Fontographer 4.1 for Windows

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Expert Advice

Glossary of Terms

Glossary of Terms

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BCP
Bézier curve
Bit
Bitmap
Bitmap font
Bitmap Window
Blend
Blue Zones
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CFG
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Help Menu

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How to Use Help...
About Fontographer...

Help Menu: Contents...

The on-line help provided by Fontographer opens initially to the "Table of Contents."   You open this help file by selecting this menu item.

Help Menu: Keys...

Help Menu: How to Use Help...

You can get help concerning how to use the Windows Help system by selecting this menu item.

Help Menu: About Fontographer...

The window that opens when you select this menu item gives you some information about the
current version of Fontographer that you are using. If you enjoy solving puzzles, there is an
alternate, more entertaining About box. We won't tell you how to view it, but it's not hard to find.

File Menu: New Font...

See Also: <u>Preferences</u>

In Fontographer when you select "New Font," you automatically open a new <u>Font Window</u>. The default values for <u>font attributes</u> will be in use, unless you decide to change them in "Font Info" in the Element menu. (Things like the font name, <u>ascent</u>, <u>descent</u>, <u>leading</u>, and <u>encoding</u>.)

The keyboard shortcut is Ctrl + N.

File Menu: Open Font...

Open Font shows you a standard file dialog which allows you to open a Fontographer outline file, a PostScript font, or a TrueType font file.   The dialog also allows you to display or hide files according to their formats.

The keyboard shortcut is Ctrl + O.

File Menu: Close

Close the active font window with this item.   If you have made changes, Fontographer will ask you if you want to save your changes.

The keyboard shortcut is Ctrl + W.

File Menu: Save

Saves any changes you have made since opening the font. The first save for a new font shows the Save As dialog box.

Note: When you save, you are creating a Fontographer database file, which is different from the font you may have opened to begin with. To build an installable font, you should use Generate Font Files... in the File menu.

The keyboard shortcut is Ctrl + S.

File Menu: Save As...

Allows you to save your file with a different name.

Note: When you save, you are creating a Fontographer database file, which is different from the font you may have opened to begin with. To build an installable font, you should use <u>Generate Font Files...</u> in the File menu.

File Menu: Revert

Restores your Fontographer database file to the last saved version on the disk, throwing away any changes you may have made since you last saved it.   You can revert from any window.

File Menu: Preferences...

See Also: <u>Expert Advice: Preferences</u>

By selecting Preferences you can alter the default settings for Fontographer. The settings that you can change cover many aspects of the program, from the number of undo's allowable (up to 101), to how points display (large or small, with or without <u>BCP</u> lines), etc., editing behavior of lines and points, and the way windows and dialogs operate. This is also where you control sounds.

The keyboard shortcut is Shift + Ctrl + P.

File Menu: Generate Font Files...

See Also: <u>Creating font files for the Macintosh</u>

To make <u>generating</u> fonts a little bit easier, Fontographer includes two approaches: Easy and Advanced mode. The Easy mode includes everything which is usually required. And ordinarily you won't want to bother with the Advanced mode.   You just choose the computer type -- Macintosh or PC, and the type of font to output -- PostScript <u>Type 1</u>, PostScript <u>Type 3</u>, <u>TrueType</u>, or none -- the <u>bitmap</u> sizes, and where you want the generated files to be placed. The Advanced mode includes several other choices, including <u>encoding</u> vectors, <u>outline font</u> IDs, etc.

For more information on navigating in the Advanced mode, refer to your documentation.

File Menu: Import

Importing <u>bitmaps</u>, EPS, or <u>Metrics</u> into a font file is a simple matter using the Import item in the File menu. Just choose one of these three options from the submenu and import from another file. You can select whether or not you want to import bitmaps into the internal bitmap list or just into the <u>Template layer</u>, or you can do both. You can also import EPS outlines into a character. When you import Metrics, you can choose to import only <u>kerning</u> information, or <u>spacing</u> information, or both types. You can also choose the kinds of files you want to appear in the dialog display: Fontographer database files, <u>TrueType</u> fonts, <u>AFM</u> files, <u>PFM</u> files, and Fontographer metrics files. The checkboxes allow you to display or hide these kinds of files, allowing you to easily recognize your files, and select the right one for importing.

File Menu: Export

When you want to export <u>metrics</u> information, an EPS graphic, or encoding, just select Export from the File menu. You can choose Metrics, EPS, or Encoding from the submenu. When you choose EPS, a dialog appears allowing you to choose the format type for the exported material, whether to export all characters or just a selected group, or the sample text, and the <u>point size</u> to use. You choose the file to export "to" from the dialog. Exporting Metrics works in pretty much the same way, but you choose to export either <u>kerning</u> or <u>spacing</u>, or both types of information, and you select the file format to use Fontographer Metrics, <u>AFM</u>, or <u>PFM</u>. The encoding is saved to a text file, which can be edited and added to the FONTOG.ENC file. This file is read each time Fontographer begins execution. So the next time you use Fontographer after adding your encoding to FONTOG.ENC, it will be available from the Font Info/Encoding pop-up after restarting Fontographer.

File Menu: Print Setup...

This is the standard Windows Print Setup <u>dialog box</u>.

File Menu: Print...

In the Print Sample dialog you can choose the sample type you want to print. Choose sample text, sample file, or <u>PostScript</u> file, keymap, <u>kerning pairs</u>, or Characters.

Printing **sample text** offers three choices:
        All characters will print all the characters in the font you are modifying.
        Selected characters will print only those you select from the <u>Font Window</u>.
        Sample text will allow you to print the text you type in the print sample text box.

Choose **Sample file** to print a text file with the new font <u>style</u>.

PostScript file will print a custom PostScript file; several sample PS files are provided with Fontographer, which you can use as is, or modify with a text editor to define your own sample. This can only be used on a PostScript printer.

Key map prints all the characters in the font including offsets, widths and key codes, and offers you the choice of Selected or All characters, and format types.

Kerning pairs prints the kerning pairs in the current font or in a <u>monospaced</u> System font.

Characters prints four kinds of print samples: a single full-page sized character, assorted sizes of the same character a sample showing the points of a character, or one that shows points and X/Y coordinates.

The keyboard shortcut is Ctrl + P.

File Menu: Exit

If you Exit without first saving some changes you have made, Fontographer will ask if you want to save those changes. You can discard those changes by clicking the Don't Save button. The Cancel button stops the process. With multiple unsaved files open, you will have a choice of Review, Close All, or Cancel.

The keyboard shortcut is Ctrl + Q.

Edit Menu: Undo (Function) / Can't Undo

See Also: Expert Advice: Options for Undo

Fontographer has 101 possible levels of "Undo." The default setting is eight. This means that you can Undo the last eight things you changed for each character in Fontographer. The operation that can be undone will appear in the menu after the Undo if you are using the Outline Window or Bitmap Window. Undo is not available on changes to more than one character.

If "Can't Undo" is displayed, either you are out of undo's, or focus is not on a single character.

The keyboard shortcut is Ctrl + Z.

Edit Menu: Redo (Function) / Can't Redo

Redo allows you to undo an Undo. There are 101 possible levels of redo.

The keyboard shortcut is Ctrl + Y.

Edit Menu: Cut

Cut deletes the selected object(s), such as characters or points, and puts them in the <u>Clipboard</u>.

The keyboard shortcut is Ctrl + X.

Edit Menu: Copy

Copy makes a copy of the selected object(s), such as characters or points, and puts them in the Clipboard.

The keyboard shortcut is Ctrl + C.

Edit Menu: Paste

Paste takes a copy of the object(s) in the Clipboard and puts it into the selected window or character slot.

The keyboard shortcut is Ctrl + V.

Edit Menu: Clear

Clear deletes the selected object(s) without doing anything to the <u>Clipboard</u>.

Edit Menu: Copy Widths

Copy Widths will copy the character width of a selected character to the <u>Clipboard</u>.

Edit Menu: Copy Reference

Copy Reference copies a <u>reference</u> of a selected character into the <u>Clipboard</u>, which can then be pasted to allow layered objects. You must use Copy Reference instead of Copy if you want to create a composite character.

The keyboard shortcut is Ctrl + G.

Edit Menu: Unlink Reference

Unlink Reference replaces a <u>referenced</u> character with explicit <u>paths</u>.

Edit Menu: Select All

Select All selects everything in the currently active window and layer. From the <u>Font Window</u> you can choose Select All to select all the character slots that are filled; Alt+Select All selects *all* slots, even if there are no <u>paths</u> in them. In the <u>Outline Window</u> it selects all points, and in the <u>Hints Layer</u>, it selects all hints.

The keyboard shortcut is Ctrl + A.

Edit Menu: Duplicate

Duplicate makes a copy of the selected object(s) and leaves it on the screen, slightly displaced from the original(s).

Power duplicating occurs when you duplicate the same object several times (in the <u>Outline Window</u>).   Every duplication is offset from the one before it by the amount the first duplicate is offset from the original. If you make a duplicate and move it, then duplicate again, the new duplication will offset the same distance as the first duplication was from the original object.

The keyboard shortcut is Ctrl + D.

Edit Menu: Clone

In the Outline Window, Clone duplicates a point or path and places it directly over the original.

View Menu: Preview

In the <u>Outline Window</u> the Preview mode displays the character or image <u>filled</u> and <u>stroked</u> (if it's a stroked character) as it will appear when printed. You can edit the character in Preview mode.

The keyboard shortcut is Ctrl + L.

View Menu: Show Points

If this item is checked, Fontographer will show the points on the path(s) in the Outline Window. When this item is unchecked, Fontographer merely draws the outline(s) of the character and does not show the points. You can temporarily display points by clicking outside the character.

The keyboard shortcut is Ctrl + U.

View Menu: Magnification

You can magnify an image in Fontographer by selecting any one of the Magnification submenu options. Fit in Window will fit the character in the window. The other choices magnify at various levels: 6.25% 12.5%, 25%, 50%, 100%, and 200%.

The magnification option lets you look at a character image at various levels of magnification. You can select one of the sizes from the pop-up menu or choose to fit the character's <u>em square</u> in the window (Ctrl+T). The magnification choices are:

Fit in Window   (Ctrl+T)

6.25%   (Ctrl+1)

12.5%   (Ctrl+2)

25%   (Ctrl+3)

50%   (Ctrl+4)

100%   (Ctrl+5)

200%   (Ctrl+6)

You can also zoom in or out using the Outline window's <u>Magnifying Tool</u> or the Bitmap window's <u>Magnifying Tool</u>.

View Menu: Next Character

This item switches the currently selected character to the next character of the font.

The keyboard shortcut is Ctrl +].

View Menu: Next Kerning Pair

If kerning pairs have been created for a font you can choose Next Kerning Pair in the Metrics Window to change the currently selected kerning pair to the next one in the sequence of kerned pairs.

The keyboard shortcut is Ctrl + '.

View Menu: Next Point

Next Point changes the selected point to the next one in the <u>path's</u> sequence of points.

The keyboard shortcut is Ctrl + /.

View Menu: Next Point Size

If more than one size of bitmaps have been created for a font, you can choose this item in the Bitmap Window to switch the size of the bitmap character to the next larger point size.

The keyboard shortcut is Ctrl + =.

View Menu: Previous Character

This item switches the currently selected character to the previous character in the font.

The keyboard shortcut is Ctrl + [.

View Menu: Previous Kerning Pair

If kerning pairs have been created for a font, choose "Previous Kerning Pair" in the Metrics Window to change the currently selected pair to the previous one in the sequence of kerned pairs.

The keyboard shortcut is Ctrl + ;.

View Menu: Previous Point

In the <u>Outline Window</u> choose "Previous Point" to change the selected point to the previous point in the <u>path's</u> sequence of points.

The keyboard shortcut is Ctrl + ,.

View Menu: Previous Point Size

This item switches the size of the <u>bitmap</u> character in the <u>Bitmap Window</u> to the next smaller <u>point size</u>.

The keyboard shortcut is Ctrl + -.

View Menu: Snap to Points

See Also: <u>Behavior of Snap to Point</u>

Choose "Snap to Points" to turn this item on or off. Snap to Points will make the selection snap to the nearest point within a certain number of <u>pixels</u> from the pointer. Or you can choose to align the selection with all the points in the <u>Preferences dialog.</u>

The keyboard shortcut is Shift + Ctrl + N.

View Menu: Snap to Guides

Choose "Snap to Guides" when you want the selected point to snap to the nearest guideline within a certain distance from the pointer.

The keyboard shortcut is Shift + Ctrl + G.

View Menu: Snap to Grid

Choose "Snap to Grid" when you want a selected point to snap to the nearest invisible grid line. You can change the grid size in <u>Preferences.</u>

The keyboard shortcut is Shift + Ctrl + I.

Element Menu: Transform...

The Transform menu item displays a dialog that lets you choose various <u>transformations</u> in the <u>Outline Window.</u> You can choose to center transformations around the origin, the <u>basepoint</u>, the center of selection, or the last mouse click; and you can make up to four transformations simultaneously.

Flip

The Flip item allows you to flip any character(s) or selected parts of a character. The flip can be either horizontal or vertical and will occur relative to the Basepoint. You can flip around the Center of selection or the Character origin if you have selected objects in the Outline window, or you can flip around the last mouse click.

