

Matisse Help Index

- 1.0 [Welcome To Matisse](#)
- 2.0 [Getting Started with Image Files](#)
- 3.0 [Mastering the Toolbar](#)
- 4.0 [Standard Brushes](#)
- 5.0 [Customizing your Brushes](#)
- 6.0 [Selecting Colors and Patterns](#)
- 7.0 [Working with Objects](#)
- 8.0 [Filters and Image Processing](#)
- 9.0 [Folders](#)

Reference:

[Version 1.2 New Features](#)

[Matisse Menus](#)

[Keyboard Accelerators](#)

Matisse Menus

<u>File Menu</u>	<i>Open and Close Files, Acquire Images</i>
<u>Edit Menu</u>	<i>Cut, Copy Paste, Marquee Commands</i>
<u>Object Menu</u>	<i>Select, Align and Order Objects</i>
<u>Image Menu</u>	<i>Image Processing Filters and Commands</i>
<u>View Menu</u>	<i>Zoom, Show and Hide Windows</i>
<u>Window Menu</u>	<i>Cascade, Tile , Arrange Icons</i>
<u>Help</u>	<i>This Help Facility</i>

The File Menu

The File Menu contains the standard commands of normal file management, plus scanning and printing commands.

<u>File: New</u>	<i>Create new image, folder or palette</i>
<u>File: Open</u>	<i>Open an existing image, folder or palette</i>
<u>File: Duplicate</u>	<i>Duplicate an image, folder or palette</i>
<u>File: Close</u>	<i>Close the current image, folder or palette</i>
<u>File: Restore</u>	<i>Restore the current window to it's last saved state</i>
<u>File: Add To Folder</u>	<i>Add the current window to a folder</i>
<u>File: Save</u>	<i>Save the current image, folder or palette</i>
<u>File: SaveAs</u>	<i>Save under a new name</i>
<u>File: Save All</u>	<i>Save all Open Windows</i>
<u>File: Acquire</u>	<i>Acquire an image from a Twain source (eg:scanner)</i>
<u>File: Select Source</u>	<i>Select Which Twain Source</i>
<u>File: Open PhotoCD</u>	<i>Open a Photo-CD file (Version 1.2)</i>
<u>File: Scan</u>	<i>Scan using Microtek Scanner</i>
<u>File: Print</u>	<i>Print an Image</i>
<u>File: Print Setup</u>	<i>Set Paper Tray and Other options</i>
<u>File: Preferences</u>	<i>Grid Size, Icon Size etc..</i>

File: New

File: New: Image

File: New: Folder

File: New: Palette

File: New: Image

This command creates a new Color or Gray Scale Image. A dialog box prompts for the size of the image (in pixels or inches) and the resolution (dots per inch). If desired enter a resolution other than the screen resolution in the resolution field. The resolution will effect the size of the image when printed.

File: New: Folder

This command creates a new empty folder.

File: New: Palette

This command creates a new 256 color palette. This palette is displayed in small format (no names). Use the Palette Names command on the Edit Menu to change this so that you can input names.

File: Open

File: Open: Image

File: Open: Palette

File: Open: Folder

File: Open: Image

Opens an existing image using the standard Microsoft file dialog box.

File: Open: Palette

Opens an existing palette. Palettes have a .pal extension.

File: Open: Folder

Opens an existing folder. Folders have a .fld extension.

File: Duplicate

Creates a duplicate of the active window. Depending on the window type, it will create a new Image, Folder or Palette.

File: Close (F3)

Closes the current window. If changes have been made to the window, the program will ask whether you want to save those changes.

File: Restore

Restores the current window to its last saved state.

File: Add to Folder

Manually adds the active window to an open folder. If there is only one folder open, the program will add the window object to that folder. Otherwise the program prompts you to select a folder from a list of open folders.

Note: An easier way to add images to folders is to iconify the image and then drag the image into the folder. If you hold down the <shift> key, the image will be copied into the folder. Otherwise it will be cut into the folder.

File: Save (F2)

Saves the active image, palette or folder.

File: SaveAs

Saves the active image, palette or folder under a new name.

File: Save All (F4)

Saves all open images, palettes and folders.

File: Acquire

This command allows you to acquire an image via a TWAIN source, for example a TWAIN scanner or digital camera. To set which source is active use the File: Select Source command.

Note: TWAIN is a standard interface which is common across a range of input devices. We highly recommend that when purchasing an input device such as a scanner or digital camera, you make sure that it is "TWAIN" compliant. This will ensure that it is compatible with Fauve Matisse and other programs

File: Open PhotoCD (Version 1.2)

This command allows you to retrieve images in Photo-CD format from your CD ROM drive. When applied it will automatically access your CD Rom drive and display a folder of thumbnails corresponding to the images on disk. Photo-CD stores each image in a number of different resolutions. A menu at the top of the PhotoCD folder allows you to specify which resolution you want to import the image in as. To activate the import, simply double click on the photo-CD thumbnail.

Note that the folder will be kept around as a separate window, allowing access to the images on disk at any time. The Window may be minimized to conserve screen space or closed.

File: Select Source

This command allows you to switch between TWAIN sources. For instance you could have several scanners connected to the computer, and you could be selecting Scanner2 as your TWAIN input source.

File: Scan

This leads to a scan menu which controls the scanner. The menu and the controls are different depending on which scanner you have installed, ie: a standard TWAIN scanner or a non-TWAIN Microtek scanner. By default, the program installation assumes your scanner is TWAIN (most likely). To install an older Non-Twain Microtek scanner use the "Custom Install" option of the Matisse Install program

File: Print (Ctrl+P)

Prints the active image on your Windows compatible printer

File: Print Setup

Sets the print quality and number of copies

File: Preferences

File: Preferences: Gamma Correction

File: Preferences: Grid Size

File: Preferences: Icon Size

File: Preferences: GrayScale Only

File: Preferences: Windows Clipboard

File: Preferences: Printer Quality Text

File: Preferences: JPEG Compression Ratio

File: Preferences: LZW Compression

File: Preferences: Gamma Correction

When you click on this preference choice, a dialog box will appear allowing you to enter *screen gamma* values for the red, green and blue channels. These values affect the overall appearance of colors on your screen. To ensure that Matisse is displaying true colors, you must "calibrate" your monitor by setting these values.

1. Open the file "gamma.mat"
2. Adjust the red gamma control until the outer and interior shades of red in the image match precisely. You can do this by using the "Preview" button after each trial value.
3. Do the same for the green and blue channels.
4. Hit OK to confirm.

File: Preferences: Grid Size

Like a draw program, Matisse supports "Snap to Grid" of objects. "Grid Size" refers to the size (in pixels) of this invisible grid.

File: Preferences: Icon Size

Sets the default icon size that is used for displaying minimized images, folders and palettes.

File: Preferences: Gray Scale

Sets the display of all windows, images, icons etc. to gray scale. Useful for viewing gray scale images on non-24 bit displays (higher quality images). Color images will be rendered in gray, but the colors will not be lost.

File: Preferences: Windows Clipboard

If checked, all cut and copy operations will result in a duplicate copy being sent to the Microsoft clipboard.

File: Preferences: Printer Quality Text

.
When checked, this preference setting will cause Matisse to print text at the resolution of the printer as opposed to the resolution of the image. This feature allows you to annotate a screen resolution image with letter quality text.

File: Preferences: JPEG Compression Ratio

This setting specifies a compression ratio from 1 to 100 for saving JPEG images. Beware of ratios greater than 4 that can lead to visible loss of image quality.

File: Preferences: LZW Compression

When checked, this preference item will cause Matisse to save TIFF files using the so-called "LZW" compression scheme.

The Edit Menu

The Edit Menu contains commands for selecting marquee areas as well as the standard "Cut" "Copy" and "Paste" commands".

