in voluptate velit esse molestaie consequat, velillum dolore eu fugiat nulla pariatur.

At vero eos et deom accusam et iusto odio dignissim qui blandit praesent luptatum delenit aigue duos dolor et molestias exceptur, simil tempor mollit id est dolor fuga. Et harumd est er expedit distinct. Nam liber tempor cum soluta nobis eligend optio congue dit doming id quod maxim placeat facer

Subhead lorem ipsum dolor

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonnumy eiusmod tempor incididunt ut labore et dolore magna aliquam erat volupat. Hanc ego cum tene sententiam, possing ecommmodare. Nos amice nebevo, olestias access potest Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonnumy incidunt ut labore et.

Hanc ego cum tene sententiam, quid est cur verear ne ad eam non possing ecommmodare nost rosnw quos tu paulo ante memorite tum etia ergat. Ut ex ae ulla commodo consequat. Duis autem , velillum dolore eu fugiat nulla pariatur.

above are example paragraphs with one-half line space between. note the random rag without very long or short lines within the body of paragraphs. avoid "widows"—single words alone on the last line of a paragraph.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonnumy eiusmod tempor incididunt ut labore et dolore er repudiand sint et molestia non recusand. Itaque earud rerum hic tenetur sapiente delectus au aut prefer endis dolorib asperiore repellat.

Hanc ego cum tene sententiam, quid est cur verear ne ad eam non possing ecommmodare nost rosnw quos tu paulo ante memorite tum etia ergat. Duis autem vel eum irure dolor in reprehenderit in voluptate velit esse molestaie consequat, velillum dolore eu fugiat nulla pariatur.

At vero eos et deom accusam et iusto odio dignissim qui blandit praesent luptatum delenit aigue duos dolor et molestias exceptur, simil tempor mollit id est dolor fuga. Et harumd est er expedit distinct. Nam liber tempor cum soluta nobis eligend optio congue dit doming id quod maxim placeat facer

Subhead lorem ipsum dolor

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonnumy eiusmod tempor incididunt ut labore et dolore magna aliquam erat volupat. Hanc ego cum tene sententiam, possing ecommmodare. Nos amice nebevo, olestias access potest Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonnumy incidunt ut labore et.

Hanc ego cum tene sententiam, quid est cur verear ne ad eam non possing ecommmodare nost rosnw quos tu paulo ante memorite tum etia ergat. Ut ex ae ulla commodo consequat. Duis autem , velillum dolore eu fugiat nulla pariatur.

above are example paragraphs with indents. paragraphs which begin a story or chapter are not indented. a paragraph which continues a story from a previous column and just happens to start a new column would be indented, however, so that the reader understands that the story is continuing. when a paragraph is broken between columns, do not leave less than three lines on either side of the break. it is traditional not to indent subheads, but to use a line space and restart the text type after a subhead without indent—as with any first paragraph. for normal paragraphs, always choose between indenting or line spacing—using both would be redundant.

"Here is one of the few effective keys to the design problem—the ability of the designer to recognize as many of the constraints as possible—his willingness and enthusiasm for working within these constraints." Charles Eames

“Here is one of the few effective keys to the design problem—the ability of the designer to recognize as many of the constraints as possible—his willingness and enthusiasm for working within these constraints.” Charles Eames

display type: a comparison of default (on left) and adjusted settings (on right). default settings are without kerning, tracking, proper punctuation, alignment, and avoiding bad hyphenation breaks—all of which are expected under any circumstances—of a professional designer and typographer.

serif type

baskerville 40/50

after designs of John Baskerville, mid 1700s. example of "transitional" type.

A B C D E F G H I J K L M N O P
Q R S T U V W X Y Z a b c d e f g h
i j k l m n o p q r s t u v w x y z f i f l 1 2 3
4 5 6 7 8 9 0 ! ? & \$ ¢ £ ¥ % # / = +
{ [(, ' ; : " " * - -)] }

baskerville italic 40/50

*A B C D E F G H I J K L M N O P
Q R S T U V W X Y Z a b c d e f g h i j
k l m n o p q r s t u v w x y z f i f l 1 2 3 4
5 6 7 8 9 0 ! ? & \$ ¢ £ ¥ % # / = +
{ [(, ' ; : " " * - -)] }*

The type families represented here, arranged alphabetically by serif and then sans serif types, are a sampling of those that have come to be regarded as "classic" among printing types. They represent the basics of typographic design and are the some of the most often used of type families.

A B C D E F G H I J K

L M N O P Q R S T U

V W X Y Z a b c d e f

g h i j k l m n o p q r s t

u v w x y z f i l 1 2 3 4

5 6 7 8 9 0 ! ? & \$ ¢

£ ¥ % # / = +

{ [(. , ’ ; : “ ” * - —)] }

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZabcdefghijklmnopqrstuvwxyz
xyzfi1234567890!/?&\$¢£¥%#/=*
+{[(.,',;:"--)]}*

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZabcdefghijklmnopqrstuvwxyz
uvwxyzfi1234567890!/?&\$¢£¥**
%#/=+{[(.,',;:"*--)]}

***ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZabcdefghijklmnopqrstuvwxyz
wxyzfi1234567890!/?&\$¢£¥%***
#/=+{[(.,',;:"*--)]}

A B C D E F G H I J K L M N O P
 Q R S T U V W X Y Z a b c d e f g h i
 j k l m n o p q r s t u v w x y z f i f l 1 2 3 4
 5 6 7 8 9 0 ! ? & \$ ¢ £ ¥ % # / = +
 { [(. , ' ; : “ ” * - -)] }