Move

The Move item allows you to move selected objects a specified distance horizontally, vertically, or both.

Rotate

The Rotate item allows you to rotate any character(s) or selected parts of a character. You can choose for the rotation to occur relative to the <u>Basepoint</u>, the Character origin, or around the Center of selection if you have selected objects in the Outline Window, or you can rotate around the last mouse click.

Scale

The Scale item allows you to resize selected characters. If 100% scaling is selected, Fontographer does not change the size of the character(s). If you wish to make selected characters smaller, use numbers below 100. If you wish to make them larger, use numbers over

You can <u>scale</u> the horizontal and vertical dimensions separately if you wish. A 200% horizontal scaling coupled with 100% vertical scaling will make selected characters twice as wide while leaving them just as tall as they were before the scaling operation.

You can choose whether Fontographer will scale from the <u>Basepoint</u>, the Character origin, the Center of selection if you have selected objects in the Outline Window, or the last mouse click.

Scale Uniformly

Uniform scaling will resize selected characters uniformly, with 100% representing the current size. Scale relative to the <u>Basepoint</u>, the Character origin, the Center of selection, or the last mouse click.

Skew

The Skew item allows you to <u>skew</u> any character(s) or selected parts of a character. The skewing will occur relative to the <u>Basepoint</u>, the Character origin, the Center of selection if you have selected objects in the <u>Outline Window</u>, or the last mouse click. Positive degrees of horizontal skew slant the character to the left; negative degrees slant to the right.

Perspective

The Perspective tool works in conjunction with the 3D Rotate tool to apply 3-dimensional rotations to 2-dimensional objects while still maintaining perspective. The best way to understand how the Perspective Tool works is to do the example provided in your documentation.

WARNING: Once a 3-D transformation has been applied to a 2-dimensional object, the object becomes 2-dimensional again. The object does not maintain 3-dimensional coordinates. To do multiple 3-D transformations while maintaining 3-D coordinates in between each transformation you must use the Transform dialog.

3D Rotate

Using the Transform dialog to apply 3-D transformations is simpler if you use the tools to setup the transformation. Double-clicking on the Perspective tool will bring up the Transform dialog ready to apply a 3-D rotation transformation. Follow the example in your documentation.

IMPORTANT: If you wish to set up additional transforms in this dialog, then make sure that the perspective transform is done last. Any transforms that occur after the perspective transform will not have a 3-dimensional appearance.

The keyboard shortcut is Ctrl + \.

Element Menu: Arrange

Arrange allows you four choices when you are working with <u>referenced</u> or composite characters. It also can be used when you're reordering <u>paths</u> for font blending.

Bring to Front

This item brings a selected object all the way to the front layer.

The keyboard shortcut is Ctrl + F.

Send to back

This item sends a selected object all the way to the back layer.

The keyboard shortcut is Ctrl + B.

Bring forward

This item brings selected objects forward by one layer.

Send backward

This item sends a selected object back one layer.

Element Menu: Font Info

In the top of the dialog you will see the name of the current font and its style (Bold, Italic, etc.). To the right you can select encoding options (Windows 3.1, Adobe Standard, etc.) Be sure that the encoding you choose has all the characters in it that you want to define.

All the numbers in this dialog are in em square units. The Ascent and Descent default to a sum of 1,000 units.

Leading is normally left at 0, but if you must set it a good setting is 10% of the sum of the ascent and descent.

A PostScript underline is accomplished by defining a stroked line a certain distance from the bottom of the character. The Underline position entry allows you to change the distance between this stroked underline and the characters above it. The default indicates that this line will be drawn below the baseline. The Underline width indicates how wide the underline should be; the default is 20 units.

You can put any text, up to 100 characters, in the Notice Box. Usually the copyright notice goes here.

You will also see listed the 12 font attribute tables, such as OS/2 data.   For more information about these tables, refer to your documentation.

Element Menu: Selection Info...

When you choose "Selection Info," a dialog will display on the screen that relates to the type of selection you have made. In the Font Window, this choice will display character information and in the Outline Window either character or point information will appear, depending on your selection. In the Hints layer, you get the Hint Info dialog, and in the Metrics Window and the Bitmap Window the Selection Info menu item displays character information.

The keyboard shortcut is Ctrl + I.

Element Menu: Selection Info...   Character Information

The Character Information dialog allows you to change the <u>fill</u> and <u>stroke</u> characteristics of individual characters for <u>Type 3</u> fonts. Normally a character will be either filled or stroked, but you can use this dialog to create characters that are both filled and stroked. The Tint, <u>Weight</u>, Cap, and Join options allow you to set the characteristics of a stroked font.

The Character Name <u>textbox</u> allows you to change the name of the character -- but be warned that doing so will also change the type of <u>encoding</u> your font uses if the current type does not include a character with the name you select.

Fill

If the Fill box is checked, you can change the percentage of black with the Tint option. 100% is black; 0% is white.

The Normal fill will fill between <u>paths</u> that are alternately clockwise and counterclockwise and can be seen in <u>Preview</u>.

The Even/odd fill will fill between every even/odd pair of paths, starting with the outermost path.

Note: The Remove Overlap option is sensitive to fill type.

Stroke

If the Stroke box is checked, you can change the percentage of black which fills the stroke with the Tint option. 100% is black; 0% is white.

Weight

The Weight option allows you to change the thickness of this individual character's stroke from the default set in the Font Info dialog.

Cap and Join

The Cap and Join options are for stroked fonts. The Cap options determine the shape of the endpoints of a stroked path. The Join options determine the shape of joins along a path.

Element Menu: Selection Info...   Point Information

The Point Information dialog appears when you select points in the <u>Outline Window</u> and choose "Selection Info" from the Element menu. Point Information lets you change the location of a point horizontally and vertically, or designate it the first point in the <u>path</u>. You can also alter the position of its <u>BCPs</u> or you can return the BCPs to the point, or move to the next or previous point in the path.

Element Menu: Bitmap Info...

The Bitmap Information dialog allows you to specify the <u>point sizes</u> you want to create. The <u>bitmaps</u> are stored in the Fontographer file. When you are ready to create an installable <u>bitmap font</u>, use the <u>Generate Font Files...</u> command in the File menu.

Element Menu: Auto Trace...

Auto Trace will autotrace any artwork or <u>scanned</u> image that you have pasted in the <u>Template layer</u> or have brought in as a <u>reference</u> using the Import Bitmap item in the File menu. you may use the Easy or Advanced mode to trace images.

In the Easy mode the "tight" end of the slider makes the trace follow every possible contour on the image. The default "normal" or middle range of the slider is a good compromise between the "tight" and "loose" options. The "loose" end of the slider ignores little jagged edges and attempts to fit only the largest features of the Image

Advanced mode specifies the kind of fit curves will take: normal, loose, tight, or custom fit.

In the lower portion of the dialog you can click on checkboxes that tell your computer to treat nearly flat <u>paths</u> as straight lines or to find extreme points.

Element Menu: Change Weight...

Change Weight allows you to change the character's thickness. You can choose to correct <u>path</u> direction before changing the weight -- to maintain proper <u>filling</u>. You can also limit the change in size to either vertical or horizontal size.

The keyboard shortcut is Shift + Ctrl + W.

Element Menu: Clean Up Paths...

Clean up Paths improves the quality of your outlines. It removes unnecessary points and adds points where they are needed. Simply create the <u>paths</u> any way you'd like, and Fontographer will automatically clean them up for you.

The keyboard shortcut is Shift + Ctrl + L.

Element Menu: Expand Stroke...

The Expand stroke item is used to expand <u>stroked</u> characters (such as old versions of Courier) into contoured (outline) or <u>filled</u> characters. You can choose Cap and Join types here and, if you are using the Calligraphic pen option, change the width and angle of the pen. You can also do this by double-clicking on the <u>Freehand Drawing Tool</u> in the tool palette to bring up the Freehand Tool Setup dialog.

The keyboard shortcut is Shift + Ctrl + E.

Element Menu: Recalc Bitmaps...

When you choose this item selected <u>bitmaps</u> and <u>point sizes</u> will be recalculated. You can recalculate all the characters in your font, selected characters, or just the characters that are changed. You may also choose to preserve the line <u>spacing</u>, or the character shapes. Recalculating bitmaps is useful when you change a character's outlines after having created bitmaps.

The keyboard shortcut is Shift + Ctrl + R.

Element Menu: Remove Overlap

The Remove Overlap item allows you to merge and remove overlapping areas. You'll get the best results if your <u>path</u> has a normal <u>fill</u>. If the path has an even/odd fill you will be able to merge the paths but you'll need to remove the overlapping segment(s) manually. Removing the overlap(s) may result in fewer and better placed points, which results in faster printing fonts and helps the hinting process.

The keyboard shortcut is Shift + Ctrl + O.

Element Menu: Correct Path Direction

Correct Path Direction examines all the selected characters or <u>paths</u> and, if necessary, automatically reorders their path directions. Paths alternate clockwise/counterclockwise, starting with the outer path (clockwise) and working toward the innermost path. Unless a character's path directions are correct, it will not print correctly.

The keyboard shortcut is Shift + Ctrl + K.

Element Menu: Clockwise

This item will be checked if the selected <u>path</u> was drawn in a clockwise direction. You can change the direction of a path to clockwise by selecting this item.

Element Menu: Counterclockwise

This item will be checked if the selected <u>path</u> was drawn in a counterclockwise direction. You can change the direction of a path to counterclockwise by selecting this item.

Element Menu: Blend Fonts...

See Also: Font Blending -- the technical details

Blend Fonts takes two fonts you have selected and develops a third font that combines the characteristics of the two selected fonts.

Points Menu: Align Points

Align Points will align selected points along a horizontal or vertical axis. Fontographer decides which axis they are closest to and aligns to that axis.

The keyboard shortcut is Ctrl + E.

Points Menu: Align Points to Grid

Align Points to Grid will align the selected points with the nearest intersection of grid lines. If no points are selected then all points are aligned with the grid lines. Hold down the Alt key during the selection to align <u>BCPs</u> as well.

The keyboard shortcut is Shift + Ctrl + Q.

Points Menu: Merge Points

Selecting this item will remove the selected point without breaking the <u>path</u> it is on. If you need to open a path use the Delete (or Backspace) or Clear key, or the knife tool.

The keyboard shortcut is Ctrl + M.

Points Menu: Retract BCPs

This item will retract the <u>extended</u> <u>BCP</u> lines of selected points.

The keyboard shortcut is Ctrl + R.

Points Menu: Split Points

Split Points will divide a selected point into two points. To open the path, select one point, and drag it off of the top of the other.

Points Menu: Auto Curvature

This item automatically adjusts the slope of the <u>BCP's</u> of a selected point to maintain a regular curve as the point is moved.

The keyboard shortcut is Shift + Ctrl + U.

Points Menu: Curve Point

This item will be checked if the selected point is a curve point. Selecting this item while other kinds of points are selected will change those points to curve points.

The keyboard shortcut is Ctrl + 8.

Points Menu: Corner Point

This item will be checked if the selected point is a corner point. Selecting this item while points of other kinds are selected will change those points to corner points.

The keyboard shortcut is Ctrl + 9.

Points Menu: Tangent Point

This item will be checked if the selected point is a tangent point. Selecting this item while points of other kinds are selected will change those points to tangent points.

The keyboard shortcut is Ctrl + 0 (that's a zero).

Points Menu: Set Basepoint...

If you have not selected any points, choosing this item will cause a <u>dialog box</u> to appear which will allow you to set the horizontal and vertical location of the <u>basepoint</u>. If you've selected a single point, Fontographer will move the basepoint to that point. If you have selected more than one point, Fontographer will set the basepoint to the center of the selection's bounding box.

The keyboard shortcut is Ctrl + `.

Points Menu: Reset Basepoint

Click "Reset Basepoint" to return the <u>basepoint</u> to its original location at the intersection of the origin and the <u>baseline</u>.

The keyboard shortcut is Ctrl + ~.

Metrics Menu: Auto Space...

Auto Space automatically spaces a font, setting widths for each character. You can select the Easy or the Advanced mode. With the Easy mode you just select the <u>spacing</u> between characters that you prefer. Preview the spacing in the <u>Metrics Window</u> by typing text in to the <u>textbox</u>.

The Advanced mode allows you to choose which characters to space, how much to space them, and the techniques to use to determine spacing.

Metrics Menu: Auto Kern...

Auto Kern automatically kerns a font. In the Easy mode you can choose how many <u>kerning pairs</u> you want, how close together you want the pairs kerned, and whether or not you want Fontographer to change existing pairs. (Check this item if you want to manually set some pairs, but want Fontographer to set the others.)

The Advanced mode allows you to choose which characters to kern, how many pairs to kern, and a lot more. You can also specify the techniques to use, as well make choices about special cases.

Metrics Menu: Kerning Assistance...

Kerning Assistance provides a table where you can name <u>kerning pairs</u> by typing characters into columns. You can create classes of kerning pairs, which will kern the same way if they are the first or second letters of a kerning pair. For example, if you enter "TW" in Equivalent First Letters, and "ao" in Equivalent Second Letters, then "Ta," "Wa," "To," and "Wo" will kern the same way.

Check your documentation for examples and more detailed information.