<u>Edit: Undo</u>	<i>Undo the last command</i>
<u>Edit: Cut</u>	<i>Cut to the clipboard</i>
<u>Edit: Copy</u>	<i>Copy to the clipboard</i>
<u>Edit: Paste</u>	<i>Paste as Object or New Document</i>
<u>Edit: Marquee All</u>	<i>Set Marquee to Entire Window</i>
<u>Edit: Marquee Invert</u>	<i>Invert Marquee</i>
<u>Edit: Marquee None</u>	<i>Eliminate Marquee</i>
<u>Edit: Clear</u>	<i>Clear to white</i>
<u>Edit: Fill</u>	<i>Fill to a color or pattern</i>
<u>Edit: Set Pattern</u>	<i>Define a new Current Pattern</i>
<u>Edit: Set Texture</u>	<i>Define a new Current Texture</i>
<u>Edit: Brushes</u>	<i>Edit Brush Set</i>
<u>Edit: Palette</u>	<i>Edit Current Palette</i>
<u>Edit: Folder</u>	<i>Edit Folder Options</i>

Edit: Undo (Alt+Bksp)

Undoes the last operation.

Edit: Cut (Shift+Del)

Cuts the current selected object to the private clipboard. Normally it will also cut a copy to the Microsoft Windows clipboard for easy communication with other applications. This feature can be turned off in the Preferences Menu.

Edit: Copy (Ctrl+Ins)

Copies the current selected object to the clipboard. Normally it will also copy a copy to the Microsoft Windows clipboard for easy communication with other applications. This feature can be turned off in the Preferences Menu.

Edit: Paste (Shift+Ins)

Pastes the content of the clipboard into the current window. If the Windows clipboard is non-empty it will use that clipboard, otherwise it will use the private clipboard.

Note (**Version 1.2**). Fauve Matisse can now "Paste as New Document". This feature is convenient for interfacing with external applications.

Edit: MarqueeAll (Ctrl+A)

Creates a marquee including all of the current window.

Edit: Marquee Invert

Inverts the current Marquee.

Edit: Marquee None (Ctrl+D)

Discards the current marquee

Edit: Clear (Ctrl+Del)

Sets all selected image objects to white. If no image objects are selected, sets the background image to white.

Note: if the image is a transparency, clear will effect the opacity layer as well, making the image 100% transparent.

Edit: Fill

Fills all currently selected objects. If no objects are selected, the fill will apply to the background image. In either case, the fill will be clipped to the marquee, if one is present.

Edit: Set Pattern

Defines the current pattern. If the active window is an image window, it will use that image (clipped to the marquee) as the new pattern. If the active window is a folder, it will use the first selected image in the folder as the new pattern.

Edit: Set Texture

Re-defines the current texture. If the active window is an image window, it will use that image (clipped to the marquee) as the new texture. If the active window is a folder, it will use the first selected image in the folder as the new texture.

Edit: Brushes

Menu commands for editing the brush set.

Edit: Brushes: Open

Edit: Brushes: SaveAs

Edit: Brushes: Add Category

Edit: Brushes: Add Brush

Edit: Brushes: Delete Category

Edit: Brushes: Delete Brush

Edit: Brushes: Set Category Icon

Edit: Brushes: Get Category Icon

Edit: Brushes: Set Brush Icon

Edit: Brushes: Get Brush Icon

Edit: Brushes: Open

Opens an existing brush set (extension .brs).

Edit: Brushes: Save As

Saves the brush set under a new name.

Edit: Brushes: Add Category

Inserts a new default category into the brush box

Edit: Brushes: Add Brush

Inserts a new default brush into the brush box

Edit: Brushes: Delete Category

Deletes the current category from the brush box.

Edit: Brushes: Delete Brush

Deletes the current brush from the brush box

Edit: Brushes: Set Category Icon

Uses the current image window to (re)-set the current category icon. If the current image window is not 64x64 pixels, the icon is obtained by resampling.

Edit Brushes: Set Brush Icon

Uses the current image window to (re)-set the current brush icon. If the current image window is not 64x64 pixels, the icon is obtained by resampling.

Edit: Brushes: Get Category Icon

Copies the current category icon into a new image window.

Edit: Brushes: Get Brush Icon

Copies the current brush icon into a new image window

Edit: Palette

Menu commands for editing the current palette.

Edit: Palette: Find

Edit: Palette: Find By Name

Edit: Palette: Interpolate

Edit: Palette: Rectangle Interpolate

Edit: Palette: Resize

Edit: Palette: SampleImage

Edit: Palette: Names

Edit: Palette: Find

Finds the closest matching color to the foreground color in the palette.

Edit: Palette: Find By Name

Brings up a dialog box where you can search for a palette color by name.

Edit: Palette: Interpolate

Interpolates between the top left selected color and the bottom right selected color to provide a range of intermediate palette colors.

Edit: Palette: Rectangle Interpolate

Interpolates between the four corners of the selected area in the palette to give a

"Gouroud" shading of intermediate colors. Useful for deriving blends of several colors.

Edit: Palette: Resize

Allows you to change the number of palette rows and columns (by default palettes are 16x16 and contain 256 colors).

Edit: Palette: Sample Image

Creates a new palette by computing out the top colors in the image using the Heckbert quantization technique.

Once you have the top colors of an image, you can use these colors to colorize another image with the Colorize command. This can produce remarkable results!

Edit: Palette: Names

Allows you to view the palette in large format, so that the names are visible.
This command acts as a toggle.

Edit: Folder

Edit: Folder: Resize

Edit: Folder: Get Cover

Edit: Folder: Set Cover

Edit: Folder: Resize

Resizes the icons in the current folder.

Edit: Folder: Get Cover

Copies the folder cover into a new image window. The folder cover is the image that is shown when the folder is iconified, or dragged into other folders.

Edit: Folder: Set Cover

Sets the cover of a folder using the current image window. The folder cover is the image that is shown when the folder is iconified, or dragged into other folders.

The Image Menu

The Image menu contains all of the filters in Matisse as well as some image processing commands.

Image: Tune

Image: Blur

Image: Convolution

Image: Distort

Image: Edge Detect

Image: Mosaic

Image: Noise

Image: Texturize

Image: Separate

Image: Recombine

Image: Convert

Image: Crop

Image: Flip

Image: Rotate 90

Image: Resample

Image: AutoPaint

Image: Tune

Image: Tune: Brightness/Contrast

Image: Tune: CMYK

Image: Tune: Colorize

Image: Tune: Equalize

Image: Tune: Invert

Image: Tune: HLS

Image: Tune: Posterize

Image: Tune: RGB

Image: Tune: Tint

Image: Tune: Tone

Image: Tune: Brightness/Contrast

Similar to the Brightness/Contrast controls on a TV. Increasing brightness adds pure white to the image. Increasing contrast tightens the color range.

Image: Tune: CMYK

Adds/Subtracts a fixed amount of Cyan, Magenta, Yellow or Black to each pixel in the image.

Image: Tune: Colorize

Colorizes an image using a 256-color palette. If you don't have such a palette, you can use the Edit: Palette: Sample Image command to extract one from another image.

Note: This command only works on color images. If you want to colorize a gray scale (8 bit image) first convert it to True Color, and then apply the command.

See Also: [Edit: Palette: Sample Image](#)

Image: Tone: Equalize

This command equalizes out the image to contain an even mix of light and dark areas. It is particularly useful for re-touching under or over-exposed photographs, particularly gray-scale ones.

Image: Tune: Invert

Inverts the image, producing a negative.

Image: Tune: HLS

Adds/subtracts hue, lightness, and or saturation. Pumping up the saturation on an image is often a good way of adding life to it.

Image: Tune: Posterize

The term "posterize" means to compress the range of color values. For example, on a gray scale image, setting the posterize level to five will result in each channel going from 256 shades to 5 shades. This results in images which are somewhat "blotchy".

Image: Tune: RGB

Adds/Subtracts a fixed amount of Red, Green or Blue to each pixel in the image.

