

Brushes

Overview

The brush dialogue allows you to create your own brushes by shape, size and pattern. Each brush created will load into the micro brush palette located below the color patch of foreground and background colors. Up to six brushes can be created and loaded into the brush micro palette.

To enter the brush dialogue, double click on the paintbrush in the toolbox. You can also enter the brush dialogue by double clicking on one of the six brushes in the micro brush palette. The brush created will be stored in the current selected brush in the micro brush palette. The selected brush is indicated by the frame around it in the brush palette. The selected brush is also stated at the top of the brush dialogue when you enter the dialogue box.

To make sure you do not replace a brush that you wish to keep, it is a good idea to enter the brush dialogue by double clicking on the brush palette instead of on the brush in the dialogue. This makes you aware of which position you will be loading the new brush and help you avoid replacing a brush unintentionally.

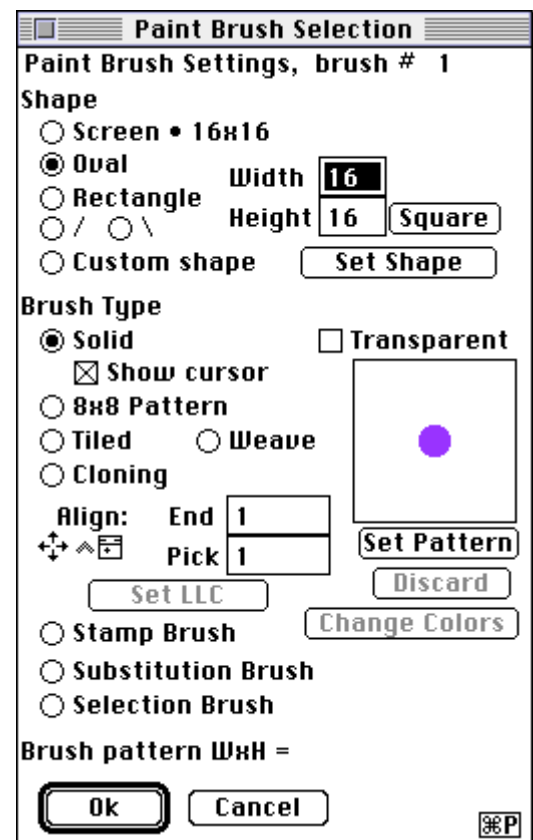
In defining a new brush you can choose the shape and the type. The shapes include the following: screen 16x16, oval, square, calligraphic- left and right orientation, and custom shape. The brush pattern size is displayed in the bottom of the dialogue box, just above the OK button.

Modifier keys for use with the brushes:

The control key constrains the brush to a line. Click drag to set the length and direction of the line. Release to form the line as defined by the click and drag.

To bucket a brush pattern into an area, with the brush pattern to be used being the current active brush, choose the bucket tool from the toolbox and hold the control key while using the bucket to click within the area to be filled with the pattern.

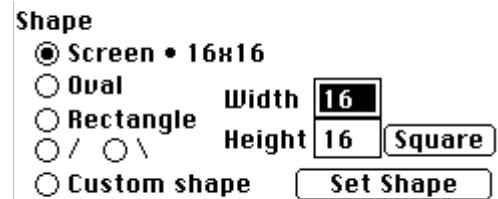
While using the brushes, holding the option key will load the color beneath the cursor into the foreground color. Holding the spacebar activates the scroll tool to navigate around the image. Spacebar and command activate the zoom-in tool. Spacebar with command and option together activate the zoom-out tool.



Shape

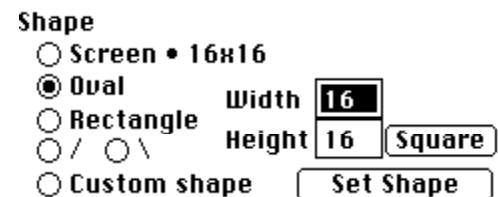
Screen 16x16

This brush size is determined by the zoom level. When zoomed all the way in this brush will be 1 pixel by 1 pixel in size. When zoomed all the way out this brush will cover 32 by 32 pixels. This brush is useful when you are working on large areas. You can begin zoomed all the way out and as you need a smaller brush for finer control zoom in one or more steps. The more you zoom in the smaller the brush will become. You can therefore reduce or increase the size of the brush without reentering the brush dialogue to redefine the size of the brush. (The eraser tool works on the same principle.) To choose this brush click on the radio button located to the left of the word Screen.