Metrics Menu: Metrics Assistance...

Metrics Assistance allows you to set up a table for <u>kerning</u> and <u>spacing</u> that uses certain characters as bases or prototypes for the rest of the characters in any class you set up.

Check your documentation for examples and more detailed information.

Metrics Menu: Set Metrics...

Set Metrics allows you to set width, as well as left and right <u>sidebearings</u>. You can also apply values to specific sets of characters. Choose the characters you want to apply the <u>metrics</u> settings to, from the categories under Which character. These include A-Z, a-z, 0-9, Punctuation, Accent characters, Symbols, or Selected characters. Add any other characters to apply the setting to, in the provided <u>textbox</u>.

The next area in the dialog tells you "What to do." You can choose to set the sidebearings or width according to a particular character's measurement, or you can pick an <u>em unit</u> value to type in to set the width, and/or sidebearings for the selected characters. You may also add an amount to that specification, either in <u>em units</u>, or as a percentage of the distance represented by the character's metrical measurements, or the value you chose.

Metrics Menu: Set Width...

This dialog allows you to set the width of any selected character(s). If you are creating a monospaced font, select all the characters and set their width to some number of units. Fontographer will set them all at once.

If the spacing of your characters is too tight or too loose, you can use the Change width by em units option to change the width of selected characters by a specified number of em square units.

If you need to increase or decrease the width of selected characters by a specified percentage, you can do so with the Change width by % value option. Enter a percentage change value in the box.

Metrics Menu: Equalize Sidebearings

If you want to make both left and right <u>sidebearings</u> for selected characters the same size, choose "Equalize sidebearings" from the Metrics menu. This improves the look of typed columns of numbers. When points are selected, Equalize Sidebearings will center them between the origin and the width lines.

If you press the Alt key and choose "Equalize Sidebearings" the right sidebearing will become the same width as the left.

Metrics Menu: Clear Kerning

This option allows you to remove all <u>kerning pairs</u> from your font. You may wish to do this before choosing "Import Metrics" for a font. As a precautionary measure, a warning message allows you to Cancel this option before Fontographer deletes all the kerning pairs.

Window Menu: Open Outline Window

Select "Open Outline Window" to view or edit outlines.

The keyboard shortcut is Ctrl + H.

Window Menu: Open Bitmap Window

Open Bitmap Window will open an existing <u>bitmap</u>. If none exist, the dialog will ask if you want to create bitmaps.

The keyboard shortcut is Ctrl + J.

Window Menu: Open Metrics Window

Open Metrics Window will display the <u>Metrics Window</u> for the selected character(s).

The keyboard shortcut is Ctrl + K.

Window Menu: View Windows by

Determines whether to label open windows (Font, Outline, Bitmap, Metrics) with the Font Name, File Name, or both. This is also reflected in the listing at the bottom of the window.

Window Menu: Show Layers Palette

This item displays or hides the movable Layers palette when you select it.

Window Menu: Show Tool Palette

Shows or hides the movable Tool palette.

Window Menu: Cascade

This is the standard Windows function to cascade the MDI child windows.

Window Menu: Tile

This is the standard Windows function to tile the MDI child windows.

Window Menu: Arrange Icons

This is the standard Windows function to arrange any minimized MDI child window icons.

Window Menu: Close All

This is the standard Windows function to close all MDI child windows.

Hints Menu: Make Vertical Stem

To make a new vertical stem hint, select two points that define the stem and choose this item from the menu.

The keyboard shortcut is Shift + Ctrl + V.

Hints Menu: Make Horizontal Stem

To make a new horizontal stem hint select two points which define the stem and choose this item from the menu.

The keyboard shortcut is Shift + Ctrl + H.

Hints Menu: Make Vertical Serif

To make a hint for a vertical <u>serif</u> (a serif that attaches to a vertical stem) select four of the serif's points and choose this item from the Hints menu. Two of these hints must define the outline width of the serif.

The keyboard shortcut is Shift + Ctrl + Y.

Hints Menu: Make Horizontal Serif

To make a horizontal <u>serif</u> (a serif that attaches to a horizontal stem) choose four of the serif's points and select this item from the Hints menu. Two of these hints must define the stem, and the other two must define the outside width of the serif.

The keyboard shortcut is Shift + Ctrl + Z.

Hints Menu: Make Diagonal Hint

Select four of a diagonal stem's defining points and choose "Make Diagonal Hint" from the Hints menu. Diagonal <u>hints</u> are used only in Fontographer's internal <u>bitmap</u> generation and for <u>TrueType</u> fonts. <u>PostScript</u> fonts don't use diagonal hints.

The keyboard shortcut is Shift + Ctrl + D.

Hints Menu: Build Serif

When you choose "Build Serif" from the Hints menu with two hints selected, one from each side of the vertical stem at its upper end, a <u>serif</u> hint will replace those two hints. Or you can select four points and choose "Build Serif."

The keyboard shortcut is Shift + Ctrl + B.

Hints Menu: Split Serif

Select the two arrows that make up the <u>serif</u> hint and choose "Split Serif" to split it into two separate hints.

The keyboard shortcut is Shift + Ctrl + L.

Hints Menu: Flip Hint Direction

This item will change the direction of the current hint. Generally, hints should point inward but there are some exceptions. The direction of the hint tells you which way the outline will be adjusted when the <u>pixels</u> are fit to the grid during outline <u>rasterization</u>.

The keyboard shortcut is Shift + Ctrl + F.

Hints Menu: Hint Parameters...

See Also: <u>Expert Advice: Hint Parameters</u>

You can change the hint parameters for selected characters using the Hint Parameters dialog.
When you change hints for certain characters, you reset the default hints for just those characters.
Other characters in the font retain the prior default hint settings.

The keyboard shortcut is Shift + Ctrl + J.

Hints Menu: Vertical Alignment Zones...

See Also: Outline Window: Layers palette
                   Expert Advice: Font Hinting: Selection Info for hints: Vertical Alignment
Zones

The vertical alignment zones correspond with the I-beam indicators appearing along the left-hand side of the Outline Window when the Hints layer is visible. In the Vertical Alignment Zones dialog box, the numerical positions of the zones may be specified manually, or Fontographer can figure them out for you by use of the "Recalc" button. A much fuller discussion of blue zones and Vertical Alignment zones can be found in your manual.

When a zone indicator is clicked, the selected zone will appear with horizontal lines defining its parameters. You can alter the size of a zone by dragging on the upper or lower part of its indicator. Selected zone indicators appear hollow on each end.

Hints Menu: Autohint

Use Autohint to recalculate hints automatically when you edit character outlines. Once an outline has been edited, new hints will be calculated to match the new outline. Autohinting is turned on if you see a check mark beside it in the Hints menu. To turn it off select it from the menu and the check mark will disappear.

The keyboard shortcut is Shift + Ctrl + A.

Glossary of Terms: AFM

(Adobe Font Metrics)

A specification for storing (in a text file) font <u>metrics</u> information such as character widths, <u>kerning pairs</u>, and character bounding boxes.

Glossary of Terms: ANSI (American National Standards Institute)

An eight-bit designation for all the letters used in the Roman alphabet.

Glossary of Terms: Application

A computer program, designed to perform a specific function such as word processing or illustrating.

Glossary of Terms: Ascent

A font's maximum distance above the baseline.

Glossary of Terms: ASCII

(American Standard Code for Information Interchange)

A numbering scheme used for identifying printing characters.

Glossary of Terms: Adobe Type Manager (ATM)

The program that improves your screen font display by eliminating jagged edges on Type 1 fonts.

Glossary of Terms: Baseline

The line upon which the (capital) letters of a font rest.

Glossary of Terms: Basepoint

Fontographer's reference point from which distances are measured, and about which the special effect transformations may be performed. When you open a new character's Outline Window (or display a new character in an existing window), the basepoint is positioned at location 0,0 -- at the origin point of the em square.

Glossary of Terms: BCP

Bézier Control Point.   One of two points which guide a <u>Bézier curve</u>. These points can be moved, which changes the slope and the position of the curve through their on-line point.

Glossary of Terms: Bézier curve

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

Glossary of Terms: Bit

A contraction of BInary digiT, this word signifies the smallest unit of data a computer holds, and represents a two-way choice like 'on or off,' or 'black or white.'

Glossary of Terms: Bitmap

A grid of individual dots or <u>pixels</u> that make up the graphic display.   Each <u>pixel</u> (or picture element) corresponds to bits in the computer's memory.

Glossary of Terms: Bitmap font

A character set created by turning on or off individual dots in a rectangular grid of dots.

Glossary of Terms: Bitmap Window

The window used to view and edit character <u>bitmaps</u>.

Glossary of Terms: Blend

To merge two different font shapes to create a third.

Glossary of Terms: Blue Zones

Blue zones allow you to control overshoot in a Type 1 font. Only Adobe knows how they came up with the term "blue zones," but the concept is to specify important vertical alignment coordinates in a table. Choose <u>Vertical Alignment Zones...</u> from the Hints menu to bring up this dialog. Fontographer will read in all the blue values from <u>PostScript Type 1</u> fonts, and can also calculate blue values itself.

Glossary of Terms: Byte

A unit of data consisting of a small number of <u>bits</u>; usually a byte equals a series of eight bits.

Glossary of Terms: Caching

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

Glossary of Terms: Cap height

The height of uppercase letters.

Glossary of Terms: Cap line

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

Glossary of Terms: CFG

This is a text file that contains information about a font.   This file can be modified by the user to convince DOS that it can use your <u>PostScript Type 1</u> files, or to configure Adobe Font Foundry or Ventura/GEM.   See <u>INF.</u>

Glossary of Terms: Character

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

Glossary of Terms: Character label

The portion including a character's name located above the character slot in the <u>Font Window</u>.

Glossary of Terms: Character set

The characters, symbols, and numbers that make up one single font.

Glossary of Terms: Character slot (or cell)

The boxed area enclosing a font character in the Font Window.

Glossary of Terms: Clipboard

The place where the most recent cut or copied image is stored.

Glossary of Terms: Condensed

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

Glossary of Terms: Crosshair

The cross-like shape the pointer assumes when certain drawing tools from Fontographer's <u>tool palette</u> are selected.

Glossary of Terms: Demagnified move

A special capability of Fontographer which allows precise point adjustment without requiring a zoom-in. When you are using most tools, you can demagnify the movement by pressing the Ctrl key.

When you are moving existing points, toggle on Caps Lock and use the arrows for a demagnified move. This will move you 1/10 the amount specified in your Preferences.

Glossary of Terms: Descent

A font's maximum distance below the baseline.

Glossary of Terms: Descender line

The lowest line that a character's descender extends to, like the line beneath the lower-case 'j' and 'y.'

Glossary of Terms: Dialog box

A window that displays when the computer needs more information from the user.

Glossary of Terms: Discontiguous

Not adjacent to each other (as in discontiguous characters).

Glossary of Terms: Downloadable font

A font that can be temporarily stored in the printer's memory.

Glossary of Terms: Downloading

The process by which an <u>outline font</u> file is sent to a <u>PostScript</u> printer.

Glossary of Terms: Dots Per Inch (dpi)

The measure of <u>resolution</u> for a video monitor or printer.   High-resolution printers contain usually at least 1000 dpi.   Laser printers typically have a resolution of 300 dpi; monitors usually contain 72, 75, or 96 dpi.

Glossary of Terms: Em

A unit of measure, which is the square of a <u>face's</u> <u>point size</u>.   Traditionally, the width of a face's widest letter, the capital 'M.'   For instance, if the 'M' is 1,000 units wide, an em is equal to 1,000 <u>units</u>.

Glossary of Terms: Em space

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

Glossary of Terms: Em square

A square the size of a capital letter 'M.'   Also the height of the <u>ascent</u> added to the height of the <u>descent</u>.

This square defines the area where character outlines are drawn. In Fontographer, the em-square is measured in <u>em-units</u>, with a default of 1,000. This is appropriate for a PostScript font, while TrueType fonts generally use an em-square of 2,048 units.

Glossary of Terms: Em units

Fontographer measuring unit whose size is relative.   The <u>em square</u> can be visualized as being divided up by horizontal and vertical grid lines that result in box-like units of equal size.   Em units are relative to the size of the em square and are not measured in points.

Glossary of Terms: Encoding

This term refers to the set of characters used in the font.   Many of the characters are common to all encoding vectors, but some are used only in one or two.   Encodings supported by Fontographer are:

Adobe Expert
Adobe Standard
ISO Latin 1
Macintosh
Macintosh Expert
OEM
OS/2 UGL
Symbol
Unicode Glyph List
Windows 3.1
Windows 95

Glossary of Terms: Expanded

A <u>typeface</u> whose letters have been made wider without visually adding <u>weight</u>.

Glossary of Terms: Extended

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

Glossary of Terms: Face

Short for 'typeface'; the style of a font or set of character images.

Glossary of Terms: Family

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

Glossary of Terms: Fill

In Fontographer, the degree of black within characters.   (You can specify the degree of fill for Type 3 fonts.)

Glossary of Terms: Flex

A means of automatically suppressing small details, such as cupped <u>serifs</u>, that would print poorly at small sizes.   At large sizes or high <u>resolutions</u>, the details are automatically reinstated. (Applies only to <u>Type 1</u> fonts.)