Image: Tune: Tint

Creates a 256-shade image which "leans" towards the foreground color.
Gives a very clean, "tinted" look to an image or area which you cannot get by other tuning adjustments.

Image: Tune: Tone

Overall tone adjustment facility. Allows you to increase the shadows, midtones or highlights of the image and see the effects on the image interactively. The controls in effect re-ramp each of the gamma curves for the three channels R, G and B.

Image: Blur

Filters for blurring an image.

Image: Blur: Blur

Image: Blur: Fragment

Image: Blur: Motion Blur

Image: Blur: Gaussian Blur

Image: Blur: Uniform Blur

Image: Blur: Blur

Applies a 3x3 convolution blur to the image. A blur amount parameter is used to increase/decrease the weight on the center pixel, mildly changing the degree of blur.

Use for: applying a mild blur to the image.

Image: Blur: Fragment

Superimposes a specified number of copies at random offsets. The variance of these offsets can be specified in pixels.

Use for: creating the effect of a "jiggled" camera.

Image: Blur: Motion Blur

Superimposes a specific number of copies at a given distance from each other and at a specified angle to create the impression of movement. Using 4 or more copies at a distance of 3 pixels yields good results.

Use for: creating the impression of movement.

Image: Blur: Gaussian Blur

Applies a smooth normalized or "gaussian" blur filter to the image. More "soft" than other blur filters, but slower. Blur amount is specified by a **radius** in pixels (1-5).

Use for: creating "soft lens" effects.

Image: Blur: Uniform Blur

Applies a uniform blur filter to the image. Essentially the same as the standard blur filter, but with a variable **radius** of up to 5 pixels (10x10 convolution). Like the gaussian blur, can be slow, especially on large images.

Use for: creating "soft lens" effects.

Image: Convolution

The term "convolution" is an image-processing term for a class of filters which are defined by a matrix of numbers. For each pixel, the new RGB values are defined as a weighted sum of the adjacent pixels. The convolution matrix allows you to enter these **weights**. The result is divided by a **scale factor**, and shifted by an **offset**.

Use for: creating your own filters.

Image: Distort

Filters for distorting an image.

Image: Distort: Cylinder

Image: Distort: Fish Eye

Image: Distort: Ripple

Image: Distort: Wave

Image: Distort: Whirlpool

Image: Distort: Cylinder

This filter maps the image to a cylinder, like a "special effects" mirror at an amusement park. You can specify an **amount** between -100 and +100. A positive amount will cause the image to "bulge" , a negative amount will cause it to be "squeezed". You can also specify whether the cylinder is **vertical** or horizontal.

Use for: creating cylinder-like bulges and squeezes.

Image: Distort: Fish Eye

Creates the impression the picture was taken through a fish-eye lens. The degree of "bulge" is controllable with an **amount** parameter. Specifying a negative amount will cause the image to be "pinched"

Use for: creating fish-eye or pinched effects.

Image: Distort: Ripple

Creates a "rippled" wave over the image, similar to looking through heavy plate glass on a rainy day. The ripple is controlled by a **wavelength** and an **amplitude** factor. The best way to see how these two parameters interact is by playing around with them!

Use for: creating a non-directional ripple over an image.

Image: Distort: Wave

Creates a horizontal or **vertical** wave on the image. The **wavelength** and the **amplitude** of the wave can be specified. Like the Ripple filter, this one takes some trial and error to get comfortable with.

Use for: creating waves in an image.

Image: Distort: Whirlpool

Passes the image through a whirlpool vortex, creating a "twirl" effect. A twist amount in degrees (between -360 and +360) controls the degree of twirl.

Use for: "twirling" all or part of the image.

Image: Edge Detect

Filters that detect and act on the edges of the image.

Image: Edge Detect: Emboss

Image: Edge Detect: Find Edge

Image: Edge Detect: Sharpen

Image: Edge Detect: Threshold

Image: Edge Detect: Variable Edge

Image: Edge Detect: Emboss

Creates an "embossed look" using directional gradient information. The emboss **depth** controls how "protruded" the embossing looks. The **contrast** parameter is useful for increasing the sharpness of the embossing. The emboss **angle** is entered in degrees. Finally, you can specify a background **color** for embossing: foreground, background or gray.

Note: you can also emboss an object interactively with any paintbrush by setting the object compositing rule of that object to emboss.

Image: Edge Detect: Find Edge

Standard filter which finds all edges of the image and displays them in white on a black background. By checking the **invert** box, you can specify black edges on a white background.

Use for: special effects.

Image: Edge Detect: Sharpen

Accentuates the edges of an image to increase the perceived "sharpness". A single parameter, **amount**, is used to regulate the degree of edge enhancement.

Use for: sharpening blurred images.

Image: Edge Detect: Threshold

This filter classifies all pixels into two categories: those whose R,G,B values are above a certain threshold and those who are below. The **R,G,B threshold values** are entered with three sliders and can be constrained to be equal by clicking on the **constrain** checkbox. You specify one color for the "above" pixels and one for the "below" pixels.

Use for: creating "Andy Wharhol" like thresholded images.

Image: Edge Detect: Variable Edge

A highly versatile filter for the image professional. For each pixel an edge gradient is computed. Depending on whether the edge is greater or less than a specific threshold, the pixel is colored in the "above" color or the "below" color. Color choices include HiLite (which sharpens the pixel) , Unchanged (leaves the pixel as is) and Raw (the raw gradient number, as displayed by the standard Find Edge filter).

Use for: sophisticated edge detection and special effects.

Image: Mosaic

Included under this heading are filters which produce a clustered "mosaic" effect.

Image: Mosaic: Maximum

Image: Mosaic: Median

Image: Mosaic: Minimum

Image: Mosaic: Mosaic

Image: Mosaic: Shatter

Image: Mosaic: Maximum

This filter replaces each pixel with the lightest (maximum) pixel in a neighborhood around it. The neighborhood **radius** is given in pixels. Using values greater than 1 can slow this filter considerably.

Use for: clustering the image pixels into areas of maximum lightness.

Image: Mosaic: Median

This filter replaces each pixel with the median lightness pixel in a neighborhood around it. The neighborhood **radius** is given in pixels. Using values greater than 1 can slow this filter considerably.

The effect of the median filter is to blur the image without destroying edges. It is perfect for removing noise from an image, or blurring flat parts of an image while keeping straight lines relatively crisp. While not really a "mosaic" filter, we included it here to be next to the minimum and maximum filters.

Use for: controlled blurring and noise removal.

Image: Mosaic: Minimum

This filter replaces each pixel with the darkest (minimum) pixel in a neighborhood around it. The neighborhood **radius** is given in pixels. Using values greater than 1 can slow this filter considerably.

Use for: clustering the image pixels into areas of minimum lightness.

Image: Mosaic: Mosaic

Creates the "police suspect" look by grouping pixels in tiles and coloring each tile with its average color. You can specify the **width** and **height** of the tiles, and constrain these to be equal by click the **square** checkbox.

Use for: "pixelating" an image into rectangular tiles.

Image: Mosaic: Shatter

Creates a "David Hockney" look by cutting the image up into tiles and moving the tiles randomly around. You specify the tile **width** and **height**, the average **movement** in pixels, and optionally an amount of random **tinting** that is applied to each tile.

Use for: David Hockney effects.

Image: Noise

These filters add/subtract random noise to the picture.

Image: Noise: Add Noise

Image: Noise: Diffuse

Image: Noise: Remove Noise

Image: Noise: Add Noise

Adds a specific **amount** of white noise to the image. The amount is specified between 1 and 255.

Use for: adding a grainy noise background to your image.

Image: Noise: Diffuse

Moves each pixel by a random **amount**, creating a very nice "grainy breakdown" of the image.

Use for: creating soft, artistic grainy breakdowns.

Image: Noise: Remove Noise

Checks each pixel's color relative to the median color of the neighboring pixels. If the difference is greater than a threshold, the pixel color is replaced with the median color. The strength parameter controls the noise threshold.

