Font Design

Basic Anatomy

Definitions and General Information that you need to know

Descender

Definition: The portion of some lowercase letters, such as g and y, that extends or descends below the baseline is the descender. The length and shape of the descender can affect readability of lines of type and is an identifying factor for some typefaces.

The descenders of some letters may touch or almost touch letters in the line below causing awkward or distracting patterns. This is most likely to happen or be obvious when a line of text with long descenders is above a line of text with tall ascenders and capital letters. Some solutions include: Increase the leading (line spacing) between lines of type; Choose a different typeface; For headlines and subheads, some careful editing/re-wording can eliminate the problem; Changing the alignment of the text may also help.

Ascender

Definition: In typography, the upward vertical stem on some lowercase letters, such as h and b, that extends above the x-height is the ascender. The height of the ascenders is an identifying characteristic of many typefaces.

The ascenders of some letters may touch or almost touch letters in the line above causing awkward or distracting patterns. This is most likely to happen or be obvious when a line of text with tall ascenders is below a line of text with long descenders. To resolve the problem of touching ascenders and descenders you can: Increase the leading (line spacing) between lines of type; Choose a different typeface; For headlines and subheads, some careful editing/re-wording can eliminate the problem; Changing the alignment of the text may also help.

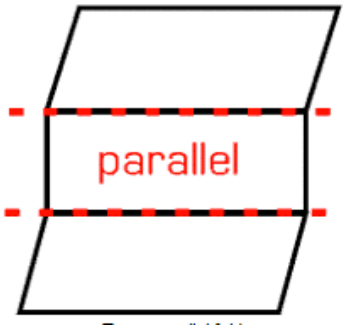
Points and Picas

Stop inching your way into desktop publishing. Plunge into picas for page layout measurments. For many, the measurement system of choice for typesetting and publication design is picas and points. If your work involves complex, multi-page designs such as books, magazines, newspapers, or newsletters, working in picas and points can be a real timesaver. And if you plan to work in the newspaper or magazine publishing industry, you'll likely be required to stop thinking in inches or millimeters for page layout. So why not start now. In fact, you're already half-way there since if you use type you already work with points.

Newsletter layouts frequently involve small pieces that are difficult to measure in fractions of inches. Picas and points provide easily for those tiny amounts. Have you heard of the magic of thirds in design? Quick, divide a 8.5 inch by 11 inch piece of paper into thirds horizontally.

Parallel Folds

Definition: The folds in paper with parallel folds all run in the same direction, parallel to each other. Parallel folds are commonly used for all kinds of brochures (such as tri-fold), stationery inserted into business envelopes, and other materials. The specific direction of each of the parallel folds determines the type of folding pattern such as accordian or gatefold.
Examples: Accordian, Zig Zag, and Gatefold are types of paper folds that are all parallel folds.



Point Size, X-Height, Caps Height

Effective use of type means knowing how to measure type. Traditionally, type size is designated in points and is set to specific pica widths and depth (column width and height -- 1 point = .013837 in. & 12 points = 1 pica). Two common misconceptions are:

1. 72 points (6 picas) = 1 inch (72 points = .996264 inches)
2. A letter at 72 points is 1 inch tall (possible but not usually true)

However, for all practical type measurement purposes we round 72 points to 1 inch. When we take spacing above and below a line of type into consideration, when set at 72 points the line of type will take up approximately an inch of vertical space.

X-Height is not the average height of all the X-Men
There are several different size aspects of a standard typeface that affects its appearance, readability, and suitability to different tasks.

The point size of a font is a measure of the overall space that the characters occupy not the actual size of any individual character.

In addition to point size, caps height and x-height are two other measures of importance. All three are moving targets. That is, two fonts at 72 points can have vastly different visual size due to caps height, x-height, and other factors specific to that font.

The sidebar image shows one font and some of it size factors. The font size is 72 points. The distance between the two blue lines is 1 inch. As you can probably tell, none of these characters are 1 inch (or even .996264 in.) tall.

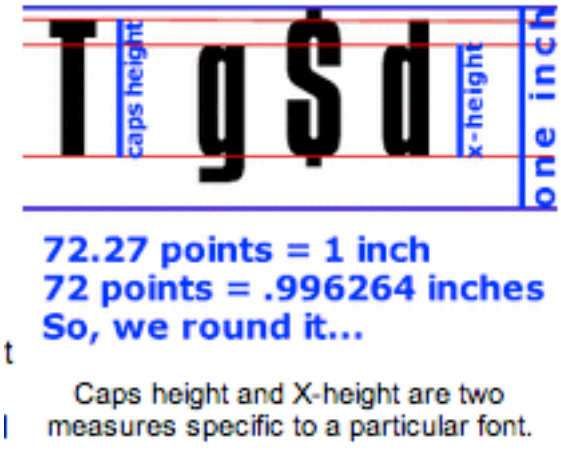
* The red line that the type sits on is the baseline. The tail (descender) of the lower case g extends below the baseline. The baseline is the starting point for several type-related measurements including x-height, caps height, and leading (space between lines of type).