Glossary of Terms: Flip

To change the appearance of a character or image by turning it horizontally or vertically on an imaginary vertical or horizontal axis, centering the movement around the click of the mouse (the mouse click locates the imaginary axis).

Glossary of Terms: FON

A bitmap font which can be used (if the application allows it) for the display instead of the TrueType font.   If the user has a bitmap printer (a dot-matrix printer, for instance), the TrueType file might not be used anyway, so the .FON file is used for both the display and for printing.

Glossary of Terms: FONT

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

Glossary of Terms: Font

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

Glossary of Terms: Font attributes

Characteristics which apply to the font as a whole (such as the <u>ascent</u>, <u>descent</u>, <u>leading</u>, etc.).

Glossary of Terms: Font Window

The graphic display of a <u>character set</u> in Fontographer from which individual character slots may be accessed.

Glossary of Terms: Fontographer

Macromedia Corporation's <u>outline font</u> editor designed to simplify the creation of high-quality fonts, logos, and other intricate <u>PostScript</u> artwork on both the Apple Macintosh and IBM-compatible computers running Microsoft Windows.

Glossary of Terms: Generate

To create a character or set of characters so that they can be viewed on the screen or printed. A
TrueType font requires only one outline file, while PostScript fonts need an outline file and a
secondary file.

Glossary of Terms: Hints

Information which enhance the appearance of characters printed or imaged at low <u>resolutions</u> (72-600 <u>dpi</u>).   <u>ATM</u> and <u>TrueType</u> can take advantage of hints to <u>render</u> more uniformly shaped <u>screen fonts</u> across the <u>character set</u>.

Glossary of Terms: Hints layer

The layer in the character's <u>Outline Window</u> that displays hint information.

Glossary of Terms: INF

This is a text file that contains information about a font.   This file can be modified by the user to convince DOS that it can use your PostScript Type 1 files, or to configure Adobe Font Foundry or Ventura/GEM.   See CFG.

Glossary of Terms: Italic

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

Glossary of Terms: Justified text

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

Glossary of Terms: Kerning

Moving pairs of letters either closer together or farther apart to adjust and improve the space between them.

Glossary of Terms: Kerning pairs

Combinations of character pairs where the space between them has been modified to improve readability.

Glossary of Terms: Keystroke

A single pressing of a key on the keyboard, or the combination of keys needed to access a character.

Glossary of Terms: Layers palette

A small floating window within the Outline Window that controls which of Fontographer's drawing layers are visible and/or active.

Glossary of Terms: Leading

The space, measured from <u>baseline</u> to baseline, added between successive rows of text in a document.

Glossary of Terms: Left justified

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

Glossary of Terms: Linotype 100/300

High-resolution typesetting systems.

Glossary of Terms: Megabyte

A measuring unit; 1,048,576 <u>bytes</u>; denoted by the letters "M" or "MB."

Glossary of Terms: Mean line

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

Glossary of Terms: MET

A Fontographer Metrics file.   This file contains information about spacing and kerning.

Glossary of Terms: Metrics

Font information such as <u>ascent</u>, <u>descent</u>, <u>leading</u>, character width, and <u>kerning</u>.

Glossary of Terms: Metrics Window

The window that displays character widths and <u>kerning pairs</u>.

Glossary of Terms: Monospaced type

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

Glossary of Terms: NFNT (New FoNT)

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

Glossary of Terms: Oblique

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

Glossary of Terms: Old Style

Characterized by variations in <u>stroke</u> width, bracketed <u>serifs</u>, high contrast, and a diagonal stroke.   Some popular Old Styles include Garamond, Janson, and Caslon.

Glossary of Terms: Outline font

A font created by drawing the outlines of each character. <u>PostScript</u> and <u>TrueType</u> fonts are outline fonts.

Glossary of Terms: Outline layer

The layer in the Outline Window used to edit a character's outline.

Glossary of Terms: Outline Window

The window that displays a character's points and paths, used for editing character outlines.

Glossary of Terms: Path

A sequence of points which may be connected, open, or closed.

Glossary of Terms: Permanent font

A font which resides in a PostScript printer until the power is turned off.

Glossary of Terms: PFB

PostScript Font, Binary.   This file contains the outline information for a PostScript Type 1 font. It goes with the PFM file in order for Adobe Type Manager (ATM) to install this Type 1 PostScript font.

Glossary of Terms: PFM

PostScript Font Metrics.   This file is the "other half" of the PostScript font, and goes with the PFB file in order for Adobe Type Manager (ATM) to install this Type 1 PostScript font.   This file contains information about things like spacing, kerning pairs, font family, etc.

Glossary of Terms: Pica

A unit of typographic measurement equal to 0.166 inches or 12 points.

Glossary of Terms: Pixel (PICture Element)

Square dots that represent the smallest units displayed on a computer screen.   Typical PC monitors display about 96 pixels per inch. Macintosh monitors typically display 72 pixels per inch. Characters and graphics are created by turning pixels on or off.

Glossary of Terms: Point

A unit of typographic measurement equal to approximately 1/72 inch (0.01383 inches).

Glossary of Terms: Point size

The height of the type body.   A standard type measurement system was originally developed by the Parisian type founder Piérre Fournier Le Jeune in 1737.   In the days of metal type, the point size was the total number of <u>points</u> in the height of metal type, including the <u>ascent</u> and <u>descent</u> of the letters, and the metal above and below the letters (i.e., built-in <u>leading</u>).

Glossary of Terms: Pop-up

A menu (aka pull-down) that appears in a <u>dialog box</u> or in a main menu when related information is selected.

Glossary of Terms: PostScript

Adobe System's page description language.   Programs like Macromedia FreeHand use PostScript to create complex pages, text, and graphics on-screen.   This language is then sent to the printer to produce high-quality printed text and graphics.

Glossary of Terms: Preview

A mode for editing or viewing a character which shows a filled outline.

Glossary of Terms: Printer font

A font that <u>permanently</u> resides in the printer, or the outline file (vs. the bitmap file) of a Macintosh PostScript font.

Glossary of Terms: Proportionately spaced type

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

Glossary of Terms: RAM

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

Glossary of Terms: Rasterization

The process of converting <u>outlines</u> into <u>bitmaps</u>.   The outlines are <u>scaled</u> to the desired size and <u>filled</u> by turning on <u>pixels</u> inside the outline. Both the monitor and the printer do this.

Glossary of Terms: Reference

An image that refers to an original character; a composite.

Glossary of Terms: Rendering

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

Glossary of Terms: Resolution

The number of dots in an image's screen display or printed output.   A monitor's resolution refers to the number of <u>pixels</u> per linear inch.   Printed resolution refers to <u>dots per linear inch.</u>

Glossary of Terms: Right justified

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

Glossary of Terms: Sans serif

A <u>typeface</u> with no counterstrokes at the end of each <u>stroke</u>. Arial is an example of a sans serif font.

Glossary of Terms: Scale

To change the size of a character or image by altering it <u>proportionally</u>.

Glossary of Terms: Scan

To digitally capture an image and save it in a format that can be manipulated or altered from within a computer <u>application;</u> the image can be autotraced in Fontographer, thus creating a character with editable outlines.

Glossary of Terms: Screen font

<u>Bitmap font</u> used for screen display.

Glossary of Terms: Script

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

Glossary of Terms: Scroll bar

The window bars containing arrows that allow the contents of the document to be moved so that other parts of it become visible.

Glossary of Terms: Serif

A <u>typeface</u> with a counterstroke at the end of each <u>stroke.</u>

Glossary of Terms: Set-width

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

Glossary of Terms: Sidebearings

The distance between the origin and the left edge of a character (left sidebearing) and the distance between the width line and the right edge of a character (right sidebearing).

Glossary of Terms: Skew

Creating an oblique image by transforming paths.

Glossary of Terms: Spacing

The amount of unused area that exists between character images. Character outlines usually have a small amount of white space on the left and right of the outline. Fontographer can <u>autospace</u> a font, or you can set the left and right <u>sidebearings</u> manually.

Glossary of Terms: Stroke

A line which may be expanded in width; or the *width* of the linear elements that compose characters.

Glossary of Terms: Style

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

Glossary of Terms: Swash capitals

Uppercase letters that have flourishes added to them.   Originally designed to go with <u>Italic typefaces</u>.

Glossary of Terms: Template layer

The layer of the Outline Window where copied, scanned, or imported background images and scans are pasted. You can also place points or paths here for reference. Data in the template layer will not become part of the font when you generate fonts.

Glossary of Terms: Textbox

Within a <u>dialog box</u>, any rectangular outline that includes text.

Glossary of Terms: TTF

A file in an <u>outline font</u> format (<u>TrueType</u> Font) that is used both in screen display and in printing.

Glossary of Terms: Tool palette

The collection of drawing tools in the Outline and Bitmap Windows.

Glossary of Terms: Tracking

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

Glossary of Terms: Transform

To alter an image by rotating, <u>flipping,</u> <u>scaling,</u> or <u>skewing.</u>

Glossary of Terms: Transient font

A font which stays in the printer memory only until the current document is finished printing.

Glossary of Terms: TrueType

An <u>outline font</u> format developed by Apple Computer (for use with System 7+) and adopted by Microsoft Corporation for use with Microsoft Windows 3.x operating systems. These fonts can be used for both the screen display and printing, thereby eliminating the need to have two font files for each <u>typeface</u>.

Glossary of Terms: Type 1 PostScript font

Genuine Adobe <u>PostScript</u> or Fontographer Type 1 fonts with <u>hints,</u> which provide high quality <u>resolution</u> at any size.

Glossary of Terms: Type 3 PostScript font

Also referred to as user-defined fonts, these are non-Adobe encrypted fonts.   They will not
<u>render</u> on-screen if you are using <u>ATM.</u>

Glossary of Terms: Typeface

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

Glossary of Terms: Vertical Alignment Zones

The vertical alignment zones correspond with the I-beam indicators appearing along the left-hand side of the Outline Window when the Hints layer is visible.

See Expert Advice: Font Hinting: Selection Info for hints: Vertical Alignment Zones

Glossary of Terms: Weight

The measurement of a stroke's width; or, in general, the heaviness of a character or <u>font.</u>
Common names for weights include demibold, light, and bold.   Some <u>font</u> <u>families</u> have several
weights, including ultra-bold and extra-light.

Glossary of Terms: x-height

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

Expert Advice

Expert Advice: Preferences

The Preferences dialog is like the dials on your television. It is where you control the way Fontographer looks and behaves... customizing your work environment. Many of the commands and tools behave in several different ways, and you can easily choose between the various items in Preferences. Items chosen in Preferences are remembered after you <u>save</u> a font, so the next time you run Fontographer, your customizations will automatically remain set.

Choose Preferences from the File menu. A dialog will appear, and like some of the others in Fontographer, a <u>pop-up</u> menu at the top of the dialog allows you to navigate through the various Preferences screens. Preferences are divided into four areas:

<u>General preferences</u>
<u>Editing behavior</u>
<u>Point display</u>
<u>Windows and dialogs</u>
<u>Defaults</u>
<u>Sounds</u>

Expert Advice: Preferences: Editing behavior

Distances
Behavior of Snap to Point
When a path is clicked on

Expert Advice: Preferences: Point display

The picture area at the top of this <u>dialog box</u> is the most important part of this screen. It lets you see the effect of each of the items in the dialog. Simply change the state of one of the checkboxes, and look at the picture to see how that will affect the outline editing environment.

Draw using larger points

Show BCP Lines

Hilite the first point in each path, when checked, draws a square around the first point in each path. This information is useful for doing Font <u>Blending</u>. Some people might object to the visual clutter of showing this, so we made it a preference that can be turned off.

Hilite the ends of unclosed paths is a way to tell at a glance whether a path is opened or closed. Sometimes it is not clear in the <u>Outline Window</u> whether a path is opened or closed. When this preference is on, big gray circles will appear around the two endpoints. You might want to turn this preference off when creating a font with intentionally open paths.

Hilite adjacent points that overlap, when checked, causes a double circle to appear on adjacent points (in the same path) which are on top of each other. This is a condition you almost never want, but which can occur by an inadvertent double-click of the mouse while laying down points. This preference should probably always remain on.

Show points while dragging paths, when checked, will display all the control points as you drag something around. Turning this off causes all the control points to disappear when you're editing. Some think this results in a cleaner image to view while performing an edit.

Draw border around paths when in Preview mode, when checked, causes a dashed border to appear around lines during edits in Preview mode. This lets you always see your lines even when dragging them over black areas, which is not an uncommon occurrence in <u>Preview</u> mode. This preference makes editing somewhat slower, however, and can distort the image of the character while you are editing it.

Show labels for is useful for Font <u>Blending</u>. This preference causes a small figure specifying point number to appear to the right of each control point, and <u>BCP</u>, if desired. This option can be used to determine <u>path</u> direction and path order. Having this on will slow editing performance a bit.

Show coordinates for is a way to have coordinates appear next to points, right in the <u>Outline Window</u>. It is probably most useful to show coordinates of only the selected points. That helps keep screen clutter down. Choosing to show coordinates will also slow editing.

Expert Advice: Preferences: Windows and dialogs

Window preferences
Dialog box preferences

Expert Advice: Preferences: Windows and dialogs: Window preferences

Automatically fit characters to windows, when checked, essentially performs an automatic Fit in Window command every time the <u>Outline Window</u> gets resized.