*A B C D E F G H I J K L M N O P Q
 R S T U V W X Y Z a b c d e f g h i j k l m
 n o p q r s t u v w x y z f i f l 1 2 3 4 5 6 7 8
 9 0 ! ? & \$ ¢ £ ¥ % # / = +
 { [(. , ' ; : “ ” * - -)] }*

ABCDEFGHIJKLMNOPQRSTU
 VWXYZabcdefghijklmnopqrstuvwxyz
 wxyzfi1234567890!/?&\$¢£¥%#/=+
 {[(.,';:“”*-—)]}

*ABCDEFGHIJKLMNOPQRSTU
 VWXYZabcdefghijklmnopqrstuvwxyz
 yzfi1234567890!/?&\$¢£¥%#/=+
 {[(.,';:“”*-—)]}*

**ABCDEFGHIJKLMNOPQ
 RSTUVWXYZabcdefghijklmnopqrstuvwxyzfi
 1234567890!/?&\$¢£¥%#/=+
 {[(.,';:“”*-—)]}**

A B C D E F G H I J K L

M N O P Q R S T U V

W X Y Z a b c d e f g h i j

k l m n o p q r s t u v w x

y z f i f l 1 2 3 4 5 6 7 8 9 0

! ? & \$ ¢ £ ¥ % # / = +

{ [(. , ' ; : “ ” * - —)] }

These examples demonstrate the range of different type foundries' interpretations of styling details, weights and sizes of historic types. Sometimes more dramatic than shown here, these differences are common.

gad gad gad gad

garamond 3
50 point

adobe garamond
50 point

classical garamond
50 point

itc garamond book
50 point

A B C D E F G H I J K L M N O P Q
R S T U V W X Y Z a b c d e f g h i j k l m
n o p q r s t u v w x y z f i f l 1 2 3 4 5 6 7 8 9 0
*! ? & \$ % ' (, . : ; " " * - -) } }*

A B C D E F G H I J K L M N O P Q
R S T U V W X Y Z a b c d e f g h i j k l m
n o p q r s t u v w x y z f i f l 1 2 3 4 5 6 7 8 9 0
! ? & \$ % ' (, . : ; " " * - -) } }

A B C D E F G H I J K L M N O P Q
R S T U V W X Y Z a b c d e f g h i j k l m
n o p q r s t u v w x y z f i f l 1 2 3 4 5 6 7 8 9 0
! ? & \$ % ' (, . : ; " " * - -) } }

Known while he was living by the name Claude Garamont (c1480–1561), the French type designer, publisher, and foundry owner's name was changed to Garamond on a type specimen sheet in 1592. One version of this type, drawn free-hand by Frederic Goudy around 1920 for the Lanston Type Company, is named Garamont and was made available as digital type for the first time in 2005 by P22 (p22.com).

ABCDEFGHIJKLMNOP
 QRSTUVWXYZabcdefgh
 hijklmnopqrstuvwxyzfi
 l 1 2 3 4 5 6 7 8 9 0 ! ? & \$ ¢ £ ¥ % # /
 = + { [(. , ' ; : " " " * - —)] }

goudy oldstyle italic 40/50

ABCDEFGHIJKLMNOP
 QRSTUVWXYZabcdefgh
 hijklmnopqrstuvwxyzfi
 l 1 2 3 4 5 6 7 8 9 0 ! ? & \$ ¢ £ ¥ % # /
 = + { [(. , ' ; : " " " * - —)] }

ABCDEFGHIJKLMNOPQ
 RSTUVWXYZabcdefghijk
 lmnopqrstuvwxyzfi1234
 567890!/?&\$¢£¥%# / = +
 {[(.,';;""*--)]}

*ABCDEFGHIJKLMNOPQ
 RSTUVWXYZabcdefghijkl
 mnopqrstuvwxyzfi12345
 67890!/?&\$¢£¥%# / = +
 {[(.,';;""*--)]}*

A B C D E F G H I J K

L M N O P Q R S T U

V W X Y Z a b c d e f g

h i j k l m n o p q r s t u v

w x y z f i f l 1 2 3 4 5 6 7

8 9 0 ! ? & \$ ¢ £ ¥ % # /

= + { [(. , ' ; : “ ” * - —)] }

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZabcdefghijklmnopqrstuvwxyz
fifl1234567890!/?&\$ç£¥%#/=+
{[(.,';:“”*-—)]}*

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZabcdefghijklmnopqrstuvwxyz
wxyzfifl1234567890!/?&\$ç£¥%#/=+
+{[(.,';:“”*-—)]}**

***ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZabcdefghijklmnopqrstuvwxyz
xyzfifl1234567890!/?&\$ç£¥%#/=+
{[(.,';:“”*-—)]}***

square serif type

A B C D E F G H I J K L M N O P Q R S T
U V W X Y Z a b c d e f g h i j k l m n o p q
r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

clarendon

Robert Besley and Company, 1845

A B C D E F G H I J K L M N O P Q R S T
U V W X Y Z a b c d e f g h i j k l m n o p q
r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

rockwell

Inland Typefoundry, 1910; revived by Morris Fuller Benton in the 1920s

A B C D E F G H I J K L M N O P Q R S T
U V W X Y Z a b c d e f g h i j k l m n o p q
r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

city

Georg Trump, 1930

A B C D E F G H I J K L M N O P Q R S T
U V W X Y Z a b c d e f g h i j k l m n o p q
r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

serifa

Adrian Frutiger, 1967

Also referred to as 'Egyptian,' square serif, or slab serif typefaces were introduced in 1815 by Vincent Figgins as "Antique" amid the popularity of Egyptian artifacts and images. Square serif faces were also regarded as visual representations of the Industrial Revolution, and may have influenced the first sans serif typefaces

sans serif type

akzidenz grotesk 65/80

designed by staff of the Berthold type foundry and issued in 1896,
this face would later be the basis of the Helvetica family