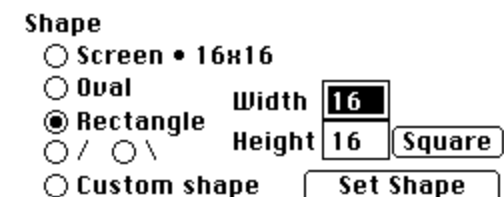
Oval

The oval brush is oval in shape. You determine the size of the brush by entering numerically the size of the brush in the upper right of the dialogue. The width and height do not have to be the same size. An oblong brush can be created, larger in height or in width. If you want the same size in height and width, enter the size for width and then click on the button labeled Square and the number will be entered in the height box. To choose this brush click on the radio button located to the left of the word Oval.



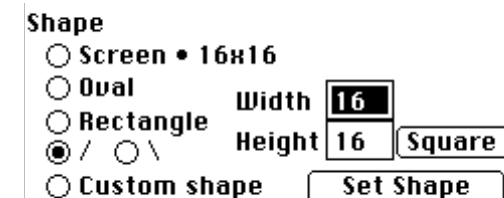
Rectangle

The rectangle brush is rectangular in shape. You determine the size of the brush by entering numerically the size of the brush in the upper right of the dialogue. The width and height do not have to be the same size. A non-square brush can be created, larger in height or in width. If you want the same size in height and width, enter the size for width and then click on the button labeled Square and the number will be entered in the height box. To choose this brush click on the radio button located to the left of the word Rectangle.



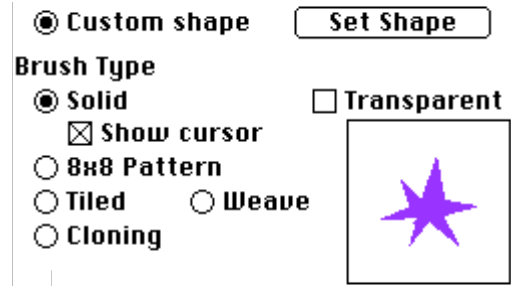
Calligraphy

The calligraphy brush is diagonal in shape. You determine the size of the brush by entering numerically the size of the brush in the upper right of the dialogue. The width and height do not have to be the same size. The brush can be larger in height or in width. If you want the same size in height and width, enter the size for width and then click on the button labeled Square and the number will be entered in the height box. The calligraphy brush on the left leans from left to right, the calligraphy brush on the right leans from right to left. The calligraphy brush creates a line like a calligraphy nib on a pen. To choose either of these brushes click on the radio button located to the left of the calligraphy shape you wish to use.



Custom shape

The custom shape brush can be any shape. You determine the shape of the brush by making a selection before entering the brush dialogue. The selection must be less than or equal to 64 x 64 in size. To choose this brush click on the radio button located to the left of Custom shape. Now click on Set Shape to load your selection into the brush preview below.

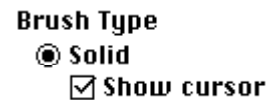


The various shape brushes can be used in combination with any of the brush types.

Brush Type

Solid

The solid brush paints with the current foreground color. The foreground color can be changed at any time during the use of the brush without having to reenter the brush dialogue. If you want to see only the brush point and not the brush tool as you work then click in the box next to show cursor to turn the paintbrush cursor off. To choose this brush click on the radio button located to the left of the word Solid.