* The red line above the baseline sits on top of the g and the bowl of the d. The space between those two lines represent the x-height of that font. The x-height relative to the caps height affects font readability and is one factor to consider when specifying leading for a passage of text.

* The next red line in this image runs along the top of the T. The space between the baseline and that line is the caps height. It represents the size of most uppercase characters in that font.

* Not all characters fit neatly within the x-height and caps height measurements. The tallest character in this specific typeface is the $ (dollar sign) which extends both above and below those measurements.

What's the Point?
Points are used not only to measure the type itself, but the space around it. Setting leading (line spacing) requires a basic understanding of points and type measurements. Points and picas may also be used to set margins, specify column widths, and spaces between columns.

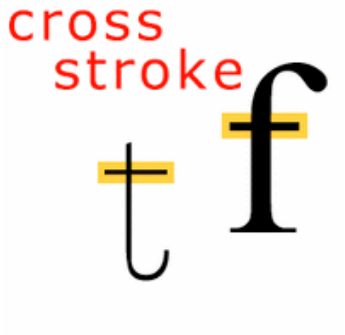



extender
dp
ascender descender


stem
DP


arm
FT


crossbar
HA


cross stroke
tf


tail
QQg
R

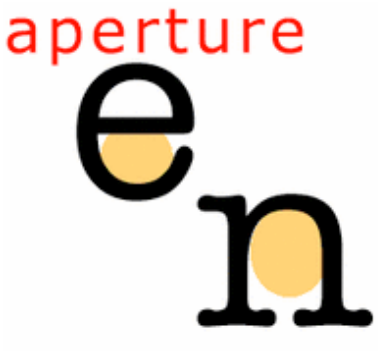

leg
k k


bowl
a q
g
not
Bowl


stroke
NM

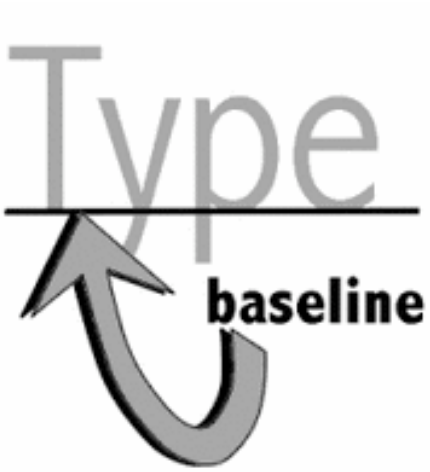

counter
dC
also see aperture
Counter


eye
ee


aperture
en

Pronunciation:
[BEYS-lahyn]

Examples: The amount of space between the baselines of two lines of type -- the leading -- combined with how far below the baseline that descenders go (and how high ascenders go), can affect the readability of the text.



Baseline
J. James

Typefaces of the same point size but differing x-heights.

Serifs

Definition: In typography, a serif is the little extra stroke found at the end of main vertical and horizontal strokes of some letterforms. Serifs fall into various groups and can be generally described as hairline (hair), square (slab), or wedge and are either bracketed or unbracketed.

Hairline serifs are much thinner than the main strokes. Square or slab serifs are thicker than hairline serifs all the way up heavier weight than the main strokes. Wedge serifs are triangular in shape. Unbracketed serifs attach directly to the strokes of the letterform, sometimes abrubtly or at right angles. Bracketed serifs provide a curved transition between the serif and the main strokes. Within these divisions serifs can be blunt, rounded, tapered, pointed, or some hyrid shape.

Some special serif-like character parts are spurs and beaks

Examples: Some of the main classifications of Serif type are: Blackletter, Old Style, Modern, Slab Serif, Transitional, and Informal. Fonts in each classfication share certain similiar characteristics including the shape or appearance of their serifs. Serif shapes include straight, rounded, pointed, and

Sans Serif

Definition: Type which does not have serifs -- the little extra strokes found at the end of main vertical and horizontal strokes of some letterforms -- are called sans serif (without serif). Within sans serif there are five main classifications: Grotesque, Neo-Grotesque, Geometric, Humanist, and Informal. Typefaces within each classification usually share similarities in stroke thickness, weight, and the shapes of certain letterforms.

Although there were some sans serif typefaces in the 1800s, the 1920's Bauhaus design movement popularized the sans serif style.
Also Known As: Lineal(e) | Grotesque | Neo-Grotesque | Geometric | Humanist | Gothic (not Blackletter Gothic)
Examples: "Arial, Helvetica, Verdana, Futura, Univers, and Franklin Gothic are some popular sans serif fonts."

Serifs

Definition: Serif: Little hooks on the ends of characters. For example, the letter i in a font such as Times Roman has serifs protruding from the base of the i and the head of the i. Serif fonts are usually considered more readable than fonts without serifs. There are many different types of serif fonts. From Linux Guide @FirstLinux