A B C D E F G H I J K L M N O P Q
R S T U V W X Y Z a b c d e f g h i j k l
m n o p q r s t u v w x y z 1 2 3 4 5 6 7
8 9 0 ! ? & \$ % ' () * + , - . : ;
{ [(. , ' : : " " * - -)] }

akzidenz grotesk italic 65/80

*A B C D E F G H I J K L M N O P Q
R S T U V W X Y Z a b c d e f g h i j k l
m n o p q r s t u v w x y z 1 2 3 4 5 6 7
8 9 0 ! ? & \$ % ' () * + , - . : ;
{ [(. , ' : : " " * - -)] }*

The term "grotesque," historically meaning a lack of ornamentation, was first used to describe a sans-serif face by William Thorowgood in 1832. "Akzidenz" is from *akzidenz schrift*, a German term for printing type. Simply meaning 'type without ornament,' Akzidenz Grotesk was marketed with the name "Standard" in the United States. The first sans-serif printing type (example at left) was a somewhat rough face named "Egyptian" and was produced only in 28 point caps by William Caslon in 1816. A much smoother revival with lower case and multiple weights was commissioned in 2001 as the corporate type family for Red Herring.

W CASLON JUNR

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!?!&
\$¢£¥%#/=+{[(.,';:“”*-—)]}

franklin gothic condensed 32/40

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!?!&\$¢£¥%#/=+
{[(.,';:“”*-—)]}

franklin gothic extra condensed 32/40

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!?!&\$¢£¥%#/=+{[(.,';:“”*-—)]}

ABCDEFGHIJKLMNOPQR
 STUVWXYZabcdefghijklmnopqrstuvwxyz
 mnopqrstuvwxyz123456
 7890!/?&\$¢£¥%#/=+
 {[(.,':;"'""*--)]}

ABCDEFGHIJKLMN O P Q R
STUVWXYZabcdefghijklmnopqrstuvwxyz
mnopqrstuvwxyz123456
7890!/?&\$¢£¥%#/=+
{[(.,':;"'""--)]}*

Completed in 1975 for the signage system at Charles de Gaulle airport in Rossey, France, Frutiger was released in 1976. Weights of this family are numbered in the same fashion as Frutiger's Univers family.

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!/?&\$¢£¥%#/=+
{[(.,':;"'"*--)]}**

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!/?&\$¢£¥%
#/=+{[(.,':;"'"*--)]}**

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz 1 23456
 7890!/?&\$ ¢ £ ¥ % # / = + { [(. , ' ; : " " * - -)]] }

futura light oblique 28/36

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz 1 23456
 7890!/?&\$ ¢ £ ¥ % # / = + { [(. , ' ; : " " * - -)]] }

futura book 28/36

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz 1 23456
 7890!/?&\$ ¢ £ ¥ % # / = + { [(. , ' ; : " " * - -)]] }

futura book oblique 28/36

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz 1 23456
 7890!/?&\$ ¢ £ ¥ % # / = + { [(. , ' ; : " " * - -)]] }

paul renner's early designs for some lower-case letters in futura were more geometric than what was accepted for production by the bauer type foundry.

à á â ã ä å æ ç

futura heavy 20/28

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&£¥%#/=+{[(.,';:"""*--)]}

futura heavy oblique 20/28

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&£¥%#/=+{[(.,';:"""--)]}*

futura bold 20/28

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&£¥%#/=+{[(.,';:"""*--)]}

futura bold oblique 20/28

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&£¥%#/=+{[(.,';:"""*--)]}

futura extra bold 20/28

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz123456
7890!?\$%&£¥%#/=+{[(.,';:"""*--)]}

futura extra bold oblique 20/28

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz123456
7890!?\$%&£¥%#/=+{[(.,';:"""*--)]}

A B C D E F G H I J K L M N O P Q R S
T U V W X Y Z a b c d e f g h i j k l m n o
p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0 ! ? &
\$ ¢ £ ¥ % # / = + { [(. , ' ; : " " * - -)] }

*A B C D E -
F G H I J K L M N O P Q R S T U
V W X Y Z a b c d e f g h i j k l m n o p q
r s t u -
v w x y z 1 2 3 4 5 6 7 8 9 0 ! ? & \$ ¢ £ ¥*

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r
s t u v w x y z 1 2 3 4 5 6 7 8 9 0

A B C D E F G H I J K
L M N O P Q R S T U
V W X Y Z a b c d e f g
h i j k l m n o p q r s t u v
w x y z 1 2 3 4 5 6 7 8 9
0 ! ? & \$ % ' () * + , - . : ;
=

