

COPYFITTING SIMPLIFIED

WITH THE

Lawrence COPYFITTER

THE fitting of copy to space is often a mystery to the layman, mostly because correct and pertinent information has not been easily available. To begin with, the layman should be familiar with the terms used in copy writing and printing, as the printing industry is one of the few that has a dual standard of measurement. Paper is measured in inches and type in points and picas. To the beginning, the following definitions will be a help.

Point— $1/72$ of an inch (approximately).

Pica—12 points or $1/6$ of an inch (approx.).

Em—The square of body size of a type (not a term in lineal measurement).

Type size—Body depth in points.

Measure—Width of line of either copy or type, measured in picas.

Running Picas—Pica length of either copy or type, if placed in one long line.

Characters—Letters, punctuations, spaces. All are counted when counting characters in copy.

Characters per Pica—Number of average characters that will set in (1) pica.

Alphabet Length—Length of the 26 letters of the alphabet (a to z) measured in points.

Caps—Capital letters.

Lower Case—Small letters.

Elite Typewriter—10 point or small typewriter. Measures 12 characters to the inch of copy.

Pica Typewriter—12 point or large typewriter. Measures 10 characters to the inch of copy.

Leading—Space between lines of type.

Point sizes of type—4, 5, $5\frac{1}{2}$, 6, 7, 8, 9, 10, 12, 14, 18, 24, 30, 36, 42, 48, 60, 72 are the sizes used the most.

The layman naturally assumes that all type of the same point body size will set the same width and occupy the same space. This very definitely is a major error. The width of characters of one type face may vary greatly from the width of another type face of the same point size. Because of this variance, it is necessary to establish the Characters per Pica for each type face and size of all type we desire to use, if we wish to fit copy accurately.

The two alphabets below demonstrate this wide difference in length.

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

It has been found that by measuring the length of the alphabet (a to z) in points, we can establish the number of average characters that will set in one pica width.

With this character per pica (Cpp.) for each type size and face, and the LAWRENCE COPYFITTER both speed and accuracy in copyfitting is easily attained.

Character Count—Because the variation in width of individual letters is much less than the variation in length of words, using the character count method of measuring copy instead of word count, results in greater accuracy.

Running Picas—The Running Pica system of Copy and Space measurement is by far the simplest method. The Total Number of Characters in Copy is theoretically lined up in one long line, which is divided by Cpp. for the face and size type being used, resulting in Total Running Picas copy will set. This long line is then divided by the Pica width to obtain the number of lines of type. This number of lines is then converted to pica depth. Single lines, irregular run-arounds, small, close-fitting areas, squared-up lines, etc., are handled much easier by the running pica method than by any area method of measurement.

Copyfitting Analyzed—There is only ONE BASIC PROBLEM in copyfitting with four arrangements of the basic formula. All other problems are merely problems of converting measurements from one term to another.

The Basic Problem involves four variables, each dependent upon the others. They are:

1. The Measure (width in picas).
2. The Depth (in number of lines).
3. The Number of Characters per Pica (for the face and size type used).
4. The Total Number of Characters in the copy.

DIFFERENT FORMS OF THE
BASIC PROBLEM

One Unknown

1. Find Number of Lines. Number of Characters, Cpp., and Pica Width known.
2. Find Total Characters of Copy to fill Space. Cpp., Pica Width and Number of Lines known.
3. Find Pica Width to Set. Number of Characters, Cpp., and Number of Lines known.
4. Find Characters per Pica. Number of Characters, Pica Width and Number of Lines known.

Two Unknowns

1. Find Cpp. and Point Size of type to fill space. Pica Width, Pica Depth, and Total Characters known.
2. Find Pica Width and Number of Lines. Point Size, Cpp., and Total Characters known.

Supplementary Problems

Converting Alphabet Length to Characters per Pica.

Finding Pica Depth of a Number of Lines.

Finding Number of Lines in Pica Depth.

Finding Number of Running Picas in Space to be filled.

Finding Total Characters in Typewritten Copy

Converting Cpp. for 12 point type to the equivalent Cpp. for a different point size.

THE LAWRENCE COPYFITTER

The LAWRENCE COPYFITTER is a slide calculator with all scales identified for specific factors of copyfitting. It is very easy to read and use.