Move palettes with windows, when checked, locks the positions of the palettes with respect to the window frame. So if you like your <u>tool palette</u> to always be one inch in from the left of the Outline Window, and two inches down from the top, this preference will make sure that's where the palette stays, even when you move the window around on the screen, or switch from one Outline Window to another.

Expert Advice: Preferences: Windows and dialogs: Dialog box preferences

Remember dialog box positions, when checked, will cause Fontographer to open up each dialog box at the same place where that particular dialog box was last positioned. This is a good way to have different dialogs appear in different places, rather than always centered on the screen.

Remember dialog box values, when checked, will cause Fontographer to remember all the values of all the controls in each dialog box (even if you quit Fontographer and start it up later). This is a time-saver for those dialogs where you frequently have to enter the same values, or choose the same settings.

Expert Advice: Preferences: Defaults

This button is a fast way to throw away all of your Preference customizations and start again with Fontographer's out of the box defaults for everything.

Note: Pressing the Defaults button only sets the current Preference screen back to the default values.

Expert Advice: Preferences: Sounds

Play sounds when has a checkbox that allows you to turn sounds completely on or off. If the sounds are turned on, you can individually opt to play or not play sounds when the program is busy (off by default), when a long operation completes, snapping to points, or snapping to guides by using the checkboxes. For more information on sounds in Fontographer, refer to your documentation.

Expert Advice: Font Blending: The technical details

Fontographer's Font Blending, or "interpolation," allows you to take two extreme variants of a typeface, then automatically generate any number of intermediate versions within that range (or "extrapolate" to obtain versions outside of this range). You can edit those intermediate versions as desired, and quickly produce a family of weights, from just two master designs like Extra Light and Extra Bold.

The basic idea behind Font Blending is to create a few key designs, then let the computer do the work of producing a family of variants. Fontographer even gives you some powerful tools like "Change Weight" and "Remove Overlap" to help produce those key designs quickly, from a single base font.

For more information on the details of font blending, and help in understanding error messages, refer to your documentation.

Expert Advice: Font Blending: The blending process

Font Blend is very much like the Macromedia FreeHand blending of one object with another. The mathematical process for interpolation is very straightforward. Given two points Fontographer will calculate another point that lies some specified fraction of the way between those points.

If the points of the two master figures don't correspond (like not having the path direction correct, or the same ordering of points) the blended character will look like it's been in a blender.

Other aspects to interpolate make it a little difficult to use, but follow clearly from the mathematics. Consider the case where the outer figure is a square, but the inner figure is a triangle. If you uncheck "Insert points to force a match," you run out of points to connect before you are done with the square, so it is pretty hard to know what to do with the extra point.

Similarly, if the outer figure is two squares and the inner figure is a single rectangle, you don't have enough figures to connect; Fontographer would complain that the number of paths didn't match. A more subtle error occurs when the two figures have the same number of points, but the points don't correspond well.

To make characters interpolate more easily, Fontographer will reorder the points (and the paths) if you check the "Correct path directions" checkbox. If you correct path directions on all characters of each font you are trying to interpolate, Fontographer will almost always arrange the points so that they match up, and interpolating will give you the right result. On rare occasions, due to the way some characters might be drawn, you can confuse Fontographer's point ordering technique. If this occurs, you will know it from the heinous interpolate results (characters will appear imploded, or turned inside-out, like the proverbial font-in-a-blender). Those cases will require manual point reordering with the Point Information dialog. Select a point on the character, choose "Selection Info," then move to the next or previous point until you are at the desired starting point. Check the "Make first" button, and Fontographer will make that point the first point of the path.

Expert Advice: Font Hinting

Very few of our Fontographer customers need concern themselves with hinting. This statement is not meant to demean the other ninety-eight percent; it's simply that Fontographer's autohinting abilities are quite good, and should serve most cases well, so generally it isn't necessary to become an expert on <u>hints</u>.   Check your documentation for a very thorough explanation of hinting.

In brief, hinting is a process by which the computer makes type look good at small sizes and low <u>resolutions</u> (72 - 600 dots-per-inch, or "dpi").

The computer has to figure out how to choose which pixels to turn on or leave off to best achieve the desired image, whether on screen on in print.

Hinting is most important at low <u>resolutions</u>, because there are fewer pixels to define the character image. Since hinting can control at most one pixel's difference either way, the human eye can't usually perceive the difference hinting makes at high resolutions.

To sum up: A hint is a special instruction placed into a character's outline definition that causes the character's outline to be adjusted in a way that improves the character's perceived shape on screen or when printed.

For more information on hinting, refer to the documentation.

<u>Hinting controls</u>
<u>Autohint</u>
<u>Editing hints in the Outline Window</u>
<u>Removing hints</u>
<u>Making new hints</u>
<u>Selection Info for hints</u>
<u>Hint Parameters</u>
<u>What happens when Fontographer opens up PostScript Type 1 fonts</u>
<u>What happens when Fontographer opens up TrueType fonts</u>

Expert Advice: Font Hinting: Hinting controls

Fontographer lets you control <u>hints</u> from two places: the <u>Hints layer</u> of the <u>Outline Window</u>, and the <u>Hints menu</u>.

To see actual hints, open an Outline Window, and make the Hints layer visible by checking the box next to its name in the <u>layers palette</u>.

Expert Advice: Font Hinting: Autohint

Hinting in Fontographer is always in one of two modes: automatic, or manual. Automatic means that Fontographer will recalculate <u>hints</u> automatically when you edit character outlines. Manual means that you have actually edited some hints. Manual mode tells Fontographer not to replace your manually-edited hints with its own. Fontographer automatically switches to manual after you have edited hints.

Expert Advice: Font Hinting: Editing hints in the Outline Window

You must make the <u>Hints layer</u> active before you can edit <u>hints</u>. This is done by clicking on the Hints layer's name in the <u>layers palette</u>.

Hints can be selected with the mouse, just like you select points. Selected hints have a hollow looking arrowhead.

You can select more than one hint by dragging a marquee around a group of hints, or by using the standard Shift-select method.

Expert Advice: Font Hinting: Removing hints

Removing a <u>hint</u> is simple. Just hit the delete key, or choose Clear from the Edit menu. Be careful -- if you have just Alt+clicked on a hint to study the points that made it, you will remove both the hint and those points if you press delete! Be sure to deselect the points, by pressing Tab or clicking somewhere else, then select just that hint before deleting anything.

Expert Advice: Font Hinting: Making new hints

Creating new <u>hints</u> is done in the <u>Hints menu</u>. To make this process faster, we have made sure each command in the Hints menu has its own key-equivalent.

To make a new vertical stem hint:

1. Select two points which define the stem.

2. Choose "Make Vertical Stem" from the Hints menu.

To make a new horizontal stem hint:

1. Select two points which define the stem.

2. Choose "Make Horizontal Stem" from the Hints menu.

To make a new serif hint:

There are two ways to create a serif hint.   For the first, you need two hints. In the case of a <u>serif</u> on a vertical stem, you need one hint from the right side of the stem to the left side of the serif; the other should be from the left side of the stem to the right side of the serif. Hint direction doesn't matter. Select those two hints, then choose "Build Serif" from the Hints menu, and those two hints will be replaced by a serif hint.

The second method is to select four points -- two that define the stem width, and two that define the serif width -- and choose "Make Horizontal Serif" or "Make Vertical Serif."

To get two separate hints back again, select the double-headed serif hint, and choose "Split Serif" from the Hints menu.

Note: Serif hints are useful only in Fontographer's internal <u>bitmap</u> generation, and for <u>TrueType</u>. <u>PostScript</u> makes no use of serif hints.

To make a new diagonal hint:

1. Select four points which define the diagonal stem.

2. Choose "Make Diagonal Hint" from the Hints menu.

Note: Diagonal hints are used only for <u>TrueType</u>. <u>PostScript</u> makes no use of diagonal hints.

Expert Advice: Font Hinting: Selection Info for hints

Selecting a <u>hint</u> and then choosing "Selection Info" from the Element menu brings up a <u>dialog box</u> that is somewhat analogous to the Point Location dialog box. It lets you traverse through all hints in the character by hint type, and modify them.

<u>Hint type</u>
<u>Apply to</u>
<u>The buttons</u>
<u>Vertical Alignment Zones</u>

Expert Advice: Font Hinting: Selection Info for hints: Hint type

Hint type is a <u>pop-up</u> menu showing which kind of <u>hint</u> you are currently examining.

For more information, refer to the documentation.

Expert Advice: Font Hinting: Selection Info for hints: Apply to

These three checkboxes influence how the particular <u>hint</u> gets output. You can control, on a hint-by-hint basis, the font types which should receive the hint.

Expert Advice: Font Hinting: Selection Info for hints: The buttons

Flip will change the direction of the current <u>hint</u>. See the <u>"Hint Parameters" section</u> for more information on hint direction.

Expert Advice: Font Hinting: Selection Info for hints: Vertical Alignment Zones

In addition to stem width hints, Type 1 font hints also control the vertical positions of characters. Due to the way the human visual system works, curved letters like the "O" should be drawn taller than straight letters like an "E" if they are to appear to be the same height. The technical term for this is overshoot. However, at small sizes this overshoot should drop out and the letters should be the same height. The oversize is typically 4%, which means that if 4% of the em square is less than one pixel, there should be no overshoot. The way overshoot is controlled in a Type 1 font is through a blue zone. Only Adobe knows how they derived that term, but the concept is to specify important vertical alignment coordinates in a table.

You are encouraged to look at *Adobe's Type One Font Specification* which covers the ins and outs of PostScript hinting quite admirably. Be aware that although the nomenclature in this dialog is PostScript-centric these values are used by Fontographer for vertical alignment in TrueType as well.

For more information, refer to your documentation.

Expert Advice: Font Hinting: Hint Parameters

Choosing "Hint Parameters" from the Hints menu brings up this <u>dialog box</u>.

Hint Parameters, like most of the other dialog boxes, will affect different groups of characters, depending upon which window you are in when you bring it up. If you are in the <u>Outline Window</u>, it will only affect the <u>hints</u> of that character. If you bring it up from the <u>Font Window</u>, it will affect all the currently selected characters.

Note: The "Common stems" values are an exception -- they apply to the entire font.

<u>Type 1</u> fonts have a restriction that hints cannot overlap. There is a way to get around this, known as "hint replacement," but the technique is so nasty and inefficient that we have chosen not to implement it. Maybe someday the Type 1 font <u>renderer</u> will be fixed to handle overlapping hints. This mainly affects <u>serifs</u>, which require overlapping hints to control the serif width on each side of the stem. Without overlapping hints or hint replacement, serif widths are uncontrolled. Fortunately, this effect is not generally a serious problem in practice.

Fontographer applies heuristics to pick which hints to keep and which to ignore when sorting through overlapping hints. You can override this by changing the pop-ups in Hint order so you can control whether the most frequent hints get applied first or the largest or some other option.

Changing the default Hint Parameters:

In the Font Window, Hint Parameters works with the selected characters. For example, if you wanted to modify some of the parameters for an entire font, you would simply Select All prior to bringing up Hint Parameters.

Option-Hint Parameters, on the other hand, changes the *defaults* for new characters.

<u>Hints to include</u>
<u>Hint order</u>
<u>Hint direction</u>
<u>Common stems</u>

Expert Advice: Font Hinting: Hint Parameters: Hints to include

This is a way to suppress entire groups of <u>hints</u>. If you are developing <u>PostScript</u> fonts, for instance, you could decide that you never want to look at any <u>serif</u> hints, or diagonal hints, since those kinds of hints can't be applied to PostScript fonts. By unchecking "Serif hints" and "Diagonal hints," those hint types will never appear in the <u>Outline Window</u>.

Expert Advice: Font Hinting: Hint Parameters: Hint order

Changing hint ordering is useful for PostScript <u>Type 1</u> and <u>TrueType</u> fonts. Since PostScript doesn't handle overlapping <u>hints</u>, you sometimes need to specify which of the overlapping hints should get used -- the hints closest to the outline in the window are the ones that will get used in the case of overlap.

Expert Advice: Font Hinting: Hint Parameters: Hint direction

The hint direction tells which way the outline will be adjusted during gridfitting (aligning the outline to the <u>pixel</u> "grid" used by the screen and/or printer). Generally, you want all your <u>hints</u> to point inwards ("Toward center"), but that is not always the case; so we included these pop-ups as a way to customize this behavior easily for entire characters. (Individual hints can have their direction changed on a hint-by-hint basis, in the <u>Hints layer</u> of the <u>Outline Window</u>.) Hint direction makes a difference for <u>TrueType</u>, but if it affects <u>PostScript</u>, we haven't been able to detect it.

Expert Advice: Font Hinting: Hint Parameters: Common stems

Changing these fields is useful for PostScript Type 1 and TrueType fonts. These fields are calculated by examining all the stems in the font, and finding which widths are the most popular (i.e., occur the most). These values appear here, and get output in the PostScript font as StdHW, StdVW, StemSnapH, and StemSnapV. See the *Adobe Type One Font Format* book for more information on these fields.

To throw away your edits to these values, or to get new values after substantially editing the font, press the "Recalc" button.