Comissioned by Edouard Hoffmann as an improvement on the 1896 type family Akzidenz Grotesk and introduced as Neue Haas Grotesk by the Haas'sche Schriftgiesserei (Haas type foundry) of Switzerland, this family was renamed Helvetica in 1960 for its country of origin by the German type foundry D. Stempel AG, which manufactured the type along with its partner German Linotype. For the first few years it was made only in light and medium weights.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
LMNOPQRSTUVWXYZ
vwxyzabcdefghijklmnop
qrstuvwxyz123456789
0!/?&\$%&£¥°#/=+
{[(.,;:“”*—)]}

A B C D E F G H I J
K L M N O P Q R S T
U V W X Y Z a b c d e
f g h i j k l m n o p q r s
t u v w x y z 1 2 3 4 5 6
7 8 9 0 ! ? & \$ ¢ £ ¥ %
/ = +
{ [(. , ' ; : " " * - -)] }

ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZabcdefghijklmnopqrstuvwxyz
wxyz1234567890!/?&\$ç£¥%#/=+
{[(.,',::“”*-—)]}

ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZabcdefghijklmnopqrstuvwxyz
wxyz1234567890!/?&\$ç£¥%#/=+
{[(.,',::“”*-—)]}

ABCDEFGHIJKLMNOPQRSTUVWXYZ
VWXYZabcdefghijklmnopqrstuvwxyz
vwxz1234567890!/?&\$ç£¥%#/=
+{[(.,',::“”*-—)]}

A B C D E F G H I J K L M N O
P Q R S T U V W X Y Z a b c d
e f g h i j k l m n o p q r s t u v w
x y z 1 2 3 4 5 6 7 8 9 0 ! ? & \$ ¢
£ ¥ % # / = + { [(. , ' ; : " " * - -)] }

A B C D E F G H I J K L M N O
P Q R S T U V W X Y Z a b c d
e f g h i j k l m n o p q r s t u v w
x y z 1 2 3 4 5 6 7 8 9 0 ! ? & \$ ¢
£ ¥ % # / = + { [(. , ' ; : " " * - -)] }

helvetica condensed light 20/28

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$%&#/'":*~.-}{

helvetica condensed light italic 20/28

*ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$%&#/'":*~.-}{*

helvetica condensed 20/28

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$%&#/'":*~.-}{

helvetica condensed italic 20/28

*ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$%&#/'":*~.-}{*

helvetica condensed bold 20/28

**ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$%&#/'":*~.-}{**

helvetica condensed bold italic 20/28

***ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$%&#/'":*~.-}{***

helvetica condensed black 20/28

**ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$%&#/'":*~.-}{**

helvetica condensed black italic 20/28

***ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$%&#/'":*~.-}{***

25 Ultra Light
 26 *Ultra Light Italic*
 35 Thin
 36 *Thin Italic*
 45 Light
 46 *Light Italic*
 55 Roman
 56 *Italic*
 65 Medium
 66 *Medium Italic*
 75 Bold
 76 *Bold Italic*
 85 Heavy
 86 *Heavy Italic*
 95 Black
 96 *Black Italic*
 27 Ultra Light Condensed
Ultra Light Condensed Oblique
 37 Thin Condensed
Thin Condensed Oblique
 47 Light Condensed
Light Condensed Oblique
 57 Condensed
Condensed Oblique
 67 Medium Condensed
Medium Condensed Oblique
 77 Bold Condensed
Bold Condensed Oblique
 87 Heavy Condensed
Heavy Condensed Oblique

97 Black Condensed
Black Condensed Oblique
107 Extra Black Condensed
Extra Black Condensed Oblique
 23 Ultra Light Extended
Ultra Light Extended Oblique
 33 Thin Extended
Thin Extended Oblique
 43 Light Extended
Light Extended Oblique
 53 Extended
Extended Oblique
 63 Medium Extended
Medium Extended Oblique
 73 Bold Extended
Bold Extended Oblique
 83 Heavy Extended
Heavy Extended Oblique
 93 Black Extended
Black Extended Oblique

On behalf of its sister company Linotype, the German foundry D. Stempel AG set out to redesign the famous Helvetica family for digital composition, greater consistency, and a larger family of faces, resulting in Neue Helvetica. Compared to Helvetica, the width of numerals and several characters have been increased, the strokes of condensed characters are much more rounded, and punctuation is larger overall. An Extended range along with weights lighter than "Light" were added.

The numbering system is adopted from Adrian Frutiger's system for the Univers family, with the basic weight 55 at the central point. The first figure of the number designates the stroke thickness, while the second figure designates the width and orientation—3 for extended, 5 for roman, 6 for italic, and 7 for condensed. In addition to the fifty weights represented here, an outlined version of the Bold weight was also produced which will not be used in this course. In 2004 Neue Helvetica Pro, an OpenType version with expanded language support was introduced.

A B C D E F G H I J K L M N O P Q
 R S T U V W X Y Z a b c d e f g h i j k l
 m n o p q r s t u v w x y z 1 2 3 4 5 6 7
 8 9 0 ! ? & \$ % ' () * + - , . : ;
 { [(. , ' : : " " * - -)] }

A B C D E F G H I J K L M N O P Q
R S T U V W X Y Z a b c d e f g h i j k l
m n o p q r s t u v w x y z 1 2 3 4 5 6 7
*8 9 0 ! ? & \$ % ' () * + - , . : ;*
*{ [(. , ' : : " " * - -)] }*

				39	
	45	46	47	48	49
53	55	56	57	58	59
63	65	66	67	68	
73	75	76			
83					

Typefaces in the Univers family are identified by a numerical system. The first digit in a face's number corresponds to its weight and the second digit corresponds to character width with odd numbers roman and even numbers italic. The original family, which involved three years of work by Frutiger, includes the 21 variations at left. Six more variations have been added since.