8 x 8 Pattern

Brush Type

- ☐ Solid
☒ Show cursor
☒ 8x8 Pattern

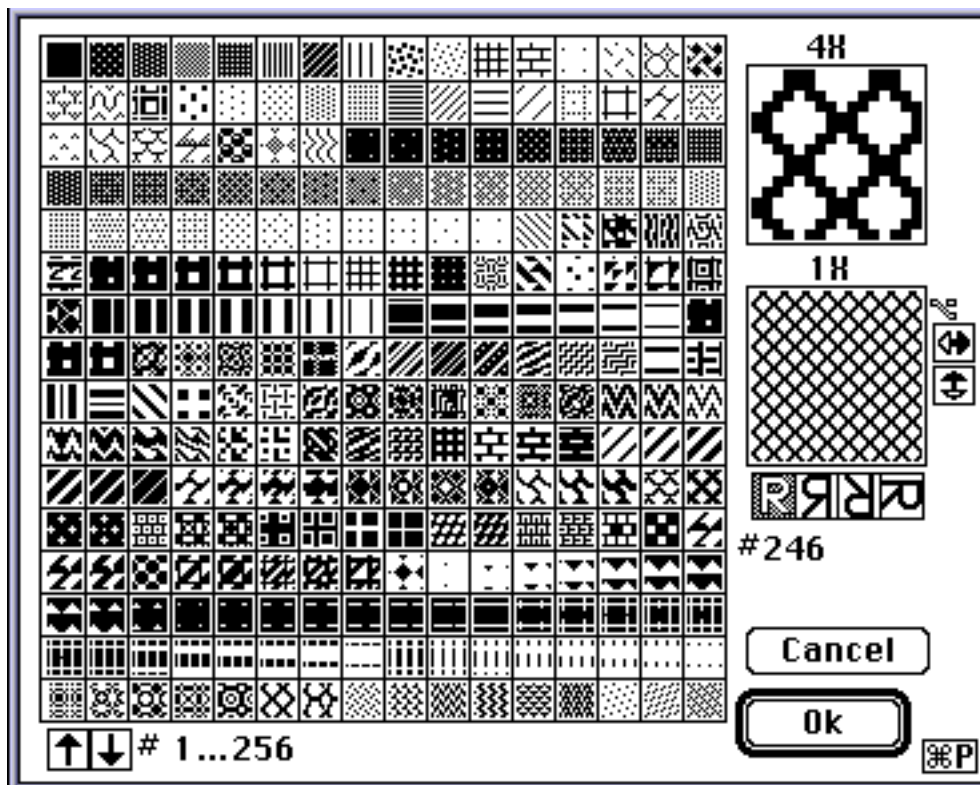
Choosing the 8 x 8 pattern brush will bring up a window containing 311 patterns. To choose a pattern click on it. It will load into the boxes at the right. The box at the top shows it at 4 x enlargement, the box below shows it at it's true size and in repeat. The arrows to the right of the view boxes

allow you to shift the end and pick on which the pattern starts.

Clicking on the top arrows will shift the pattern to the right.

Clicking on the bottom arrows will shift the pattern up.

Hold down your option key as you click and the top arrow will shift to the left and the bottom arrows will shift the pattern down.