Expert Advice: Font Hinting: What happens when Fontographer opens up PostScript Type 1 fonts

When a PostScript <u>Type 1</u> font is read, Fontographer always keeps the <u>hints</u> that were defined as part of the font. Each character is marked as having user-edited hints. This lets you <u>generate</u> a Type 1 font and still leave the original hints unchanged. Before generating a <u>TrueType</u> font, however, you should select all characters and choose "Autohint" from the Hints menu, so <u>serif</u> and diagonal hints can be found. This will remove the original stem hints and find new ones.

Expert Advice: Font Hinting: What happens when Fontographer opens up TrueType fonts

Fontographer completely hints <u>TrueType</u> fonts when it opens them.

Windows

Tool Palette Keyboard Alternatives

To avoid having to constantly move the pointer back to the tool palette you can use the number keys on your keyboard to switch between tools. When the lock icon is in the locked position, pressing the following keys will access the corresponding tool:

Outline tools

`   Pointer
1   Rectangle
2   Multigon
3   Oval
4   Straight line
5   Calligraphy pen
6   Pen
7   Knife
8   Curve point
9   Corner point
0   Tangent point

Bitmap tools

1   Straight line
2   Hand
3   Pencil
4   Eraser
5   Marquee
6   Move
7   Measuring tool
8   Magnifier

In the ***Font Window*** the left and right arrow keys will move you to the previous character or to the next character. The up and down arrows select the character in the row above or below the present character.

In the ***Outline Window*** the arrow keys will move selected points by ten em units in the direction of the arrows. If the default setting in Preferences is changed, then this number will reflect that change.

Toggle on Caps Lock and use the arrow to move selected points by one em unit in the direction of the arrow. When the default setting in Preferences changes this number will be 1/10th the distance of the new setting.

Caps Lock + Shift and the arrows move the selected points by 100 em units in the direction of the arrows, or 10 times the Preferences setting.

In the ***Metrics Window*** use the left-right arrow keys to move to the next or previous character in the screen display when a character is selected.

Keyboard Shortcuts

Keyboard Shortcuts: Functions

Function	Key Command
Align Points	Ctrl + E
Align Points to Grid	Ctrl + Shift + Q
Auto Curvature	Ctrl + Shift + U
Auto Trace...	Ctrl + Shift + T
Autohint	Ctrl + Shift + A
Build Serif	Ctrl + Shift + B
Change Weight...	Ctrl + Shift + W
Clean Up Paths...	Ctrl + Shift + C
Close	Ctrl + W
Copy	Ctrl + C
Copy Reference	Ctrl + G
Corner Point	Ctrl + 9
Correct Path Direction	Ctrl + Shift + K
Curve Points	Ctrl + 8
Cut	Ctrl + X
Duplicate	Ctrl + D
Exit	Ctrl + Q
Expand Stroke...	Ctrl + Shift + E
Flip Hint Direction	Ctrl + Shift + F
Hint Parameters...	Ctrl + Shift + J
Make Diagonal Hint	Ctrl + Shift + D
Make Horizontal Serif	Ctrl + Shift + Z
Make Horizontal Stem	Ctrl + Shift + H
Make Vertical Serif	Ctrl + Shift + Y
Make Vertical Stem	Ctrl + Shift + V
Merge Points	Ctrl + M
New Font...	Ctrl + N
Next Character	Ctrl +]
Next Kerning Pair	Ctrl + '
Next Point	Ctrl + /
Next Point Size	Ctrl + =
Open Bitmap	Ctrl + J
Window... Open Font...	Ctrl + O
Open Metrics Window	Ctrl + K
Open Outline Window	Ctrl + H
Paste	Ctrl + V
Preferences...	Ctrl + Shift + P
Preview	Ctrl + L
Previous Character	Ctrl + [
Previous Kerning Pair	Ctrl + ;
Previous Point	Ctrl + ,
Previous Point Size	Ctrl + -

Print...	Ctrl + P
Recalc Bitmaps	Ctrl + Shift + R
Redo	Ctrl + Y
Remove Overlap	Ctrl + Shift + O
Reset Basepoint	Ctrl + ~
Retract BCPs	Ctrl + R
Save	Ctrl + S
Select All	Ctrl + A
Selection Info...	Ctrl + I
Set Basepoint...	Ctrl + `
Set Metrics...	Ctrl + Shift + M
Set Width...	Ctrl + Shift + S
Show Points	Ctrl + U
Snap to Grid	Ctrl + Shift + I
Snap to Guides	Ctrl + Shift + G
Snap to Points	Ctrl + Shift + N
Split Serif	Ctrl + Shift + L
Tangent Point	Ctrl + 0 (zero)
Transform...	Ctrl + \
Undo	Ctrl + Z

Keyboard Shortcuts: Constraining the Tools

Tool	Type of Constraint	Constraining Key Command
Rectangle	Draw a square.	Shift
	Draw a rectangle from its center.	Alt
	Draw a square from its center.	Shift + Alt
Multigon	Constrain a polygon to a 45° angle.	Shift
Oval/Circle	Draw a circle.	Shift
	Draw an oval from its center.	Alt
	Draw a circle from its center.	Shift + Alt
Line	Constrain a line to a 45° angle.	Shift
	Draw a line from its center.	Alt
	Draw a line from its center and constrain it to a 45° angle.	Shift + Alt
Pen	Move the point and handles together.	Ctrl
Knife	Remove a segment.	Alt
Measuring	Click and drag to measure between two points.	
<u>Magnifying</u>	Click and drag to select an area, and it magnifies to fill the window.	
Transform, Rotate	Constrain the rotation to 45° angles.	Shift
Transform, Mirror	Unconstrain the reflection.	Shift
Transform, Scale	Click and drag at a 45° angle to scale uniformly.	Shift
	Click and drag horizontally to scale along horizontal axis.	Shift
	Click and drag vertically to scale along vertical axis.	Shift
Transform, Skew	Click and drag to skew uniformly.	Shift
	Click and drag horizontally to skew along horizontal axis.	Shift
	Click and drag vertically to skew	

along vertical axis.   Shift

Keyboard Shortcuts: Outline Window

Function	Key Command
Deselect entire selection.	Tab
Constrain movement of selected points to horizontal, vertical, or 45° angles.	Shift
Change cursor to pointer tool temporarily.	Ctrl
Zoom in.	Ctrl + space
Zoom out.	Ctrl + Alt + space
Toggle lock on and off.	Return or Enter

Keyboard Shortcuts: Bitmap Window

Function	Key Command
Zoom in.	space + Ctrl
Zoom out.	space + Ctrl + Alt
Toggle the guidelines on and off (when locked).	G
Toggle the outline on and off (when locked).	O
Toggle lock on and off.	Return or Enter
Deselect entire selection.	Tab

Keyboard Shortcuts: Metrics Window

Function	Key Command
Drag a guide/bar.	Alt
Change cursor to hand tool.	space
Move numeric info to be directly underneath character.	Alt
Zoom in.	Ctrl + space
Zoom out.	Ctrl + Alt + space
Demagnify movement of selection.	Ctrl

Windows: Font Window

The Font Window shows you all the characters in your font at 24 points.

View by menu
The View by menu allows you to change the label over each character slot.

Character "View by" menu
The Character "View by" item shows the character symbol that corresponds to each slot in the Font Window.   When you see a double asterisk (**) above a character it means that you cannot access the character from the keyboard using the currently selected encoding. Scroll the Window down so that you can see the international characters, and you will see numbers in the label like "0174." Characters in the extended range are accessed by pressing the Alt key and typing the decimal number *from the numeric keypad*, preceded by a zero. For instance, to produce the ®, hold down the Alt key and type "0174." Similarly, to reach the ¶, hold down the Alt key and type "0187."

You can change encoding in the Font Info dialog in the Element menu.

Keystroke "View by" menu
The Keystroke "View by" item corresponds to the keyboard sequence used to enter the character. When you see a double-asterisk (**) above a character it means that you cannot access the character from the keyboard using the currently selected encoding. You can change encoding in the Font Info dialog in the Element menu.

Decimal "View by" menu
The Decimal "View by" item shows the decimal value of a character's current slot.

Hexadecimal "View by" menu
The Hexadecimal "View by" item shows the hexadecimal (base 16) locations of the characters. For example "A" displays as "$41."

Octal "View by" menu
The Octal "View by" item shows the octal (base 8) locations of the characters. For example "A" displays as "o101."

Width "View by" menu
The Width "View by" item shows the character's width in em square units. Em square units are not related to point size or any other physical measurement. In the Width mode when you see a double-asterisk (**) above a character it means that the slot is undefined.

Left sidebearing "View by" menu
The left sidebearing "View by" mode shows the measurement of the character's left sidebearing -- the distance between the origin line and the left edge of the character's outline -- in em units. A negative number indicates that some part of the character's outline extends beyond the left sidebearing. A positive number means that space exists between the sidebearing and the left edge

of the outline. In the left sidebearing mode, when you see a double asterisk (**) above a character, it means that the character is undefined. You can type the contents you place in the slot.

Right sidebearing "View by" menu
The Right sidebearing "View by" mode shows the measurement of the character's right sidebearing (the distance between the width line and the right edge of the character's outline) in em units. A negative number indicates that some part of the character's outline extends beyond the right sidebearing. A positive number means that space exists between the sidebearing and the right edge of the outline. In the right sidebearing mode, when you see a double asterisk (**) above a character, it means that the character is undefined. You can type the contents you place in the slot.

Fill tint "View by" menu
The Fill Tint "View by" item shows the percentage of black that will fill the character when you output a PostScript or <u>Type 3</u> font. (We recommend using 100%.) In the Fill Tint mode, when you see a double-asterisk (**) above a character it means that the character is unfilled or that it is undefined using currently selected <u>encoding</u>. You can type the contents you place in the slot.

Stroke tint "View by" menu
The Stroke Tint "View by" item shows the percentage of black that fills <u>strokes</u> when you output a font. (We recommend using 100%.) In the Stroke Tint mode, when you see a double-asterisk (**) above a character it means that the character is not stroked or that it is undefined. You can type the contents you place in the slot.

Stroke weight (Weight) "View by" menu
The Weight "View by" item shows the character's <u>stroke</u> <u>weight</u> in <u>em square</u> units when you output a PostScript or Type 3 font. In the Weight mode, when you see a double-asterisk (**) above a character it means that the character slot is empty, includes no weight in em square units, or is undefined. You can type the contents you place in the slot.

Windows: Outline Window

See Also: <u>Keyboard Shortcuts</u>

To open a character's Outline Window:

You can open the Outline Window in one of four ways:

-- Double-click on the selected character.
            OR
-- Select the character and type Ctrl+H.
            OR
-- Select the character and press the Return or Enter key.
            OR
-- Select the character and choose "Open Outline Window" from the Windows menu.

The Outline Window is where most editing will take place. At the top of the window you see the title bar which contains the font's character code and the name of the font.

The Outline Window shows you the outlines (or <u>strokes</u>) of the character named in the title bar and allows you to edit them. At the top of the window (in the Info bar) you will see position indicators. The numbers below them are horizontal and vertical distances measured in <u>em units</u>. These distances let you know the distance from the cursor or selected points to certain objects in the window.

You may click on the I-beam icon in the lower left of the character window (next to the lock icon) to display or hide the Info bar.

The black lock icon at the bottom of the window indicates that you cannot change from the character in the Outline window to some other character by merely typing the <u>keystroke(s)</u> of that character. If you click on the lock, it will become white and open, and you will then be able to change characters simply by typing the keystroke(s) of the new character. You can also toggle the lock icon on and off by pressing the Return or Enter key.

<u>Tool palette</u>
<u>Layers palette</u>

Changing and hiding layers
You can turn layers on and off by clicking on the checkbox next to their name in the <u>Layers palette</u>. When the lock icon is in the locked position, Fontographer also allows you to change layers simply by typing "O, T, G, or H."

When the lock icon is in the locked position, you can also hide the Outline, Template, Guides, and <u>Hints layers</u> from view.

-- Hold down the Alt key and type "O" to hide the <u>Outline layer</u> from view. Repeat to bring the

Outline layer back into view.

-- Repeat this procedure to hide the Template, Guides, and Hints layers, substituting "T, G, and H" for the "O."

Magnification
You can change the magnification of the Outline Window with the Magnification menu item in the View menu or you can use the magnifying tool or keyboard shortcuts.

To enlarge an image:

1. Select the magnifying tool from the tool palette or press the Ctrl key and the Spacebar until the magnifying tool appears.

2. Click on the part of the window that you want centered within the magnified screen area.

> OR

Select the points or path to magnify with the pointer and choose a magnification menu item.

> OR

Use the magnifying tool to drag a box around the area to magnify.

To reduce an image:

1. Select the magnifying tool or press the Ctrl key and the Space bar until the magnifying tool appears.

2. Then hold down the Alt key and click on the part of the window that you want to reduce.

> OR

Select the points or path for reduction with the pointer and choose a magnification menu item.

> OR

Select the magnifying tool and drag a box around the area to reduce while pressing the Alt key.

Switching characters

If you need to change the character in the Outline Window to the next sequential character, you can use the View menu's Next Character item, or Ctrl +]

To change to the previous sequential character use the View menu's Previous Character item, or Ctrl + [. When the lock icon is off you can change characters simply by typing the character.