A B C D E F G H I J K

L M N O P Q R S T

U V W X Y Z a b c d

e f g h i j k l m n o p q

r s t u v w x y z

1 2 3 4 5 6 7 8 9 0 ! ?

& \$ ¢ £ ¥ % # / = +

{ [(. , ' : ; " " * - -)] }

ABCDEFGHIJK

LMNOPQRST

UVWXYZabcd

efghijklmnopq

rstuvwxyz

1234567890!?

&\$ç£¥%#/=+

*{[(.,',:,"" *--)]}*

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZabcdefghijklmnopqrstuvwxyz
xyz1234567890!?&\$ç£¥%#/=+
{[(.,'::""*--)]}**

***ABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZabcdefghijklmnopqrstuvwxyz
xyz1234567890!?&\$ç£¥%#/=+
{[(.,'::""*--)]}***

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZabcdefghijklmnopqrstuvwxyz
xyz1234567890!?&\$ç£¥%#/=+
+{[(.,'::""*--)]}**

***ABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZabcdefghijklmnopqrstuvwxyz
xyz1234567890!?&\$ç£¥%#/=+
+{[(.,'::""*--)]}***

univers 47 22/29

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&'()*+,-./:;<=>@[]_{}~

univers 48 22/29

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&'()+,-./:;<=>@[]_{}~*

univers 57 22/29

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&'()*+,-./:;<=>@[]_{}~

univers 58 22/29

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&'()*+,-./:;<=>@[]_{}~

univers 67 22/29

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&'()*+,-./:;<=>@[]_{}~

univers 68 22/29

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
!?\$%&'()*+,-./:;<=>@[]_{}~

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890!/?&\$ç£¥%#/ = + {[(, ' : " " * - —)]}

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
mnopqrstuvwxyz1234567890!/?&\$ç£¥%#/ = +
{[(, ' : " " * - —)]}

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567
890!/?&\$ç£¥%#/ = + {[(, ' : " " * - —)]}

ABCDEFGHIJKLMNOPQRSTUVWXYZ
UVWXYZabcdefghijklmnopqrstuvwxyz
1234567890
! ? & \$ % ' () * - , . : ; " " ' " * - -)] }

ABCDEFGHIJKLMNOPQRSTUVWXYZ
UVWXYZabcdefghijklmnopqrstuvwxyz
1234567890
! ? & \$ % ' () * - , . : ; " " ' " * - -)] }

ABCDEFGHIJKLMNOPQRSTUVWXYZ
UVWXYZabcdefghijklmnopqrstuvwxyz
1234567890
! ? & \$ % ' () * - , . : ; " " ' " * - -)] }

ABCDEFGHIJKLMNOPQRSTUVWXYZ
QRSTUVWXYZabcdefghijklmnopqrstuvwxyz
hijklmnopqrstuvwxyz
1234567890
! ? & \$ % ' () * - , . : ; " " ' " * - -)] }

black letter type

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0
goudy text Frederick Goudy, 1928

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
fette fraktur Johann Christian Bauer, 1850, "Fraktur" is also a term historically used for blackletter type

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0
linotext Morris Fuller Benton, 1901

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0
clairvaux Herbert Maring, 1990

Hambŭrgefontiŭ

A revival of the 1454 type used in Gutenberg's 49 line Bible, the first use of moveable metal type in printing.

These faces are revivals of the gothic (or black letter) types that were the most common form of lettering from the twelfth through the fifteenth centuries. The style was also long associated with Germany, although the Nazis issued a decree to outlaw gothic scripts as 'Jewish' in 1941. While historically common, and used for the first metal type, they are now considered novelty faces sometimes used when an antiquated or severe look is desired. Some of these faces are also recognized as representing aspects of current popular and sub-cultures, and have been a tradition in logotypes for newspapers. Like the script and novelty faces that follow, these are included here for reference only.

script type

A B C D E F G H I J K L M N

O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

ashley script

Ashley Havingdon, 1955

A B C D E F G H I J K L M N

O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

freestyle script

Martin Wait, 1981

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

kuenstler script

Hans Bohn, 1957

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

ribbon

Script faces mimic calligraphic lettering and range in style from loose brush lettering and handwriting faces to faces with intricate decorative curves. While seen as elegant in some situations, some of these faces call to mind discount store sale signs and common wedding announcements. Because typeset letterforms are usually exactly repeated and aligned, they do not have the spontaneity of hand drawn letterforms, although OpenType has expanded the possibilities for character variations within a single face.

novelty type

A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z 1 2 3 4 5 6 7 8 9 0

beesknees

David Farley, 1990

A B C D E F G H I J K L M N O P Q R S
T U V W X Y Z 1 2 3 4 5 6 7 8 9 0

caked

Joe Miller, 1995

A B C D E F G H I J K L M N O P Q R S
T U V W X Y Z a b c d e f g h i j k l m n o p q
r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

remedy

Frank Heine, 1991

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z

logger

unknown

A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z a b c d e f g h i j k l m n o
p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

moonbase alpha

Cornel Windlin, 1992

Novelty (or “decorative”) faces are the most varied and prolific of typefaces, but have extremely limited usefulness due to exaggerated styling and often incomplete fonts. By virtue of their appearance alone, many of these faces communicate very specific messages, further limiting the range of appropriate applications. Digital hand drawn and “dirty” faces often look ‘fake’ when characters repeat, since no two characters would look alike if actually hand produced.