Use for: cleaning up spotty images.

Image: Texturize

Texturizes the image using the current texture. The texture **amount** can be set to a number between 1 and 200. The **angle** of the light source can be entered in degrees.

Use for: adding paper texture to images.

Image: Separate

These commands break an image down by channel.

Image: Separate: RGB

Image: Separate: HLS

Image: Separate: CMYK

After separating out an image into the different channels, each channel is given its own window, and can be modified using any of the paint or image processing commands. The Image: Recombine command can then be used to re-create a composite of the different channels.

See also: Image: Recombine

Image: Separate: RGB

Separates an image out into its Red, Green and Blue channels.

Image: Separate: HLS

Separates an image out into Hue, Lightness and Saturation channels.

Image: Separate: CMYK

Separates an image out into the print standard Cyan, Magenta, Yellow and Black channels. To optimize the separation, you can modify any of the following parameters:

Threshold: Starting threshold in % below which there is no black being generated.

Black generation: max % of black that will be generated.

Under color removal: % of black that will be removed from each C,M,Y triplet.

Image: Recombine

Recombines a set of gray scale channels to form a color image. You must select whether to recombine split RGB, HLS or CMYK images.

See also: [Image: Separate](#)

Image: Convert

Converts an image from one image type to another.

Image: Convert: To Gray Scale

Image: Convert: To Indexed 256

Image: Convert: To True Color

Image: Convert: To Gray Scale

Converts the image to 8-bit gray scale. No arguments are needed.

Image: Convert: To Indexed 256

Converts the image to the indexed 256 format. When converting from gray scale no arguments are needed: the indexed image's palette is set to the 256 shades of gray.

When converting from color, you are asked to choose between medium quality (pattern dither using a system palette) or high quality (using a diffusion dither and adaptive palette). Note: If you do not have a 24 bit graphics card Matisse will use a dithered display and you will not be able to visually see any difference between the two images while in the program. However, if you use a different application which resets the system palette, or if you try it on a 24 bit display, the image will show up at superior quality.

Image: Convert: To True Color

Converts the image to True 24 bit color.

Image: Crop

Crops the image to the current marquee.

Image: Flip

Flips the entire window (including all objects) either horizontally or vertically.

Image: Rotate 90

Rotates the entire window (including all objects) by 90 degrees.

Image: Resample

Resamples the entire window (including all objects) to a given new width and height. These can be entered in either in pixels, inches, or as percent of the original image. You can also constrain the aspect ratio to be fixed to the aspect ratio of the old image.

Image: AutoPaint

This switch toggles on auto painting mode. With AutoPaint, when the brush tool is active the right mouse button causes Matisse to automatically fill the image using the last brush stroke. (Normally the right mouse button simply repeats the last stroke *once*).

The Object Menu

The Object Menu contains commands that used for selecting, grouping and aligning objects on the screen.

Object: Make Floating

Object: Merge

Object: Merge Control

Object: Select All

Object: Select None

Object: Delete

Object: Flip

Object: Soften

Object: Set Outline

Object: Set Interior

Object: Group

Object: UnGroup

Object: Order

Object: Snap To Grid

Object: Align

Object: Align To Image

Object Location

Object Opacity

Object: Make Floating(Ctrl+O)

Creates a "floating" image object by copying the bits under the current Marquee.

Object: Merge (Ctrl+M)

Merges all selected objects onto the composite. When an object is merged all of its pixels are copied to the background image, and the object information is lost.

Object: Select All (Ctrl+X)

Selects all objects in the active Window. Do not confuse it with the Select All command in the Edit Menu which is used for selecting a Marquee.

Object: Select None(Ctrl+Z)

Deselects all objects in the active Window. Do not confuse it with the Select None command in the Edit Menu which is used for selecting a Marquee.

Object: Delete (Del)

Deletes all the currently selected Objects in the active Window.

Object: Flip

Flips selected objects, either horizontally or vertically. If you wish to flip the entire image, use the Image: Flip command.

See also: [Image: Flip](#)

Object: Merge Control

Sets the merge control options that apply to the top-most selected object. These options depend on the type of object: image, shape or text.

For image objects there exists a checkbox allowing you to specify that the image is a Transparency, i.e.: that its background is non-opaque. Transparencies are handy for "writing" on top of another image and for other effects.

For shape objects, a different checkbox allows you to turn off the drawing of borders. This is useful for creating crisp filled shapes with no outline.

For Text objects, a text entry box and font selector are provided.

For all objects, you can select the compositing rule that determines how the object is merged onto other objects beneath it.

Object: Soften

Softens the edges of an object. Matisse does this by applying a blur filter to the selection mask defining the object. The soft-edge amount is given in pixels.

Object: Group (Ctrl+G)

Unifies selected objects so that they move as one. You can have groups of groups and so on... To undo the group use the Object: UnGroup command

See Also: [Object: UnGroup](#).

Object: UnGroup (Ctrl+U)

This command is used to diss-associate grouped objects.

See Also: [Object: Group](#).

Object: Order

These commands change the order of objects on the desktop

Object: Order: Send To Front

Object: Order: Send To Back

Object: Order: Move Up

Object: Order: Move Down

Object: Order: Send To Front (Ctrl+F)

Sends the current selected objects to the **top** of the desktop.

Object: Order: Send To Back (Ctrl+K)

Sends the current selected objects to the **back** of the desktop.

Object: Order: MoveUp

Moves the selected objects **up** one layer on the desktop.

Object: Order: Move Down

Moves the selected objects **down** one layer in the desktop

Object: Location (Version 1.2)

This command brings up a popup menu allowing you to "remember" the position of an object and to "restore" the object to that position. Alternatively, you can use the Home key to restore an object to its remembered position..

Object: Snap To Grid

Toggles Snap to Grid Mode. When Snap to Grid is checked all objects, marquees etc.. snap to fixed grid points when moved.

Object: Align

Aligns a set of objects relative to each other. For instance, selecting Align Left will cause all selected to be left-aligned to the left-most object.

Since the align command tends to be used frequently, we have assigned the following easy-to-remember keyboard accelerators:

CTRL+L Object: Align: *Left*

CTRL+R Object: Align *Right*

CTRL+T Object: Align *Top*

CTRL+B Object: Align *Bottom*

CTRL+C Object: Align *Center*

The Shift versions of these accelerators are used for the Align To Image commands.

See Also: [Object: Align to Image](#).

Object: Align: Left

Aligns selected objects to the left side of the bounding rectangle.

Object: Align: Right

Aligns selected objects to the right side of the bounding rectangle

Object: Align: Top

Aligns selected objects to the top side of the bounding rectangle.

Object: Align: Bottom

Aligns selected objects to the bottom side of the bounding rectangle.

Object: Align: Center

Aligns selected objects to the center of the bounding rectangle.

Object: Align To Image: Left

Aligns selected objects to the left side of the image.

Object: Align To Image: Right

Aligns selected objects to the right side of the image.

Object: Align To Image: Top

Aligns selected objects to the top side of the image.

Object: Align To Image: Bottom

Aligns selected objects to the bottom side of the image.

Object: Align To Image : Center

Aligns selected objects to the center of the image.

Object: Align To Image

These commands are used to align a set of objects to the edges of the image window.

Since these command tends to be used frequently, we have assigned the following easy-to-remember keyboard accelerators:

CTRL+SHIFT+L Object: Align To Image: *Left*
CTRL+SHIFT+R Object: Align To Image: *Right*
CTRL+SHIFT+T Object: Align To Image: *Top*
CTRL+SHIFT+B Object: Align To Image: *Bottom*
CTRL+SHIFT+C Object: Align To Image: *Center*

See also: Object: Align.

Object: Set Outline (Ctrl+H)

Sets the outline color for shape objects to the current foreground color. It has no impact on image objects.