Windows: Outline Window: Tool palette

See Also: <u>Constraining Tools</u>

Pointer tool
The pointer tool is for selecting and dragging objects. To change to the pointer tool when another tool is being used type the accent grave key (`). To temporarily use the pointer tool when another tool is selected press the Ctrl key and release to deselect the pointer tool.

Hand tool
The hand tool lets you scroll through the display area -- useful for large characters. To temporarily change from the other tools to the hand tool hold down the Spacebar.

Rectangle tool
The rectangle tool is for drawing rectangles, squares, and rectangles with rounded corners. To change the radius of curve at the corners of the square or rectangle, double-click on the icon and make changes from the dialog. To constrain the shape to a square, hold down the Shift key while dragging. Press the Alt key and drag with mouse to change the shape of the rectangle to a square, using the point clicked on as the center of the figure. To access the rectangle tool from another tool type the number "1."

Multigon tool
The multigon tool draws starbursts and regular polygons. Double-click on the tool to bring up a dialog that controls the shape. From the <u>dialog box</u> specify polygon or star shape, number of sides and shape of points. To access from another tool type the number "2."

Oval tool
The oval tool creates ovals and circles. Hold down the Alt key to draw the oval outwards from the center. To constrain the oval to a circle, hold down the Shift key and drag. When the character edit window is locked, you can choose this tool by typing the number "3."

Straight line tool
The straight line tool draws straight lines without requiring you to place points manually. To constrain the line to the vertical, horizontal, and 45 degree angles, hold down the Shift key while dragging with the mouse. To access from another tool type the number "4." Press the Alt key and click the mouse to draw a straight line that centers on the point where you click, and extends outward as you drag.
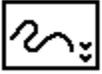
Freehand tool
The freehand tool can be used to draw <u>paths</u> freestyle or as either a variable-weight or calligraphic pen tool. Holding the Alt key down will affect the behavior of the <u>BCPs</u>.

Calligraphic pen tool
The calligraphic pen tool draws calligraphic lines. You can set the pen width and angle from the dialog accessed by double-clicking on the icon. To use the calligraphy pen when the selection pointer or other tools are selected type the number "5."

Pressure sensitive tool
From the dialog (accessed by double-clicking the icon) you can choose the freehand tool by selecting the pressure-sensitive option. Choose the maximum and minimum widths of <u>strokes</u> as well as the shapes of caps and joins.

The Tight curve fit option lets you increase how much the outline conforms to the curved lines you draw. (The other option is normal fit, the default option, ordinarily used if you ignore this choice.) Choose "Draw dotted line" to display your lines as a series of hash marks; this option displays the strokes faster than does the normal option.

Note: Your strokes will not appear as a dotted line or as hash marks when printed.

Pen tool
The pen tool is for drawing outlines or strokes without having to change tools. You can choose this tool by typing the number "6."

Knife tool

Use the knife tool to cut <u>paths</u> or points. Access the knife when using another tool by typing the number "7."
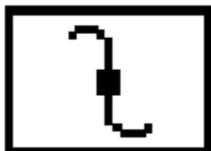
Curve tool

The curve tool creates a point with curves on both sides. The angle of the curve can be adjusted from either of the incoming or outgoing <u>BCPs</u>. The radius of the curve can be adjusted individually by the BCP on the appropriate side of the point. You can choose this tool by typing the number "8."

Corner tool

The corner tool connects two straight lines or two curves at a cusp. Both the incoming and outgoing paths can be adjusted with their respectively independent BCPs. You can choose this tool by typing the number "9."

Tangent tool

The tangent tool is used to connect straight lines to curves for smooth joins. You can choose this tool by typing the number "0."

Rotate tool

The rotate tool lets you rotate a character or its parts, centering the rotation around the place where the mouse clicks. Double-click on the tool to access the Transform dialog and specify degrees of rotation.

Click the mouse and drag to display a radius used to rotate the image on-screen. (The rotation

occurs around the point where the mouse clicked on the screen.) If you press the Shift key and click with the mouse and drag, you will constrain the movement of the radius to horizontal, vertical, and 45 degree angles.

Flip tool
The flip tool functions similarly to the rotate tool by allowing you to flip a figure horizontally or vertically, centering the movement around the click of the mouse. Double-click on the tool to get the Transform dialog where you can choose either direction, horizontal or vertical.

Click the mouse and press the Shift key to display a radius used to rotate the image on-screen. (The rotation occurs around the point where the mouse clicked on the screen.) If you click with the mouse and drag, you will constrain the movement of the radius to horizontal, vertical, and 45 degree angles.

Note: The rotate and flip tools are similar in function. The difference between the two tools is that the flip tool constrains rotation to 45 degree increments unless the Shift key is held down, while the rotate tool requires the Shift key be depressed to constrain movement.

Scale tool
The scale tool allows you to <u>scale</u> a figure horizontally and vertically, centering around the click of the mouse. Double-click on the tool to access the Transform dialog where you can enter horizontal and/or vertical degrees for scaling.

To scale horizontally and vertically click the mouse and drag in either direction. To constrain scaling to horizontal, 45 degree, or vertical axes, just press the Shift key and drag to those locations.

Skew tool
The skew tool lets you <u>skew</u> figures both horizontally and vertically, centering the movement around the click of the mouse. Double-click on the tool to access the Transform dialog where you can enter horizontal and/or vertical degrees to skew the selection.

To skew horizontally and vertically click the mouse and drag in either direction. To constrain skewing to horizontal, 45 degree, or vertical axes, just press the Shift key and drag in any of those directions.

Measuring tool

The measuring tool measures distances in em units in the Outline Window.

Press the Alt key and click the mouse to draw a measuring line that centers on the point where you click, and extends outward as you drag. If you press Shift, and click with the mouse and drag,- you will constrain the movement of the measuring line to horizontal, vertical, and 45 degree angles.

Magnifying tool

Use the magnifying tool to enlarge or reduce the image in the window. With the tool selected, click on the place you want to center in the window, to enlarge the image (or type Ctrl+Space-click or Ctrl+Space click to temporarily invoke the tool). Press Alt and click with this tool to reduce the

When the magnifying tool is selected you can drag a box around the area you wish to magnify, and Fontographer will zoom into the area enclosed by the box. You can also use this method to zoom out by holding down the Alt key.

Arc tool

The arc tool allows you to create one fourth of an oval and arc-like shapes. It appears in the tool palette as one of the following icons:

The arc tool icon (and the objects you draw with it) will change according to the options you select in the Arc Tool Setup dialog. If you double-click on the arc tool icon the Arc Tool Setup dialog will appear.

By default the arc tool creates closed paths. Two examples of closed path arcs are and .

When the Create Open Arc option is checked in the Arc Tool Setup dialog the arc tool will create open paths. Two examples of open path arcs are and .

By clicking down with the mouse on the check box or the words next to the check box you can toggle the check box on and off.

By default the arc tool creates convex arcs. These arcs will resemble quarter ovals like , , , and . With the Create Concave Arc option checked in the Arc Tool Setup dialog. the arc tool will create Concave Arcs like and .
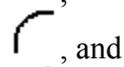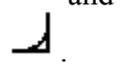
Keyboard shortcuts for the Arc Tool

You can create different types of arcs without changing the Arc Options. The Arc Options determine the default type of arc that is created. However, modifier keys can be applied to change the type of arc being created. The arc tool will create the type of arc that is opposite of the default type of arc when you press the modifier keys. These modifier keys should be pressed while dragging the mouse to create a new arc.

-- Hold down the Ctrl key while creating a new arc to toggle between creating an open and a closed arc.

-- With Create Open Arc turned on, hold down the Ctrl key to create a closed arc.

-- Hold down the Alt key to flip the arc both horizontally and vertically.

-- The caps lock key toggles between creating a convex and a concave arc.

Note: Unlike the Ctrl and Alt keys, the caps lock key does not need to be pressed while dragging the mouse.

These modifier keys are also mentioned in the Keyboard short-cuts section of the Arc Tool Setup dialog for the convenience of the user.

Use the Shift key to create quarter circles. Since the Shift key constrains the movement of the second point of the arc to 45 degree angles it makes it easy to create a quarter circle. By moving the mouse at approximately a 45 degree angle (up and right, up and left, down and left, down and right) while holding the Shift key down, the arc tool will create a quarter circle.

Moving the mouse along 90 degree angles while holding the Shift key down, makes a straight line appear. This is probably not what you want.

The Alt key is the demagnified move modifier key. By holding the Alt key down when you

create a new arc, you can increase/decrease the size of the arc in one em-unit increments if Preferences is set to 10, otherwise it will change the size by 1/10 the Preferences setting.

Windows: Outline Window: Layers palette

The Layers palette displays in the Outline window. It shows which layer is currently active and which ones are visible. The highlighted layer shows which one is currently in use. When a check appears in the checkbox beside a layer, that layer is displayed in the current window. You can click the checkboxes of the layers on or off to show or hide them.

Outline layer
The Outline layer is where you will create and edit your outline character.

Template layer
The Template layer is where you will place images you want to use as a template for drawing. Any points you draw here will not be used for <u>PostScript</u> creation, but will show gray in the Outline and Guides layers. You can also paste <u>scanned</u> images into the Template layer for hand-tracing or autotracing. Each character in the font has its own Template layer.

Guides layer
The Guides layer is where you place guidelines and outlines to help you draw a character. Dragging from the origin line creates horizontal or vertical guidelines that will show up behind every character in the font Like guidelines, any outlines drawn here will not be used for PostScript creation. They will show up gray behind the characters.

Hints layer
The Hints layer displays hints that define features like vertical stems, horizontal stems, <u>serifs</u>, and cap-heights. Here you can adjust the hinting of individual characters and edit character outlines.

Windows: Bitmap Window

See Also: Keyboard Shortcuts

To open a Bitmap Window:

There are three ways to open a window for a bitmap character:

-- Press and hold down the Alt key while you double-click on the desired character.
                 OR
-- Select the character and type Ctrl+J.
                 OR
-- Select the character and choose "Open Bitmap Window" from the Windows menu.

The Bitmap Window shows how characters look as they appear on the screen. However. bitmaps aren't normally used in printing your type or graphics so time spent editing them will have no impact on the printed results. Therefore tweaking and adjusting bitmaps may not be for you.

The Bitmap Window allows you to edit the various sizes of bitmap fonts that Fontographer creates. You can use a pencil or other tools to turn the dots in the bitmap on or off. The characters outline is visible in the background to help you place the dots properly. Each of the dots in this window is equivalent to one point (pixel) on the computer screen. At the top left area of the screen you will see the current size preview of the bitmap.

At the bottom of the window is a lock icon. When the lock is closed you will not be able to change characters by merely typing the keystroke(s) for the new character. If you click on the lock it will open and you will be able to change characters by simply typing the keystroke(s) of the new character.

Press Enter or Return to change the status of the lock.

Actually, advances in programming related to type production have almost made editing bitmaps unnecessary. If you use ATM (Adobe Type Manager -- a program that improves the looks of screen fonts) or TrueType fonts (Apple and Microsoft's outline font format that uses outlines for screen display) you don't need to spend time perfecting the look of the screen font.

Tool palette

Ascent, Descent, Offset, Width
In the Info bar at the top of the window, you find the character's ascent, descent, offset and width numbers. The ascent is the maximum distance above the baseline measured in points. The descent is the maximum distance below the baseline measured in points. The offset is the number of points between the origin line and the leftmost point in the character. The width indicator shows us the width of the character in points.

(Recalc) From outline

When you press this button the bitmap will be recalculated in order to correspond with the outline version of the character. This is useful when you change a character's outlines after having created bitmaps. To recalculate more than one character's bitmap at a time use the "Recalc Bitmaps" command in the Element menu.

Magnification
You can change the magnification of this window with the Magnification items in the View menu or you can use keyboard shortcuts. To enlarge, hold down the Ctrl key (or the Ctrl key and Spacebar) and click anywhere in the window. To reduce the magnification, hold down Alt, Ctrl and Spacebar and click anywhere in the window. You can also use the magnifying tool.

Scrolling
The Spacebar switches the current tool to a hand tool that will allow you to scroll the character back and forth in the window.

Switching characters
If you need to change the character in the Bitmap Window to the next sequential character you can use the View menu's Next Character item.

To change to the previous sequential character use the View menu's Previous Character item. When the lock icon is off you can change characters simply by typing in the character.

Changing point sizes
To select the Next or Previous bitmap point size choose one of these menu items from the View menu, or use the keyboard shortcuts.

Note: If only one size exists these items will appear gray. To generate more point sizes, go to the Bitmap Info item in the Element menu.

Windows: Bitmap Window: Tool palette

See Also: <u>Constraining Tools</u>

Straight line tool
The straight line tool draws straight lines without requiring you to place points manually. To constrain the line to the vertical, horizontal, and 45 degree angles, hold down the Shift key while dragging with the mouse. To access from another tool type the number "1."
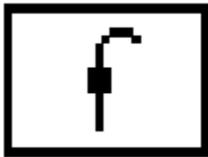
Hand tool
The hand tool lets you move the display area -- useful for large characters. To change from the other tools to the hand tool hold down the Spacebar. You can use the tool as long as the Spacebar is held down. Or type the number "2" to select the hand.