wood type

A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z 1 2 3 4 5 6 7 8 9 0

abilene

unknown

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 1 2 3 4 5 6 7 8 9 0

ponderosa

Kim Buker Chansler, 1990, from 18th century references

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
1 2 3 4 5 6 7 8 9 0

poplar

Barbara Lind, 1990, from an 1830 William Leavenworth type specimen book

A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z 1 2 3 4 5 6 7 8 9 0

rosewood fill

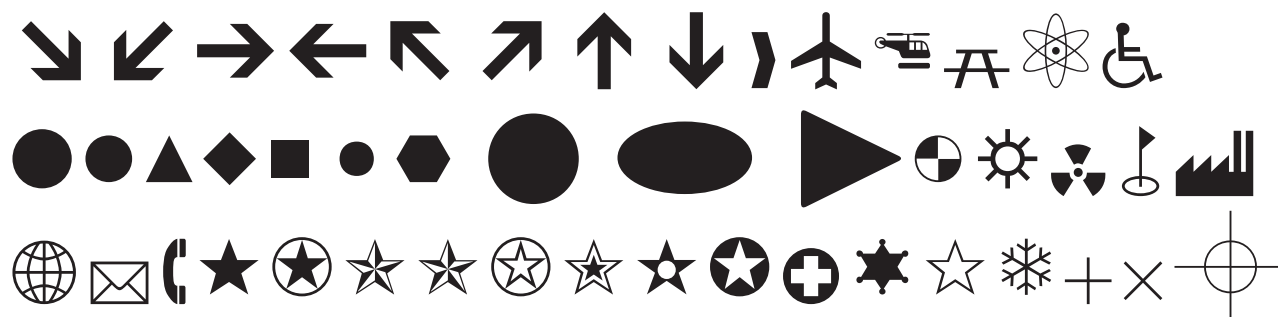
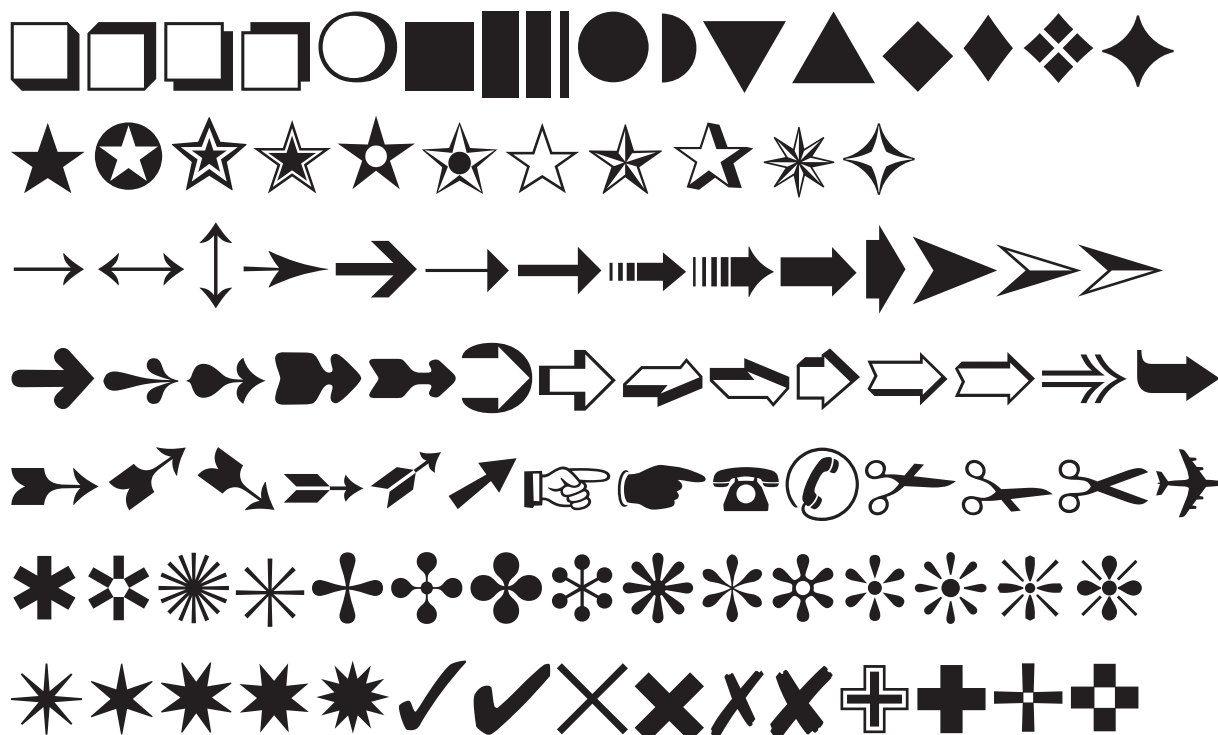
Kim Buker Chansler, Carl Crossgrove, and Carol Twombly for Adobe from 18th century references

A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z 1 2 3 4 5 6 7 8 9 0

rosewood regular

Kim Buker Chansler, Carl Crossgrove, and Carol Twombly for Adobe from 18th century references

While several classic families like Futura, Clarendon, and so on, were once produced in wood to print very large characters in letterpress, the description “wood type” often refers to styles produced in wood and popularized in the 1800s. While mostly French in stylistic origin, they are often associated with the American West and sometimes classified as “old west” because of their coincidental popularity in that region and time. Like other forms out of antiquity, “wood type” has been revived in digital form as another area of novelty type.



recycling symbols

**recycled content**

Solid and part-solid logos are for use on paper products made with recycled fibers (at least 30% post-consumer according to EPA guidelines). If the recycled content is less than 100%, then the percentage of recycled material must be printed under or at the center of the symbol (such as: "contains 50% total recycled fiber, including 30% post-consumer."). The symbol was designed in 1970 by Stanford University student Gary Anderson for a competition sponsored by Container Corporation of America. The symbol is also used for other materials with varying amounts of pre-consumer or post-consumer recycled content.