Object: Set Interior (Ctrl+I)

Sets the interior colors of shape objects. If the shape is currently being filled with a single color, the command will replace that color with the current Foreground Color. If the shape is being gradient filled, the current Background and Foreground colors will define new gradient fill colors.

Object: Opacity (Version 1.2)

This submenu contains 4 commands which effect the "Opacity layer" of an object. The Opacity layer records how "opaque" the object is at every pixel.

Opacity Import	<i>Imports an external image as the current opacity layer</i>
Opacity Export	<i>Exports the opacity layer as a gray scale image</i>
Opacity Fill	<i>Fills the opacity layer to a given value.</i>
Opacity Invert	<i>Inverts the opacity layer.</i>

Note: All these commands work only if a single object is selected. Also, the opacity fill command, like the regular command is clipped to the current marquee. So if you make the current marquee a circle marquee and then fill to transparent inside that marquee, the result will be to "burn" a hole in the object.

The View Menu

The View Menu allows you to control which element of the Matisse window is visible at any one time. For instance, you can hide the toolbox or the status bar by toggling the appropriate settings. The menu also contains standard zooming commands.

View: Zoom In

View: Zoom Out

View: Actual View

View: Fit to Window

View: Information

View: Brush Box

View: Brush Shape

View: Brush Options

View: Color Selector

View: Current Pattern

View: Current Texture

View: Toolbox

View: Status Bar

View Ribbon (Version 1.2)

View: Zoom In

Zooms in. Zoom factor varies from 1 to 16.

View: Zoom Out

Zoom out. Zoom factor varies from 1 to 0.06 (One Sixteenth).

View: Actual View

Sets Zoom Factor to 1:1 (Actual view)

View: Fit to Window

Resets the Window so that the image fits tightly.

View: Information

Displays a window showing information on the active image.

View: Brush Box

Shows/Hides the Brush Box.

View: Brush Shape

Shows/Hides the Brush Shape Box

View: Brush Options

Shows/Hides the Brush Options Box

View: Color Picker

Shows / Hides the Color Picker

View: Current Pattern

Shows/Hides the Current Pattern. Note: The current pattern window is not editable.

View: Current Texture

Shows/Hides the Current Texture. Note: The current texture window is not editable.

View: Toolbar

Shows/Hides the Toolbar.

View: Status Bar

Shows/Hides the Status Bar

View: Ribbon (Version 1.2)

This command displays a ribbon with the following controls:

Control	Meaning
"A" Button	Marquee Select All
"N" Button	Marquee Select None
"I" Button	Marquee Select Invert
"Float" Button	Object Make Floating
"Marquee" Button	Object Make Marquee
Combo Box	Composite Rule (from Object Options)
Slider	Opacity (from Object Options)
"T" Check	Transparency Mode (from Object Options)
"Undo"	Edit: Undo
"Clear"	Edit: Clear

The Window Menu

Window: Cascade

Window: Tile

Window: Arrange Icons

Window: Cascade (Shift+F5)

Cascades all open windows so that they are neatly arranged.

Window: Tile (Shift+F4)

Tiles the entire matisse window with all open windows.

Window: Arrange Icons

Arranges all icons at the bottom of the screen.

Help

This help facility.

Keyboard Accelerators

These keyboard sequences can be used to replace Matisse's Menu commands.

CTRL+A	<u>Edit: Marquee All</u>
CTRL+B	<u>Object: Align : Bottom</u>
CTRL+SHIFT+B	<u>Object:: AlignToImage:Bottom</u>
CTRL+C	<u>Object: Align : Center</u>
CTRL+SHIFT+C	<u>Object: Align to Image: Center</u>
CTRL+D	<u>Edit: Marquee None</u>
CTRL+F	<u>Object: Order: Send to Front</u>
CTRL+G	<u>Object: Group</u>
CTRL+H	<u>Object: Set Outline</u>
CTRL+I	<u>Object: Set Interior</u>
CTRL+K	<u>Object: Order: Send to Back</u>
CTRL+L	<u>Object: Align : Left</u>
CTRL+SHIFT+L	<u>Object: Align to Image: Left</u>
CTRL+M	<u>Object: Merge</u>
CTRL+O	<u>Object: Make Floating</u>
CTRL+P	<u>File: Print</u>
CTRL+R	<u>Object: Align: Right</u>
CTRL+SHIFT+R	<u>Object: Align to Image: Right</u>
CTRL+T	<u>Object: Align: Top</u>
CTRL+SHIFT+T	<u>Object: Align to Image: Top</u>
CTRL+U	<u>Object: Ungroup</u>
CTRL+X	<u>Object: Select All</u>
CTRL+Z	<u>Object: Select None</u>
CTRL+DEL	<u>Edit:Clear</u>
CTRL+INS	<u>Edit:Copy</u>
SHIFT+DEL	<u>Edit:Cut</u>
SHIFT+INS	<u>Edit:Paste</u>
F1	Help
F2	<u>File:Save</u>
F3	<u>File:Close</u>
F4	<u>File:Save All</u>
SHIFT+F5	<u>Window: Cascade</u>
SHIFT+F4	<u>Window: Tile</u>

Version 1.2 Additions:

Cursor Keys Move Objects by Grid Size

SHIFT+Cursor
Tab Keys
Home Key

Move Objects by 5*Grid Size
Tab between Objects
Moves Object Back to Last Remembered Position

Version 1.2: New Features

The following new features were included in Version 1.2 and are not documented in the manual. They appear **in red** elsewhere in this online manual.

Photo-CD support

Automatic detection of WinTab capability, allowing Kurta tablet support.

A "Quill" brush which varies in size with pressure

A "Japanese" watercolor brush

A "Chameleon" brush which changes color with pressure

A "Make Marquee" command.

Opacity commands for better control of the alpha layer.

Object position remember and restore commands.

Ability to tab between selected objects.

Ability to move objects with the cursor keys.

A "Paste as New Document" feature.

A "Clear Clipboard" command.

A Ribbon for quick access to frequently used commands such as Marquee
None.

New preferences including brush cursor and pressure options.

An improved "Additive" merge mode allowing lighting effects.

New, non-repeating textures including leaves and grass.

A new "Surface" brush for airbrushing texture onto the canvas.

Improved shape and gradient tools.

New preset palettes such as "Santa Fe" for palette gradient fills and image colorization.

Chapter 1: Welcome To Matisse

1.1 Overview

2.2 System Requirements

1.3 Memory

1.1 Overview

Matisse is a Paint and Image Processing program that is built around the concept of objects. An object can be an image, a shape or a paragraph of text. It can sit on top of other objects, blend into them, be resized, rotated or distorted. The result is that you can produce in minutes photo-paint compositions that would take hours in other packages, if you could do them at all.

Tremendous research has gone into making Matisse's brushes perform like their natural counterparts. Aspects such as paper texture, grain control, blackness, smoothing and scatter have been incorporated into the design. On the other hand, we have tried to limit the number of brush controls to avoid the feeling of overload.

Experienced photo-retouching and paint program users will recognize many of these standard tools, such as the Marquee Tool. Whenever possible we have tried to remain backward compatible with existing standards to avoid confusion.

1.2 System Requirements

In order to run Matisse, you need at a minimum:

an Intel-386 or 486 based Computer.
4MB of Ram
SVGA Color Monitor
Windows 3.1

If you have Windows 3.0 you can upgrade to 3.1 for a very low cost. Besides being generally more stable than 3.0, the newer version allows you to use "True Type" fonts, which are becoming the de-facto standard.

If you are serious about your graphics, you may want to consider the following additional investments:

Get a good font pack. For under \$50 you can add 50 to 100 new True Type fonts to your system. There is no reason to be limiting yourself to Times Roman or Arial.

Upgrade to a 486 machine, preferably 33Mhz or faster. The additional speed will make the brushes really perform. At a minimum, add a math coprocessor chip to your 386.

Get a 24-bit card. The 24-bit card will completely eliminate the dithered look on your screen. Images will appear with photographic crispness.