Pencil tool
The pencil tool allows you to change the bits of a <u>bitmap</u> character in the Bitmap Window. To access the pencil from another tool type the number "3."

Eraser tool
The eraser tool will remove <u>pixels</u> when you drag it across them. Double-click on the eraser tool icon to remove all pixels in the character bitmap. To use the eraser when another tool is selected type the number "4."
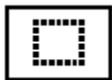
Marquee tool
Use the marquee tool to outline an area and display it with a grid. The gridded section can be moved around the window by dragging it. To place the moved bits and deselect the marquee click outside of the movable section, or use the Tab key. To use the marquee when another tool is selected type the number "5."

Move tool

Use the move tool to move the bitmap away from its outline in any direction. Click on the character bitmap and drag to a new location. Access the move tool by typing the number "6" when another tool is selected.
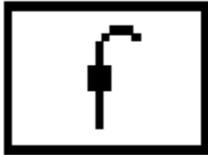
Measuring tool

The measuring tool measures distances in pixels. Press the Shift key and drag the mouse in any direction to use a deconstrained measuring line. Press the Alt key and click to extend a measuring line that centers on the clicked point, and that rotates constraining to 45 degree, horizontal and vertical angles. Select the measuring tool when using another tool by typing the number "7."

Note: You may have noticed that the Shift key has an opposite effect on the measuring tool here in the Bitmap Window when compared to the way it works in the Outline Window mentioned earlier. We found that users in the Bitmap Window most frequently want constrained measuring due to the organized way that the bits align while the more freeform nature of outline editing requires that the measuring tool default to deconstrained measurement in the Outline layer.

Magnifying tool

Use the magnifying tool to enlarge or reduce the image in the window. With the tool selected, click on the place you want to center in the window (to enlarge the image) or press Alt and click with this tool (to reduce the image). To temporarily invoke this tool press Ctrl+Space-click to enlarge and Alt+Ctrl+Space-click to reduce. Select the magnifier when another tool is selected by typing the number "8."

Windows: Metrics Window

To open the Metrics Window:

There are three ways to open the Metrics Window:

-- Select a character (in the Font Window) and type Ctrl+K.
                  OR
-- Select a character in the Font Window and then choose "Open Metrics Window" from the
Windows menu.
                  OR
-- Type Ctrl+K to access the Metrics Window directly from the Outline Window.

The Metrics Window displays the metrics for characters you type into the textbox at the top left.
Here you can edit widths and kerning pairs for those characters. Underneath the characters is a
table that displays the numerical values in em units that apply to each character and its kerned
pair. Changes to the kerning and width show up in the table below the screen area.

Width is the distance in em units between the origin point and the width line. Kern is the number
of em units (negative) the character on the right overlaps or is pushed away from the character on
the left (positive). You can change kerning distance, left and right sidebearings, and width by
changing the numbers in the table, or by using the kerning and sidebearing lines for each
character.

Keyboard commands

Kerning and sidebearing lines
To use the kerning or sidebearing lines to adjust amount of space that a character has on its left
and right edges. Click on any character. and drag its sidebearings or kerning line to the desired
location to affect the amount of empty space that will exist between that character and those on
either side of it.

Kerning
To display the characters in the textbox with or without kerning information click on the Kerning
checkbox. When an "x" appears in the checkbox the kerning information is displayed on screen.
Using this option allows you to see how your font will appear in a program that does not support
kerning.

File
This button allows you to load text from a file into the textbox and display area. Click on the up
and down arrows beside the file button to scroll vertically within the file.

Windows: Metrics Window: Keyboard commands

The keys to using the Metrics Window are:

-- The Tab and right arrow keys allow you to move between slots from left to right.

-- The Shift-Tab and left arrow keys allow you to move between slots from right to left.

-- Typing a character when a slot is highlighted changes the character in that slot.

Key commands to change spacing and/or kerning:

Alt+H
Toggles sidebearings and kerning lines on or off when you click on the screen area (not inside the textbox).

Alt+G
Toggles guides on or off when you click on the screen area (not within the textbox).

Alt+left arrow-right arrow
When a character cell is selected changes the selected character to the following character in the font sequence.

Alt+left arrow-right arrow
When a numeric cell is selected adjusts the values up or down by one unit. Holding down the Shift key simultaneously adjusts by ten units at a time.

Ctrl + '
Views the Next kerning pair.

Ctrl + ;
Shows the Previous kerning pair.

Ctrl +]
Shows the Next character.

Ctrl + [
Shows the Previous character.

Expert Advice: Preferences: General Preferences

Expert Advice: Preferences: General Preferences: Options for Undo

This is where you can set the number of undo's and redo's. Unlike other programs, Fontographer has to remember undo's for each separate character. While that allows you to go back to any character you have edited, open up that character's <u>outline window</u>, and have all your undo's ready and waiting, it can use up a lot of memory.

The other two items in the undo area have to do with memory considerations. When Fontographer runs out of memory, it can throw away undo's to free up some memory. For instance, if you have been running Fontographer for a couple of hours, edited fifty characters with an average of ten edits per character, you have 50 x 10 = 500 undo's floating around. If you let Fontographer get rid of these when it runs out of memory, you can sometimes reclaim a fair amount of memory. In addition to the "Throw away undo's when out of memory" item, there is an "Ask before throwing away undo's" checkbox. This is useful so you will know when Fontographer is running low on memory; an alert box will appear, asking if Fontographer should throw away the undo's.

Expert Advice: Preferences: General Preferences: Using the Keyboard to choose a character

This area has to do with typing in things from the <u>Font Window</u>. When you are looking at the Font Window and you type a key from the keyboard, Fontographer has to choose the cell in the Font Window that corresponds to that key click. However, there are a couple of choices to be made to decide which character should be highlighted. Basically, Fontographer can either choose the character which corresponds to the font's <u>encoding</u> vector, or it can choose the character which corresponds to the encoding vector of the computer currently running Fontographer. On the off-chance that that explanation wasn't entirely clear, let's run through an example.

Suppose you're running Fontographer on the PC, you have opened an Adobe Standard encoded font, and this preference item has been set to "Use the font's encoding to choose the character." What is going to happen now can be a little confusing if you're not used to thinking in this way:. Fontographer will not use the Windows 95 character encoding -- it is instead going to use the character ordering of the Adobe Standard encoding. For most of the alphabet and "normal" characters, you won't notice a difference. If you choose "a" from the keyboard, "a" is going to get highlighted in the Font Window.

However, if you press "Alt+0241," the "æ" character will get highlighted instead of the expected "ñ" character which Windows users expect to get when they key in "Alt+0241."

This is because "Alt+0241" in Windows encoding means character number 241, but in the Adobe Standard encoding, the character "ñ" is numerically located at 230. To get "ñ" when you type "Alt+0241," change the preference so Fontographer will use the machine-specific encoding vector.

Expert Advice: Preferences: General Preferences: When reading in an outline font

Before reading this section, read the section called <u>"Using the keyboard to choose a character."</u>
These two preferences are very closely related. Essentially, this preference item allows you to
either see the font in its original <u>encoding</u> (which will typically be Windows 3.1 for TrueTypes,
and Adobe Standard encoding for most <u>PostScript</u> fonts), or to see the font in the native encoding
of your particular computer. We recommend, unless you have some particular need to see the
font's native encoding, that you have Fontographer re-encode each character to your computer's
encoding vector so the <u>Font Window</u> will place each character consistently in the same position.

Expert Advice: Preferences: Editing behavior: Distances

The ***Cursor-key distance*** field lets Fontographer move points around by specified amounts when you press the arrow keys. For instance, if you set this value to be 2.7, every time you hit an arrow key the selected points will move exactly 2.7 units in the direction of the arrow. In addition, if you hold down the Shift key and an arrow key, the amount moved is ten times the normal value. Toggle the CapsLock key to move by one-tenth the normal amount.

The ***Grid spacing*** field is for setting up an invisible grid that the Snap To Grid function snaps to. The Align Points to Grid command also uses this as the grid. One popular use for gridding is to have all your coordinates be on integral-number coordinates. Simply set a grid spacing of one <u>em unit</u>, make sure Snap To Grid is on, and then as you drag points around, they will always fall on em unit boundaries (i.e., coordinates will always be 120,66 rather than things like 120.223,65.97).

Snap-to distance specifies how close something has to be before a snap will occur. For instance, if Snap To Point is on, this preference states how close in <u>pixels</u> the object you're dragging has to be to another point before it automatically snaps to that point. If you are having trouble moving points around because they seem to be snapping to everything too often, try using a lower value in this field.

Expert Advice: Preferences: Editing behavior: Behavior of Snap to Point

Snap to Point is a mode which makes aligning points much easier. If Snap to Point is on, points you drag around with the mouse will "snap" to other points as you drag by them, as if they were magnets. This is how snap-to-point works when you have set the Only snap to the closest point mode. Automatically align with all points, on the other hand, makes objects snap to "point extensions" rather than just the points. In other words, let's say you have a point at $x = 50$, $y = 100$. In the Only snap to the closest point mode, you will snap to that point only when the point you are dragging comes close to 50,100. In the Automatically align with all points mode, however, the point you are dragging will snap anywhere along a vertical line at $x = 50$, or anywhere along a horizontal line at $y = 100$.

Expert Advice: Preferences: Editing behavior: When a path is clicked on

This influences what happens when you click and drag the mouse on an actual <u>path</u> (i.e., the line between the control points), as opposed to clicking on one of the points. What you would expect to happen in this case depends upon your prior drawing program experience.

Do nothing is what you would choose if you had used previous versions of Fontographer. This is a good setting if you want to prevent yourself from modifying a path by clicking on it accidentally.

Select and drag the path is a Macromedia FreeHand-style operation. If you want to move an entire path, this preference allows you to do so merely by clicking on it with the mouse and dragging it around. (This can also be accomplished, as in previous versions of Fontographer, by double-clicking on one of the points, and dragging the path around by a point.)

Select and edit the path is more of an Adobe Illustrator-style edit. This allows you to edit the path without having to click on control points or <u>BCPs</u>; simply click directly on the path, and drag. This is especially fun to do in <u>Preview</u> mode, with the points turned off. This is a very exciting path editing feature, but it makes it easier to accidentally modify paths.

Note: This mode is meant to be used for minor path changes -- large-scale movements may become unwieldy and difficult to predict.

Constraining Tools

When you want to constrain the action of a tool to 45° increments use the tool normally while holding down the Shift key. Each tool's constraint mode may operate with slightly different results.

Here is a list of how various tools react while constrained:
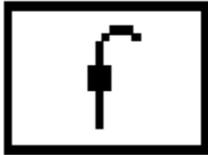
To use the rectangle tool to draw a square, press the Shift key and drag the mouse.

To use the oval tool to draw a circle, hold down the Shift key and drag the mouse.

Any path or object moved with the pointer tool can be constrained. Select the object or path and begin dragging it; then press and hold the Shift key to constrain the movement of the selected object.
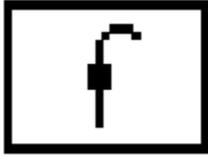
Use the Shift key with corner, curve, or tangent point tools while dragging points to constrain their movement. In addition, if the Shift key is held down when placing new points with these tools, the new point is automatically aligned (or "constrained to") the previous point.

Each of the underline transformation tools can be constrained by pressing the Shift key after clicking on the selected point of reference.

Note: The flip tool is automatically constrained, because you will most often want to flip paths and objects in exact 90° increments. Hold down the Shift key to **deconstrain** the flip tool.

If you use the Shift key with the measuring tool, you can constrain its measurements.

Note: In the Bitmap Window, the measuring tool is automatically constrained, because you will usually want to measure pixels straight across, or up and down. So, when you're in the Bitmap Window, hold down the Shift key to **deconstrain** the measuring tool.

Creating font files for the Macintosh

Until Fontographer 4.1, the difference in structure between Macintosh and Windows fonts prevented the successful production of fonts for the Macintosh on a PC.

Macintosh font files consist of resources stored in the resource fork of a file. And PostScript Type 3 fonts have data in both the resource and data forks of a file. Windows files contain only the data fork. To further complicate things, Macintosh files must also be given a file type and creator to allow them to show up on the desktop with the proper icons, and to tell the Macintosh operating system what type of files they are.

Enter MMPC2MAC, (Macromedia PC to Macintosh Font Conversion Utility), provided with the Windows version of Fontographer 4.1. Once loaded on your Macintosh, it sits quietly in a folder or on your desktop. Select the file you produced using Fontographer 4.1 for Windows to create a Macintosh font and drag it onto MMPC2MAC.   MMPC2MAC will take the font apart, and rebuild it as a Macintosh font file, ready for use -- with the proper file type and creator codes. You'll find the two files that make up MMPC2MAC on your Fontographer 4.1 CD. MMPC2MAC.TXT is a SimpleText Readme file. The actual font conversion application is MMPC2MAC.MAC.

Drag both files into a new folder on your hard drive. You can keep the MMPC2MAC.MAC application on your desktop, but keeping it in a folder on your hard drive is probably safer.

You must be running System 7 or a later version of the Macintosh operating system to be able to use MMPC2MAC.

Refer to your documentation for more information on using MMPC2MAC.