**recyclable only**

The outline logo indicates paper and other products that are only capable of being recycled (or often downcycled: used for lesser grade products). These products do NOT contain any significant recycled materials. With the numbers 1 through 7 inside, this symbol is used to indicate the recycle potential of plastics. Symbols with a hollow circle or hollow ends of the arrows have recently been used to indicate recyclable materials with partial (less than EPA specified) recycled content.

As well as letterforms, sets of symbols and illustrations are commonly made into "fonts" for setting on the keyboard.

type as software

There are three main formats of digital type: OpenType (cross-platform type that is the new standard in professional type), Postscript Type1 (the previous standard for professional use), and TrueType (most common in Windows). All digital type is software that is subject to the same range of licensing and pricing as any other software. Type fonts can be purchased and downloaded from the original foundries and many other retail sites. Type designers and distributors deserve compensation for their work. Font piracy hurts individual designers and limits options in the design field.

Some fonts are also distributed as freeware or shareware, and while plentiful, these are usually novelty fonts or knock-offs with limited character sets and lesser utility. There are also fonts that are licensed by companies like Apple, Microsoft, and Adobe and that are included with operating systems and applications. These fonts, sometimes called “system fonts” may come pre-installed, or are automatically installed along with other software. For instance **Myriad** is supplied with Apple’s Mac OS, and **Verdana** is installed with Microsoft Windows. Corrupted or conflicting fonts can cause serious problems on your computer—be sure you trust the source, and that you are familiar with and need each font that you install.

Designers can create, modify, and add characters to typefaces with applications such as Fontographer and FontLab Studio. The designs of letterforms are considered to be in the public domain and cannot be copywritten in the United States, but the software code in digital type, and the names of typefaces and families, can be copywritten or trademarked like any other work or product from an individual or a company.

In both Mac OS and Windows, having too many fonts activated at one time can slow performance and make font menus in applications like Illustrator and InDesign overly large and slow. Font management applications like Font Book and third party software can be used to simplify and speed font menus and selection.

installing fonts in Mac OS

To quickly install individual fonts, double-click on a font file, then click “Install” in the preview box. To install several fonts at once, select a continuous group of fonts with the shift key held down, or a random group with command key held down, and then double click then click “Install” in the preview box.

You can also launch Font Book in the Applications folder, and in the upper left menu choose “Add Fonts.” From the dialogue box, navigate to the fonts you want to install, select the folders or individual fonts, and click “Open” to install the fonts. Font Book, included in OS X, can be also be used to preview and organize fonts.

installing fonts in Windows

Windows 7 and Windows 8:

Right-click the font you want to install and click Install.

Windows Vista:

Open Fonts by clicking the Start button, clicking Control Panel, clicking Appearance and Personalization, and then clicking Fonts.

Click File, and then click Install New Font.

If you don’t see the File menu, press ALT.

In the Add Fonts dialog box, under Drives, click the drive where the font that you want to install is located.

Under Folders, double-click the folder containing the fonts that you want to add.

Under List of fonts, click the font that you want to add, and then click Install.

font management applications in Mac or Windows

Third party font management utilities such as FontAgent Pro, Suitcase Fusion, and others, offer a range of features such as automatic font activation and deactivation, custom font sets and subsets, alternate font previews and menus, repair of corrupt fonts, and other tools. While most of these features are part of Font Book in Mac OS, there are tools that might be helpful for designers with large font libraries.

accents and special characters

On the next page are keyboard commands for some of the many symbols and accents that are not represented on your keyboard. These glyphs can also be inserted via the Character Viewer in the right side of the Menu Bar in Mac OS (if not showing go to System Preferences> Language & Text> Input Sources> check Keyboard & Character Viewer), and the Character Map in Windows (Start> All Programs> Programs> Accessories> System Tools> Character Map). In Character Map, be sure to show the the font you wish to use and then copy the character and paste to your document.