Get more memory. 8Mb is plenty for working at screen resolutions (see Memory), but if your ultimate goal is 300 dpi output, you will want at least 16 Mb, and possibly more.

Get a flatbed scanner. The quality of these machines is unbelievable, some of them picking up detail at 600 dpi. Adding a scanner to your system will change the way you think of images forever.

Get a color laser printer. Although the cost is coming down, high quality color printing is still very expensive. Many of the more affordable systems have one or more irritating drawbacks. Before you make the plunge, make sure you are satisfied with the quality of the output.

Get a CD drive. Fauve Matisse now supports Photo-CD. The great advantage of Photo-CD is that it bypasses the scanning step, allowing for quick, inexpensive image acquisition.

1.3 Memory

In order to optimize your use of Matisse, it helps to have some understanding of memory - both what's available under Windows and what you need to work with.

The good news is that, Unlike DOS, Windows supports virtual memory. In theory, this means that you can address up to four times the physical memory on your system. In practice, the factor is closer to two times, after accounting for DOS, Windows and Matisse. For instance, if you have 8Mb installed on your system, you probably have around 16-17 Mb of available memory. The exact number is shown at the bottom of the Matisse Status Bar.

Now for the bad news: Imaging is very memory intensive. For the purpose of example, lets use a standard snapshot size of 3.5 x 4.75 inches. At a typical screen resolution of 70 dots per inch this image contains about 80,000 pixels and will require about 560K of memory, allowing for undo and clipping operations. In other words, an 8Mb system can "hold" up to 28 snapshot size images at a time. So, as long as you are working at screen resolutions 8Mb will generally be more than enough.

On the other hand, the minute you get into 300 dpi or more images, the memory requirements start adding up. The same snapshot at 300 dpi will require about 10MB of memory, or almost 18 times as much as at screen resolution. Bottom line - if you are working at printer quality resolutions you need a lot of memory: at least 16MB

Chapter 2: Getting Started With Image Files

2.1 Color, Gray Scale and Indexed 256 Images

2.2 Image File Formats

2.3 Opening and Saving Images

2.4 Zooming, Scrolling and Iconifying Images

2.1 Color, Gray Scale and Indexed 256 Images

Matisse supports three distinct types of images: Color, Gray Scale and Indexed 256. Most the time, you will simply deal with "True" Color images. However, if you are ultimately interested in gray-scale printed output, you may decide to work in gray scale. Finally, Matisse supports an older type of image called "Indexed 256". While this image type is slowly being phased out, you may still run across it if you are downloading GIF and other files.

True Color is the standard 24-bit type used to represent color images. Each color is identified by three numbers between 0 and 255 representing the Red, Green and Blue components of that color.

Gray Scale images are 8 bit images where every pixel is represented by a number between 0 (black) and 255 (white). All the filters and paint operations apply directly to gray scale images.

Indexed 256 images are 8 bit images with each pixel being coded as an index between 0 and 255. This index is used as a lookup into a fixed "palette" or table of RGB colors. For instance, the index 233 might correspond to the color R=123, G=56, B=129. This palette is saved with the image.

Indexed 256 images have two main advantages. First, they are relatively small, requiring only byte of information per pixel. Second, they allow images to be displayed in high quality on VGA and SVGA displays, assuming that the system palette is reset to match the palette of the image.

Unfortunately they also have some serious drawbacks. They are inherently ill-suited for painting and image-editing both which require a 24-bit internal description of the image. Furthermore, resetting the system palette to display an image is only really feasible if you are displaying one image at a time. Otherwise, you will experience total loss of color on the other images, excessive flicker and delays as the system "rotates" between palettes. Consequently, Matisse has opted to not to take advantage of this "feature" on 8-bit displays. Note: Although we support indexed 256 color as a type, you must first convert the image to True color if you want to edit it.

2.2 Image File Formats

Image files are stored on disk in various file formats. In order to import a file into another program such as Microsoft Word you will need to save it in a file format that is supported by that program.

Matisse Format (.MAT) This format is the only one that fully recognizes all the different types of objects (images, shapes and text) that you can use in Matisse. You should use it to save all your work in progress.

Tagged Image Format (.TIF) A format developed by Aldus and Microsoft and recognized by most applications including all major draw and presentation packages. TIFF comes in two varieties, compressed and non-compressed. The compressed variant uses the so called LZW compression scheme that allows space savings without any loss of image quality.

Joint Photographic Experts Group Format (.JPG) This format is rapidly becoming the standard for compressed images. JPEG can compress an image up to 100 times, albeit with some loss of image quality. Use this format for archiving large images. Do not use it for work in progress, as there is some loss at each compression and decompression cycle.

Windows Bitmap (.BMP) This is the standard Microsoft/OS2 Bitmap format, and is used internally for copying to the MS clipboard. As all the other formats described here, it is "device independent," not linked in any way to a specific type of display monitor.

Encapsulated Postscript (.EPS) This is the Adobe format, required by postscript printers. It is a good choice for sending your output to a service bureau or communicating with Macintosh desktop publishing programs.

Graphic Interchange Format (.GIF) GIF is the main Compuserve format. It does not support 24 bit color and does not record the image resolution. Use this file format to send indexed images over the Compuserve network.

PC Paintbrush (PCX) The ZSoft format, developed for the entry level package PC Paintbrush.

2.3 Opening and Saving Images

The commands for opening and saving images are located in the File Menu. These commands are:

File: New: Image Creates a new color or gray scale image.

File: Open : Image Opens an image from disk.

File: Save Saves the active image.

File: Save As Saves the active image under a new name.

File: Save All Saves all active images.

2.4 Zooming, Scrolling and Iconifying Images

When you bring up an image, the image is contained in its own image window. This window contains a Title Bar which lists the name of the image file and the zoom factor. A zoom factor of 100% indicates a full-scale image. The zoom factor can be changed either with the Zoom Tool or with the Zoom Factor commands on the View Menu.

When an image is zoomed, or is otherwise too big to fit in the current window vertical and/or horizontal scroll bars will appear to allow you to edit the image one part at a time. You can also use the Hand Tool to auto scroll or "pan" around the image.

Like any Microsoft window, an image window can be maximized or minimized. When minimized, the image is replaced with a thumbnail slide, or "Icon". You can specify the size of these icons using the File: Preferences: Icon Size command.

Chapter 3: Mastering The Toolbox

3.1 Toolbox Overview

3.2 Selection Tool

3.3 Marquee Tools

3.4 DistortTools

3.5 Zoom Tool

3.6 BrushTool

3.7 Fill Tools

3.8 Shape Tools

3.9 Text Tool

3.10 Hand Tool

3.11 Eyedropper Tool

3.1 Toolbox Overview

The Matisse toolbox consists of 10 different tool categories, each represented by a tool icon. Icons which contain a small triangle in the lower left region lead to additional "related" tools. For example, the Rectangular Marquee icon can be pressed down (below the triangle) to reveal three other related tools: An Elliptical Marquee, A Lasso and a Wand.

The toolbar is deceptively simple. Some of the tools, in particular the distort tools, apply to objects, a term which is defined in [Chapter 7: Working With Objects](#).

3.2 The Selection Tool (Arrow)

This tool is used to select and move objects. To Select an object click on the object with the left mouse button. This will normally cause all other objects to be deselected. If you want instead to add to the selection hold down the Shift key while selecting the object. To toggle the state of an object, hold down the Control key while selecting the object.

3.3 The Marquee Tools

These tools are used to define a marquee or clipping area which applies to all filter and painting operations. Once a marquee is created, the Object: Make Floating command can be used to transform the marquee into a floating object.

The **Rectangle Marquee Tool** is used to create rectangular clipping regions or objects. To use the tool, *click* to anchor the rectangle and then *drag* to create the desired shape. The rectangle can be constrained to a square by holding down the Control key during the operation.