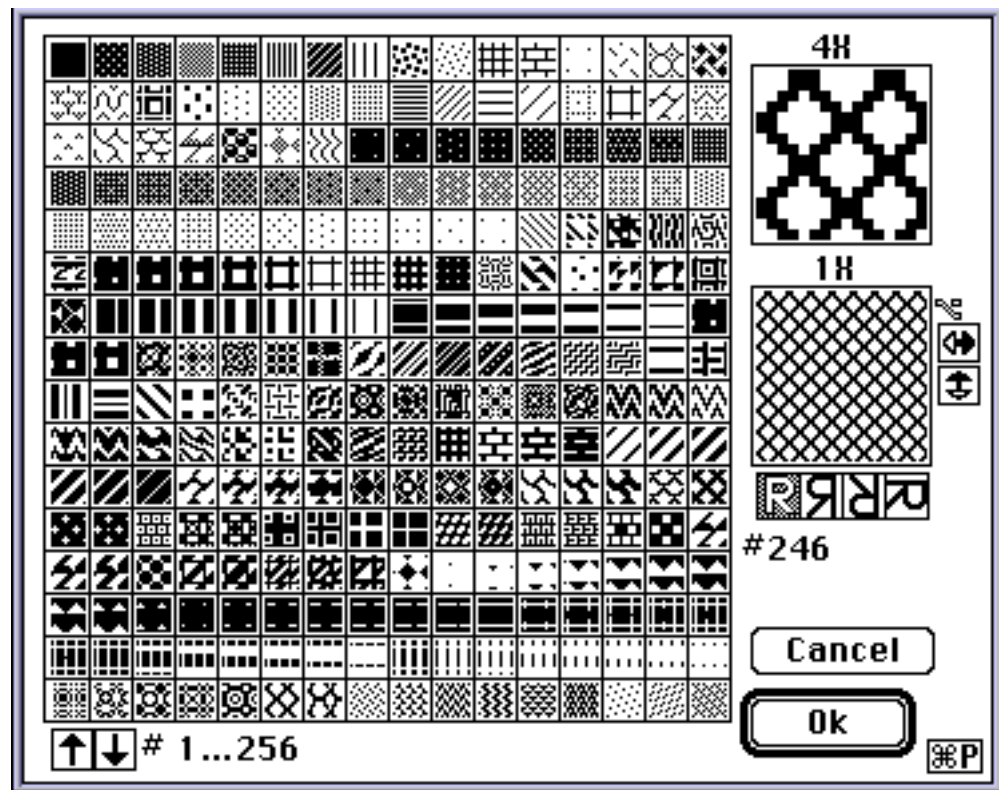


8 x 8 Pattern continued

The pattern can also be reversed (black becomes white and white becomes black), flipped vertically, horizontally or rotated 90 degrees by clicking on the inverted R, mirrored R, upside down R or the rotated R below the 1 x view box.

The pattern number chosen is shown below the R buttons. Any change made using the R buttons is shown below the pattern number. A bullet indicates the pattern has been reversed. If the pattern has been flipped vertically, an E will indicate the end mirror change. If the pattern has been flipped horizontally, an H will indicate the pick mirror change. If the pattern has been rotated, an R will indicate the rotated change.

To view patterns 257-311 click on the up arrow in the lower left of the dialogue box. To return to the first 256 click on the down arrow. As you move your cursor over the patterns the pattern number your cursor is currently over will be shown at the bottom center of the dialogue. When you are satisfied with the 8 x 8 pattern you have chosen with any changes you have made to it, click on OK to load it into your brush type. Click Cancel to exit without loading an 8 x 8 pattern.



The 8 x 8 pattern you selected will be shown in your current foreground and background colors. The black will go to the foreground color and the white will go to the background color. The foreground and background colors can be changed at any time during use of the 8 x 8 pattern brush without reentering the brush dialogue. To turn the background color to clear, click on the box next to Transparent located above the preview window. This allows you to paint over an area of your design and have the previously painted pixels remain unchanged under the background area of your pattern brush. This can create a lacy transparency. Changing the foreground color during use can also create beautiful effects.

Tiled

The tiled brush allows you to create a pattern that will roll out in a grid repeat. Make a rectangular selection of what you want to have as your tiled pattern before entering the brush dialogue. Click on the radio button located to the left of the word Tiled. This will load your rectangular selection into the brush preview box and show it in repeat (if there is enough room to display more than one unit of repeat). There is no limit to the size of your tiled brush.

This brush has a variety of uses beyond the obvious.

This brush can be used to make the color rotation for box assignments where the user will use the function Color Strip to box assignments. To use the brush for a box sequence, create one full sequence of the boxes. Select the sequence with a selection tool. Enter the brush dialogue, choose tiled brush. If you created the sequence from a different area of the design than the end and pick that will be the color strip, make sure that it is correctly aligned. For example, if you created it starting on an even number and you will be applying it starting on an odd number pick, it will not be in the proper sequence when you use it.