By placing two known factors of a problem in copyfitting in conjunction, the unknown factor is easily read opposite the other known factor.

The Scales and Their Uses

Pica Measure of either typewritten copy or type line is always shown on top scale.

Number of Lines of either copy or type is always shown on next scale.

Characters per Pica (Cpp.) are always shown on scale on bottom of slide.

Total Characters and Running Picas are shown on bottom graduated scale.

These four scales are the ones most frequently used.

There are two other scales, calibrated in Red, which are conversion scales. They are:

Alphabet Length—This is the center scale on the slide and is used to convert alphabet lengths to Cpp.

Type Size in Points—This scale is on the extreme bottom of the body of the copyfitter. It is used to convert pica depth to number of lines and vice versa. It also converts Cpp. for 12 point type to the equivalent Cpp. for other type sizes.

The three arrows: The arrow at 1.0 on the Cpp. scale points to the number of Running Picas of either copy or type on the scale below. The arrow at 1.66 points to total Characters if copy is typed in Pica typewriter. The arrow at 2.0 points to Total Characters if copy is typed in Elite typewriter.

The Slide Indicator is used to locate graduations and hold position.

NOTE—*It has been found that quick reading of any instructions such as these leads only to confusion.*

Please take demonstrations of the LAWRENCE COPYFITTER one at a time, and work a few problems of each, mastering the application, before moving on to the next problem.

In a very short while you will thoroughly understand the LAWRENCE COPYFITTER and recognize its speed and accuracy.

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As the first use of the LAWRENCE COPYFITTER, we will determine the Cpp. of different type faces and sizes.

Set up the alphabet (a to z) and measure it in points. 9 point Old Style No. 7, for instance, measures 112 points. Using the LAWRENCE COPYFITTER, move the indicator to place the hairline on the 112 mark on the scale marked Alphabet Length in Points. Now the Cpp. for this alphabet length will also appear under the hairline, but on the Cpp. scale. 9 pt. O. S. No. 7 will set on an average of 3.0 Cpp.

The alphabet length of 18 pt. Futura Medium is 210 pts. and will set 1.6 Cpp. The alphabet length of 12 pt. Antique CAPS is 240 pts. and it will set 1.4 Cpp. 8 pt. Futura Medium l.c. is 96 pts. and it will set 3.5 Cpp.

This Cpp. of each type face and size is necessary to accurately fit copy. If not available, you will have to establish a list of Cpp. for all types you have and keep for future reference. Do this for both caps and lower case letters.

Now let's work a few supplementary problems before going to the Basic problems.

To Find Pica Depth of a Number of Lines.

What will be the Pica Depth of 27 lines of 18 pt. type?

Move the indicator to 18 on Type Size scale (extreme bottom scale) and then pull slide of Copyfitter to place 27 on Number of Lines scale, under hairline of indicator. Now move indicator to 12 pts. (pica) on Type Size scale. Under hairline on indicator, on Number of Lines scale, read number of 12 pt. lines or Pica Depth, which is 40½ picas.

82 lines of 9 pt. will be 61½ picas deep. 60 lines of 10 pt. will be 50 picas deep. Work these out with the Copyfitter, and then check with pencil and paper. Note how much quicker it is with the Copyfitter.

To Find Number of Lines in Pica Depth.

*By identifying scales for specific factors of copyfitting, The Lawrence Copyfitter is made very easy to read and use. Align two known factors in a problem of copyfitting, and the unknown factor or answer is found aligned with the remaining known factor. Copyfitting becomes a pleasure with the LAWRENCE COPYFITTER.

How many lines of 9 pt. type will go in 40½ picas deep?

This is the reverse of the previous problem. (Treat number of picas deep as number of 12 pt. lines.)

Place line on indicator over 12 pts. on Type Size scale. Move slide on Copyfitter to bring 40½ lines under indicator line. Now to find number of 9 pt. lines, move indicator to 9 pts. on Type Size scale. On Number of Lines scale, under indicator line, read 54 lines of 9 pt.

16 picas deep will allow for 24 lines of 8 pt. 22 picas deep will allow for 48 lines of 5½ pt. type. Check these on the LAWRENCE COPYFITTER.