The **Ellipse Marquee Tool** is used to create elliptical clipping regions or objects. To use the tool, *click* to anchor the ellipse and then *drag* to create the desired shape. The ellipse can be constrained to a circle by holding down the Control key during the operation.

The **Wand Tool** is used to automatically select out regions which are similar in color.

To use the tool, simply click with the wand on any part of an open image. The wand will automatically create a connected marquee encompassing all similar pixels. The sensitivity of the tool can be controlled by the wand options dialog box, which you can get to by *double-clicking* on the wand tool icon.

The **Lasso Tool** is used to select a marquee area free-hand. To use the tool, press the left mouse button down to anchor the lasso, and while keeping the button down, draw out the outline of the marquee. When you are finished, double click to terminate.

Note: You can *add* to the current marquee by holding down the Shift key while applying the marquee tool. If you want to *subtract* from the current marquee, use the Alt key.

3.4 The Distort Tools

The Distort Tools are used to distort and resize objects. The following tools are available:

The **Rotate Tool** is used to rotate objects around a given point. To use the tool, select it from the Marquee . Handles will appear around each selected object and a small cross will appear in each object's center. You can grab the handles to rotate the object, or drag the center cross to a different location if you want to rotate around an arbitrary point.

The **Resize Tool** is used to resize a given object. When the tool is active handles will appear around selected objects. By grabbing these handles you can freely resize each object to the desired dimensions.

The **Free Distort Tool** is used to freely distort a given object. When the tool is active handles will appear around selected objects. By grabbing one of these handles you can "pull it" to cause a distorted effect.

The **Perspective Tool** is used to apply a perspective transformation to a given object. When the tool is active handles will appear around selected objects. By grabbing one of these handles you can move both it and the "opposite" handle in opposite directions. To switch between Vertical and Horizontal Perspective use the Shift key.

The **Skew Tool** is used to apply a Skew transformation to a given object. When the tool is active handles will appear around selected objects. By grabbing one of these handles you can move both it and the "opposite" handle in the same direction. To switch between Vertical and Horizontal Skew use the Shift key.

The **Reshape Tool** is used to edit control points of shape objects. When the Reshape Tool is active, the control points and tangents of all selected shapes will appear. These points can be dragged to alter the shape of the object. The Delete key can be used to delete control points, while Shift+Insert can be used to add control points.

The **Tilt Tool** is used to tilt all selected objects in the current window so that a specified line appears horizontal. This is particularly useful for straightening up an image object which has been scanned in crooked. To use it simply locate a horizontal line in the image and trace that line out with the tilt tool.

3.5 The Zoom Tool

The Zoom Tool is used to zoom into or out of a current Image Window.

Clicking with the left mouse button will *zoom in* by a factor of two. Clicking with the right mouse button will *zoom out* by a factor of two.

3.6 The Brush Tool

The Brush Tool is used for all types of painting. To select the type of brush you wish to paint with, click on an icon in the Brush Box (you can bring up this brush box either with the View: Brush Box command or by double-clicking on the brush tool icon).

3.7 The Fill Tools

The **Bucket Fill** tool is used for flood-filling a region to the current foreground color.

The sensitivity of the fill can be changed by double clicking on the Bucket Icon and changing the value of the sensitivity parameter.

The **Gradient Fill** tool is a versatile tool for filling regions and objects. By double clicking on the Gradient Fill Icon, you access a dialog box controlling the tool's behavior. The following parameters can be changed:

Gradient Shape. This can be Line, Rectangle or Ellipse. Use Line for linear (horizontal, vertical, diagonal) fills, and Rectangle or Ellipse for fills emanating from the center of an area or object.

Gradient Colors. Foreground to Background, Background to Foreground or Palette Colors. The Palette Colors option is only available if at least one palette is open.

Gradient Palette. A dialog box listing all open palettes. Select one of these palettes to customize the gradient fill colors. Note: this option is only available if at least one palette is open.

Gradient Opacity. The Opacity of the fill. Use an opacity of less than 100 to overlay a color gradient fill on-top of an existing image.

Gradient Repeat. Controls how many times the gradient fill will be repeated outside of the defining area. Choose a repeat factor greater than 1 to create repeating "psychedelic-art" type fills.

Gradient Midpoint. Controls how fast the fill is done from background to foreground (or vice versa). It has no impact on palette fills.

Gradient Smooth Fill. Check this box for the usual (smooth) gradient fill. Leaving it unchecked will result in a "banded look".

Gradient Extrapolate. Check this box if you wish to extrapolate beyond the defining area.

Gradient Repeat. Check this box if you wish to alternate the repeating gradient fills: e.g. Back->Fore, Fore->Back etc.

Gradient Cross Fade. Check this box if you wish to impact the opacity layer of an object as opposed to an image layer. This is desirable if you wish to create

gradient cross fades of one image into another. Note: this feature only impacts objects, not the background image.

3.8 The Shape Tools

The Shape Tools are used for creating Shape Objects. The following tools are included:

Rectangle Shape Tool. Used for Creating Rectangular Shapes. Can be constrained to create Square shapes by holding down the Shift Key.

Round Rectangle Shape Tool. Used for Creating Rectangle Shapes with Rounded Corners. Can be constrained to create Rounded Squares by holding down the Shift Key.

Ellipse Shape Tool. Used for Creating Ellipse Shapes. Can be constrained to create Circle Shapes by holding down the Shift Key.

Filled Spline Shape Tool. Used for Creating Filled Spline Shapes. These shapes typically start out as "blobs" but can be reshaped into virtually any shape using the Reshape Tool.

Polygon Shape Tool. Used for Creating Polygons. These are nothing more than filled Splines with the tangent vectors set to zero.

Line Shape Tool. Used for Creating Lines.

Polyline Shape Tool. Used for Creating Polylines - i.e.: a series of line segments.

3.9 The Text Tool

The Text tool is used for creating Text Objects. To activate the tool, click anywhere in a window. A specialized version of the Object Options box will appear allowing you to enter paragraph text. You can select any True Type font that you have installed on your system. You can also specify whether the text is to be left, center or right aligned.

At any point in time you can edit the text in a text object or change the font simply by double clicking on the object to bring up the dialog box.

One of the options in the Text tool dialog box is a checkbox called "Printer Quality". Checking this box will force the text to be printed at the resolution of the printer, resulting in vastly superior printed quality (versus screen resolutions). The only drawback is checking this option disables compositing, gradient fills of text, rotation, distortion and other features which would normally apply. Bottom line - if you are going to print your image, check this box; if not, don't.

3.10 The Hand Tool

The Hand Tool is used for panning around images which have vertical and/or horizontal scroll bars. The tool has no effect if no scroll bars are active.

3.11 The Eyedropper Tool

The Eyedropper tool is used for selecting colors from an image. Clicking on an image with the Eyedropper causes the foreground color to change to the color that is underneath the cursor. In order to compensate for random noise, Matisse allows you to specify an averaging radius for this color determination. If the radius is greater than 1, every pixel within that radius will be averaged to get the color. The radius is set in the Eyedropper dialog by double clicking on the Eyedropper Icon

When the Eyedropper is active, the R, G and B values for the current pixel are displayed on the Status Bar.

Note: The Eyedropper works both on images and palettes. For palettes, the Right mouse button of the Eyedropper has the effect of "dropping" (the opposite of the Left Mouse Button).

Chapter 4: Standard Brushes

4.1 DrawTools

4.2 Paint Tools

4.3 Stamp Tools

4.4 Retouch Tools

4.5 Opacity Brushes

4.1 Draw Tools

Pencil. A smooth, opaque pencil for sketching.

Calligraphy Pen. An angled, tightly spaced rectangular quill, for fancy lettering.

Felt-tip Pen. A "dirty" felt tip pen, which darkens when you go over it repeatedly.

Quill Pen. (**Version 1.2**): A "pen and ink" tool which varies smoothly in size as pressure increases. **Requires Pressure Tablet.**

Charcoal. A highly textured brush that simulates the touch of charcoal.