Shape

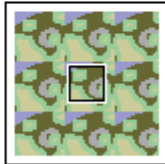
☐ Screen • 16x16
☐ Oval
☒ Rectangle Width Height Square
☐ / ☐ \ ☐ Custom shape

Brush Type

☐ Solid ☐ Transparent
☒ Show cursor
☐ 8x8 Pattern
☒ Tiled ☐ Weave
☐ Cloning

Align: End
Pick

☐ Stamp Brush



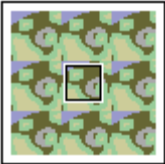
To insure that the pattern is properly aligned, enter the appropriate end and pick in the boxes located

below and to the right of the word align. You can also enter the correct start point by holding down the control key while you click on the right end and pick in your image. In addition, you can adjust the alignment by using the arrow keys on your keyboard. Alignment can also be defined by the lower left corner of the rectangular selection present when the brush dialogue was entered by clicking on the button Set LLC. This loads the lower left corner of the rectangular selection into the end and pick coordinates, replacing the default setting of End 1, Pick 1.

Brush Type

☐ Solid ☐ Transparent
☒ Show cursor
☐ 8x8 Pattern
☒ Tiled ☐ Weave
☐ Cloning

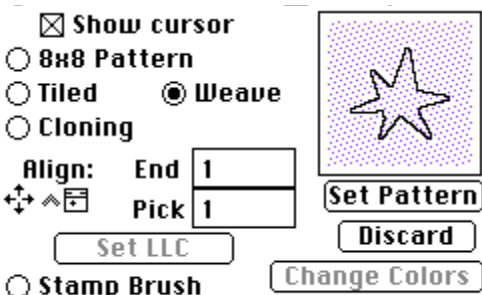
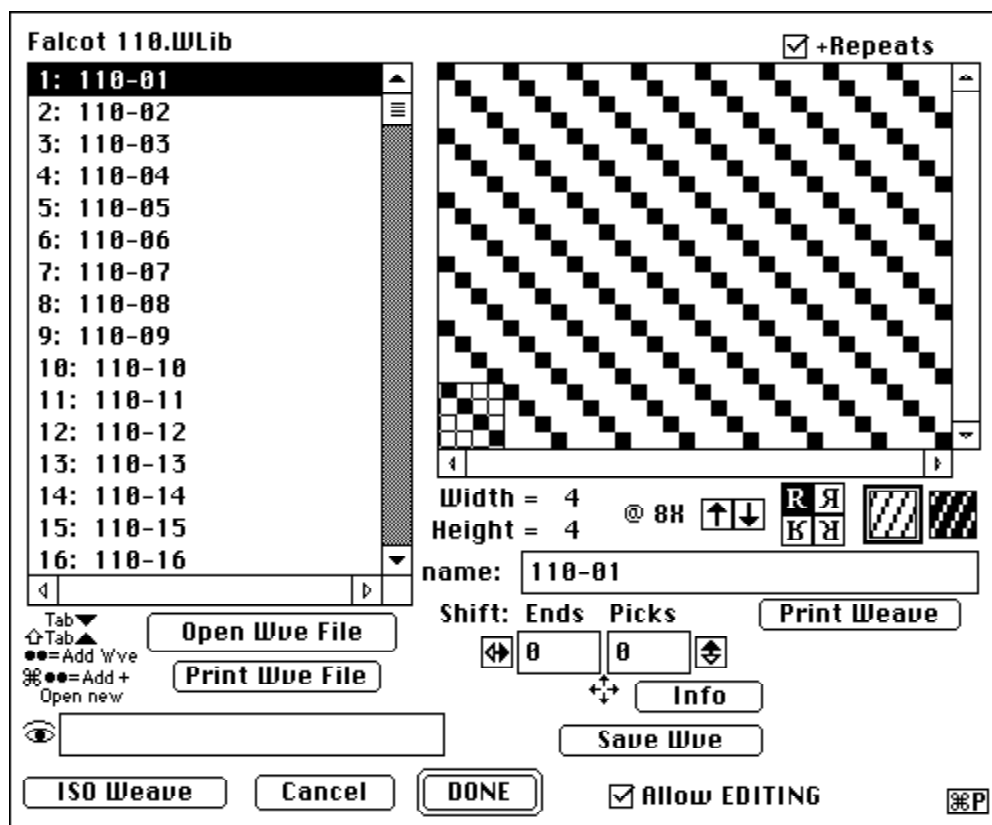
Align: End
Pick



Another helpful use of the tiled brush is as an undo for a specific area from a previously saved version of the design. To use the brush this way, open the version that has the area that you want to revert to, select all in the edit menu, by using command A or by double clicking on the upper right rectangle tool. Now enter the brush dialogue box and choose tiled. Choose the size and shape of brush you want to use with the tiled pattern. (Remember if you want to use a custom shape you must exit the brush dialogue, make the selection shape and reenter the dialogue to load it in conjunction with the tiled brush.) Click OK to exit the dialogue, close the window of the previous version and paint the area that you want to rescue. Note this will have perfect alignment only if the previous window is of the same size as the current window.