To Count Characters in Typewritten Copy.

Count characters in copy at bottom of opposite page.*

Draw a line from top to bottom on the right hand edge of copy, where the average length line ends. With a printer's line gauge, measure the pica width and depth of the copy. (As typewritten copy lines are spaced 1 pica apart, measuring the depth in picas gives us the correct number of lines.) Our copy here measures 22½ picas wide and there are 7 lines of copy.

There are two sizes of typewriter type and we must determine which our copy is. By checking copy with the Typewriter scale on the back edge of this folder, we find that the 10 pt. or Elite scale fits our copy. This is, therefore, Elite typewriter.

Now use the LAWRENCE COPYFITTER.

Set indicator at 22½ picas on Measure scale and move Copyfitter slide to set 7 lines under indicator line. Note the Red Arrow at 1.0 on Cpp. scale. This points to the Total Running Picas in copy, read on scale below, which is 157½ R. P. in copy. Now we convert this into character count by the simple method of sliding our Copyfitter indicator out to the arrow marked TW Pica or TW Elite, whichever was used in typing our copy. As the copy above was typed with Elite TW, we read our answer under the Elite TW arrow, on the Characters scale, and find we have 315 characters in our copy.

We will now show the variations of the BASIC PROBLEM, using the same set of factors on all problems.

First form. Find Number of Lines.

21 picas wide

? Number of Lines

2.5 Cpp. (setting in 10 pt. Bodoni)

315 characters in copy

Set indicator at 315 on Characters Scale. Move slide to place 2.5 Cpp. under indicator line. Move indicator to 21 picas on Measure scale, and under indicator line, on Number of Lines scale, read 6 lines.

Second Form. Find Total Characters of Copy to fill Space.

21 picas wide

6 Lines

2.5 Cpp. (setting in 10 pt. Bodoni)

? characters in copy

Set indicator at 21 on Measure scale. Move slide to place 6 on Lines scale under indicator line. Move indicator to 2.5 on Cpp. scale, and read 315 characters under indicator line.

Third Form. Find Pica Width to Set.

? picas wide

6 Lines

2.5 Cpp. (setting in 10 pt. Bodoni)

315 characters in copy

Set indicator at 315 on Characters scale. Move slide to bring 2.5 Cpp. under indicator line. Move indicator to 6 on Number of Lines scale and under indicator line read 21 picas wide on Measure scale.

Fourth Form. Find Characters per Pica.

21 picas wide

6 lines deep

? (after this is found, type size and face can be selected)

315 characters in copy

Set indicator at 21 on Measure scale. Move slide to place 6 on Lines scale under indicator scale. Move indicator to 315 characters, and read 2.5 Cpp. on Cpp. scale.

Note that in all cases three of the four factors in the problem were known, and that by aligning two of the known factors, we found the unknown factor aligned with the remaining known factor.

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There are two variations of the Basic Problem that have *two* unknown factors.

Form 1. When pica width and depth of space is given and we also know the copy to fill, what face and size type will fit?

The two unknowns are (1) type face and its Cpp. and (2) point size of type.

In all previous problems, the depth of space was given in number of lines because the point size was known. Here we use the pica depth as the number of 12 pt. lines. Figure the problem for 12 pt., and then convert the Cpp. for 12 pt. type to the equivalent Cpp. for any type size. From our list of type faces and their Cpp.'s, we select the face and point size most suitable to our problem.

Example:

900 characters in copy

15 picas wide

20 picas deep (20 picas=20

lines 12 pt.)

Set indicator at 15 on Measure scale. Move slide of Copyfitter to place 20 lines under indicator line. Move indicator to 900 on Characters scale and read 3.0 Cpp. on Cpp. scale. *This is Cpp. for 12 pt. type only.* If you have a 12 pt. type with Cpp. of 3.0 this is your answer. But many times you will not have a type with the Cpp. indicated.

Now, here is where the LAWRENCE COPYFITTER really shows to advantage. You can set up on the Copyfitter, every type size and its correct Cpp. that can possibly fit this space. From these possibilities you select the type face and size you desire or have available, without moving the Copyfitter or refiguring each point size.