Characters for different languages are ‘typed’ using the programming language Unicode. A particular glyph, however, can only appear if it is designed into the specific font you are using. The method shown for Windows on the next page uses the Alt key plus a four digit number entered via the numeric keypad, with Num Lock on. The glyph appears after the keys are pressed and released. Note that some laptops have a ‘hidden’ numeric keypad with the upper left corner at the number 7 key.

keyboard commands for special characters:

mac os	windows	definition				
‘	option]	Alt 0145	left single quote	Ç	option shift c	Alt 0199 C, cedilla
’	option shift]	Alt 0146	right single/apostrophe	È	option ` E	Alt 0200 E, grave accent
“	option [	Alt 0147	left double quote	É	option e E	Alt 0201 E, acute accent
”	option shift [	Alt 0148	right double quote	Ê	option i E	Alt 0202 E, circumflex accent
...	option ;	Alt 0133	ellipsis	Ë	option u E	Alt 0203 E, umlaut
†	option t	Alt 0134	dagger	Ì	option ` I	Alt 0204 I, grave accent
‡	option shift 7	Alt 0135	double dagger	Í	option e I	Alt 0205 I, acute accent
‰	option shift r	Alt 0137	per mill sign	Î	option i I	Alt 0206 I, circumflex accent
‹	option shift 3	Alt 0139	single left angle quote	Ï	option u I	Alt 0207 I, umlaut
›	option shift 4	Alt 0155	single right angle quote	Ñ	option n N	Alt 0209 N, tilde
™	option 2	Alt 0153	trademark	Ò	option ` O	Alt 0210 O, grave accent
©	option g	Alt 0169	copyright	Ó	option e O	Alt 0211 O, acute accent
®	option r	Alt 0174	registered trademark	Ô	option i O	Alt 0212 O, circumflex accent
—	option -	Alt 0150	en dash	Õ	option n O	Alt 0213 O, tilde
—	option shift -	Alt 0151	em dash	Ö	option u O	Alt 0214 O, umlaut
¡	option 1	Alt 0161	inverted exclamation	Ø	option shift o	Alt 0216 O, slash
¢	option 4	Alt 0162	cent sign	Ù	option ` U	Alt 0217 U, grave accent
€	option shift 2	Alt 0128	euro currency symbol	Ú	option e U	Alt 0218 U, acute accent
£	option 3	Alt 0163	pound sterling	Û	option i U	Alt 0219 U, circumflex accent
¥	option y	Alt 0165	yen sign	Ü	option u U	Alt 0220 U, umlaut
§	option 6	Alt 0167	section sign	ß	option s	Alt 0223 lowercase sharps, German
¨	option shift u	Alt 0168	umlaut	à	option ` a	Alt 0224 a, grave accent
ª	option 9	Alt 0170	feminine ordinal	á	option e a	Alt 0225 a, acute accent
º	option 0	Alt 0186	masculine ordinal	â	option i a	Alt 0226 a, circumflex accent
«	option \	Alt 0171	left angle quote	ã	option n a	Alt 0227 a, tilde
»	option shift \	Alt 0187	right angle quote	ä	option u a	Alt 0228 a, umlaut
¬	option l	Alt 0172	not sign	å	option a	Alt 0229 a, ring
°	option shift 8	Alt 0176	degree sign	æ	option ‘	Alt 0230 lowercase ae
±	option shift =	Alt 0177	plus or minus	ç	option c	Alt 0231 c, cedilla
≠	option =		not equal sign	è	option ` e	Alt 0232 e, grave accent
÷	option /	Alt 0247	division sign	é	option e e	Alt 0233 e, acute accent
/	option shift 1		fraction line	ê	option i e	Alt 0234 e, circumflex accent
´	option shift e	Alt 0180	acute accent	ë	option u e	Alt 0235 e, umlaut
µ	option m	Alt 0181	micro sign	ì	option ` i	Alt 0236 i, grave accent
¶	option 7	Alt 0182	paragraph sign	í	option e i	Alt 0237 i, acute accent
·	option shift 9	Alt 0183	middle dot	î	option i i	Alt 0238 i, circumflex accent
•	option 8		large dot/bullet	ï	option u i	Alt 0239 i, umlaut
,	option shift z	Alt 0184	cedilla	ñ	option n n	Alt 0241 n, tilde
¿	option shift ?	Alt 0191	inverted question mark	ò	option ` o	Alt 0242 o, grave accent
fi	shift option 5		fi ligature	ó	option e o	Alt 0243 o, acute accent
fl	shift option 6		fl ligature	ô	option i o	Alt 0244 o, circumflex accent
À	option ` A	Alt 0192	A, grave accent	õ	option n o	Alt 0245 o, tilde
Á	option e A	Alt 0193	A, acute accent	ö	option u o	Alt 0246 o, umlaut
Â	option i A	Alt 0194	A, circumflex accent	ø	option o	Alt 0248 o, slash
Ã	option n A	Alt 0195	A, tilde	ù	option ` u	Alt 0249 u, grave accent
Ä	option u A	Alt 0196	A, umlaut	ú	option e u	Alt 0250 u, acute accent
Å	option shift a	Alt 0197	A, ring	û	option i u	Alt 0251 u, circumflex accent
Æ	option shift ‘	Alt 0198	uppercase AE	ü	option u u	Alt 0252 u, umlaut
				ÿ	option u y	Alt 0255 y, umlaut

proofreader's marks

proofreader's marks are used to communicate changes and corrections in type to those responsible for its design and production. demonstrated here are some of the most common proofreader's marks.

 insert word

 delete word

 capitalize

set in small caps

set in italic type

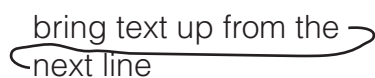
set in bold type

 correct letter marked

set letter lower  case

close up a  space

start a new line  at this point

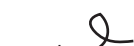
 bring text up from the next line

 move to the right

 move to the left

 paragraph

 space

disregard proofreader's  mark
stet

insert this word

delete word

Capitalize

set in SMALL CAPS

set in *italic type*

set in **bold type**

correct letter marked

set letter lower case

close up a space

start a new line
at this point

bring text up from the next line

move to the right

move to the left

paragraph

space

disregard proofreader's mark