Weave

Choosing the weave brush will bring up a similar dialogue to the one you see in assigning weaves, load weaves. This brush allows you to load or create weaves (by using the ISO Weave function) and use the weave pattern in a brush. (Please see the write up on assigning and creating weaves for details on weave creation.)

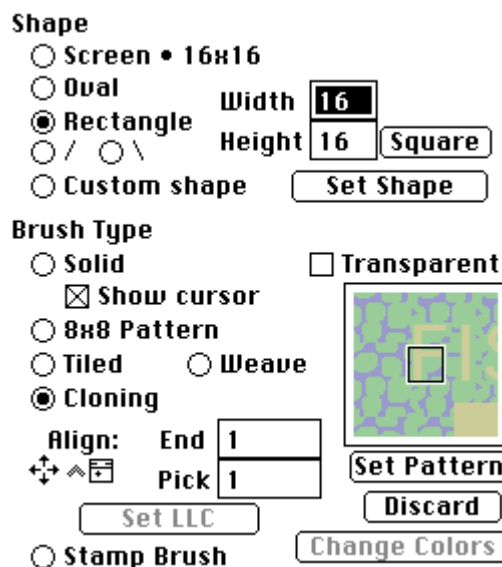


To insure that the weave pattern is properly aligned enter the appropriate end and pick in the boxes located below and to the right of the word Align. You can also enter the correct start point by holding down the control key while you click on the right end and pick in your image. You can also adjust the alignment by using the arrow keys on your keyboard.

Cloning

The cloning brush is similar to the tiled brush in that it allows you to roll out an area repeatedly. However, it has some important and unique characteristics. It is not a fixed source as is the tiled brush. Once the tiled brush is defined it cannot be changed without redefining the source. The cloning brush is taken from the image too but it works from the image itself, rather than from a fixed selection, and continually updates itself as the image is changed.

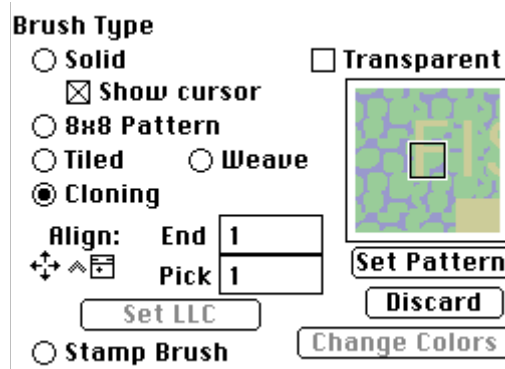
To use the cloning brush enter the brush dialogue, choose cloning and click OK. Now in your image hold down the command and control keys and click on the position in your image that you want to define as the source.



Cloning brush continued

The source is what will be the start area, lower left corner, of what will be the pattern as you paint. To define where you want that lower left corner to begin being painted, hold down the command key and click in your image. In essence what you are doing is aligning the two lower left corners to each other: the lower left corner of your source to the lower left corner of your destination.

Another way to define the source alignment of the cloning brush is to enter the appropriate end and pick in the boxes located below and to the right of the word Align. You can also enter the correct start point by holding down the control key while you click on the desired end and pick in your image. The alignment can also be adjusted by using the arrow keys on your keyboard.



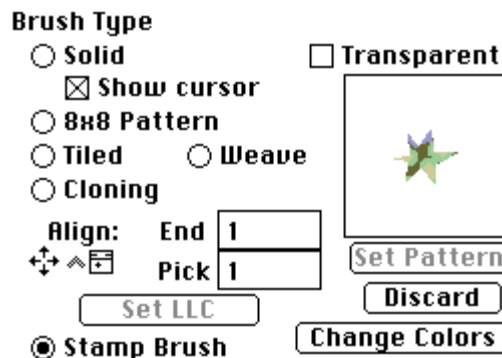
As you paint, the more you paint in width and height the more area from the location of your source will be painted. If you go beyond the left edge of the window from your start point, the cloning brush will then pull from the right edge of your window as its source. It is as though the window is a cylinder in width as well as a tube in height. If you overlap as you are painting into the source area and change that area you will now see the change occur in what you paint. If one is not careful, one can create a fractured, house of mirrors effect. This can be quite interesting in exploration and experimentation but quite disturbing if it is unintentional.

The same source can be used repeatedly in different destination points. This is commonly how this brush is used. If, for example, you want to duplicate areas of a foliage pattern without it looking obvious that an area is being reused, rather than copying and pasting and having exact duplicates, use the cloning brush. Make the foliage your source point. Define your destination point, paint a small area. Move your cursor and define a new destination point, paint a larger area. Move your cursor. Define a new destination point and paint another portion of the foliage. This is much faster and less predictable than copy/paste or using a tiled brush pattern.

Once the cloning brush is available in the micro brush palette there is no need to reenter the dialogue to define a new source or a new destination. Click once on the cloning brush in the micro brush palette (designated by the letters CL in the palette). Now use command and control keys with a click in the image to define the new source and the command key with a click in the image to define the new destination point.

Stamp

The stamp brush allows you to load a selection into a paintbrush. The shape and the colors used within the selected area become the brush. The selection can be any shape, created using any selection tool. The stamp brush does not roll out in repeat like the tile brush does. It stamps the selection with each click in the image and can be used to overlap and smear and repeat the printing of the stamp.



Stamp brush continued

The tiled brush cannot smear or overlap because it rolls out the repeat of the original unit in a grid configuration. When you click and drag the stamp brush, it will smear the print. This smearing can be used to create beautiful and elegant stripes. To make a coordinate stripe, select part of the image of the pattern you want to coordinate with the stripe. Load that selection into the stamp brush, click and drag that stamp brush in the image holding down the shift key to constrain the direction to horizontal or vertical (whatever direction you begin with will be the direction in which the brush is constrained and the brush will be in the same alignment of the end or pick in which you began.)

Shape

☐ Screen • 16x16
☒ Oval
☐ Rectangle
☐ / ☐ \
☐ Custom shape

Width
Height

Brush Type

☐ Solid
☒ Show cursor
☐ 8x8 Pattern
☐ Tiled
☐ Cloning

☐ Transparent

Align: End
Pick

☐ Stamp Brush
☒ Substitution Brush

Substitution Brush

The substitution brush allows you to change multiple colors, each color can go to a different color while using only one defined Substitution brush. To create a substitution brush, define a substitution Look Up Table or SubLUT before entering the brush dialogue. See the Change Colors or the Proximity wand write ups for the step by step on creating a SubLUT. You can save up to 8 SubLUTs during the current work session in JacqCAD.

Selection Brush

The selection brush allows you to use any brush shape to make selections. The selection brush does not paint the area, it creates an active selection in the same manner as any of the selection tools in the toolbox create active selections. The selection defined using the selection brush can be manipulated in all the ways any selection made with any selection tool can be manipulated. The selection can be cut, copied, pasted, flipped, rotated, expanded or reduced. The selection can be filled with a solid color or a pattern and it can be loaded into a stamp brush which would include the colors within the selected area. The selection brush allows the designer to create sophisticated shapes easily. It is especially useful in creating organic shapes that would be cumbersome to produce using any other selection tool.

☒ Custom shape

Brush Type

☐ Solid
☒ Show cursor
☐ 8x8 Pattern
☐ Tiled
☐ Cloning

☐ Transparent

Align: End
Pick

☐ Stamp Brush
☐ Substitution Brush
☒ Selection Brush

When you are finished defining a brush click on the OK button to load the brush and exit the dialogue box. To exit the dialogue without loading a new brush click on the button labeled Cancel.