Crayon. A standard, waxy crayon, similar to the ones you used when you first learned to draw.

One Pixel Pencil. A precision pencil for detailed work at the pixel level.

4.2 Paint Tools

Airbrush. A brush for applying a fine mist of paint.

Oil. A rich, creamy multi-tipped brush. Use it to create your own "Sunflowers" at a fraction of the cost.

Water colors. A semi-transparent medium characterized by a high degree of "bleeding."

Pastels. A chalky, grainy brush.

Pointillist. A neo-impressionistic style brush for drawing landscapes, trees, etc.

Fauve. A totally wild brush for the true *Fauve* artist. In French, *fauve* means wild beast, and it was the name of the school to which Matisse belonged.

Cubist. A brush in the style of Braque or Picasso.

Surface. (**Version 1.2**) A textured airbrush, perfect for applying surface texture to the canvas.

Japanese. (**Version 1.2**) An oriental watercolor brush which varies in size with pressure. **Requires Pressure Tablet.**

Chameleon (**Version 1.2**) A brush which varies in color between the background and foreground colors depending on pressure. **Requires Pressure Tablet.**

4.3 Stamp Tools

Stamp tools are brushes that copy one part of an image to another part of a (possibly different) image.

Transfer. A straight copying tool.

Felt Tip. A "dirty," felt-tip stamp tool for creating blackened copies of images.

Stroke. Copies, using an oil paint brush.

Dots. Pointillist stamp. Instant neo-impressionistic art. (Handle with care. May result in a case of measles.)

Airbrush: Fine mist stamp for creating "ghost" effects.

To use a stamp tool:

1. Open the image you wish to stamp *from*, and click with the left mouse while holding down the Shift key. This will "anchor" the stamp.
2. Open an image onto which you wish to stamp. (This may be the same image.)
3. Paint on the target image, as with any brush. Matisse will "pick up" pixels from the source image and copy them as you go.

4.4 Retouch Tools

These brushes are primarily used for retouching photographic images. A bad snapshot can be "saved" by careful application of these brushes. Retouch tools can also be used in painting to create special effects.

Lighten. Lightens the area under the cursor.

Darken. Darkens the area under the cursor.

Smudge. "Finger Painting" tool. Picks up paint and smudges it as it goes.

Blur. Useful for softening edges locally.

Diffuse. Good for giving a hint of randomness.

Despeckle. Digital detergent. (Cleaner than clean.) Removes small spots.

Mosaic. Applies the mosaic filter to the pixels directly under the brush.

Add Noise. Adds noise as you go.

4.5 Opacity Brushes

Opacity brushes remove or restore opacity as they are applied. By removing opacity, we create "holes" in an object that lets the background "shine through." Conversely, by using the opacity restore brush, we undo the holes, and restore the original object.

Remove Opacity. Removes opacity from an image object. Used in zoomed mode to define precisely the borders of image objects.

Restore Opacity. Undoes the effect of "remove opacity."

Blur Opacity. Softens the edges of an image object as it is applied.

Remove One Opacity. A one pixel variant of the "remove opacity," for defining the edges of objects in a close, highly detailed manner.

Restore One Opacity. The converse of the "remove one opacity" brush.

Chapter 5: Customizing your Brushes

- 5.1 The Brush Shape Box
- 5.2 The Brush Options Box
- 5.3 Paintbrush Options
- 5.4 Stamp Options
- 5.5 Retouch Options
- 5.6 Editing Brush Sets

5.1 The Brush Shape Box

The first thing you will want to change with your brushes is to change their size. To do this you need to make sure the Brush Shape Box is visible (use the View: Brush Shape command to show it). The following controls are available:

Brush Size: Sets the current brush radius in pixels.

Brush Aspect: Defines the brush aspect ratio i.e.: the ratio of the brush height to the brush width. The smaller this number, the more elliptical round brushes will appear.

Brush Angle: Allows you to have angled brushes. Great for calligraphy and "ribbon" effects.

Brush Soft Edge: Controls the "softness" of the brush edge. The greater this number, the more "Airbrush"-like the brush will appear.

Number of Tips: Controls how many brush tips are in use. Typically this is set to one, although you can have more than one tip, in particular if you want to create thick, "oil" effects.

Square Tip: Sets the brush tip to "square" as opposed to "round". This is useful for precision work at the pixel level.

Anti-Alias Box: This checkbox turns on and off anti-aliasing for the brush. Usually you will want to leave it on, although for detailed work with square brushes you might prefer to disable it.

5.2 The Brush Options Box

The Brush Options Box controls the behavior of an individual brush. It contains for instance, controls on the spacing and opacity of the paint dabs. Any changes you make in this box will only affect the current brush.

At the top of the Brush Options Box a combo box allows you to choose between three types of brushes: standard *paintbrushes*, brushes used for cloning or "*stamp tools*", and finally a specialized category of "*retouch tools*". Depending on which of these three options you choose, a different set of sliders will appear.

5.3 Paintbrush Options

Opacity: The overall opacity of the paint. At 20% opacity, each dab of the paint will apply 20% of color to the background.

Spacing: The spacing between successive dabs of paint. Is measured *relative* to the size of the brush. For example, if the brush size is 10 pixels, a spacing setting of 50% implies that there are $50\% \times 10 = 5$ pixels between each dab. You can generally leave the spacing at around 20% for most brushes. Small spacing will slow down the brush.

Smoothing: Applies a smoothing algorithm to the brush path. This allows you to create very smooth strokes, even with a standard mouse. On the other hand, the higher the smoothing value, the less control you will have with mouse. Also, you generally don't need quite as much smoothing with a tablet as with a mouse.

Scatter : Randomly scatters successive brush strokes, giving a "pointillist" neo-impressionist look.

Grain: This control affects the outer-rim of the brush, giving a "shredded fringe" look to your brush strokes. It is sensitive to the type of paper texture in effect.

Texture: Picks up the underlying paper texture. When combined with the grain control, can give a very natural look to your brush strokes.

Bleed: Effects how the colors of the brush "bleed" into the colors that are already on the canvas. If bleed is set at a high level, the strokes will be very diluted, as with a watercolor brush.

Blackness: Effects how the colors "burn in" to the background. When blackness is zero, the blending is a strict (additive) opacity blend. This mimics the way oil paints tend to blend. On the other hand, setting blackness close to 100% results a subtractive blending which is closer to the way inks blend.

Randomization Controls: These controls randomize the colors of each dab of paint. You can choose to randomize using either the RGB, HLS or CMYK models. If, for instance, you choose the RGB model, each of the r, g and b channels would be continuously randomized according to the sliders.

Pressure Sensitivity Controls: These controls take the form of three menu check items which are used to turn on or off pressure-sensitive behavior.

They only apply when you have a pressure sensitive tablet installed.

Increase Opacity increases the opacity when pressure is increased.

Increase Blackness increases blackness when pressure is increased.

Increase Scatter increases scatter when pressure is increased.

Change Size. (**Version 1.2**) increases size when pressure is increased.

Change Color (**Version 1.2**) changes color from foreground to background with pressure.

Speed Sensitivity Controls: Like the pressure sensitivity controls, these controls take the form of three menu check items which are used to turn on or off speed-sensitive behavior.

Decrease Opacity decreases the opacity when brush speed is increased.

Decrease Blackness decreases blackness when brush speed is increased.

Decrease Scatter decreases scatter when brush speed is increased.

5.4 Stamp Options

Stamp options effect the behavior of Stamp Tools. See Chapter 4. for a description of the standard stamp tools.

Align: When this option is checked, the cloning is always done relative to the anchor point, regardless of whether the mouse is down or not. You want this *checked* if you cloning a large part of an image, you want it *unchecked* if you are cloning multiple copies of the same thing at different places.

Align To Page: This option forces the cloning to be done page-to-page. You want to check this option if you are cloning an entire image. In this mode, first use File: Duplicate to duplicate the image. You can then either clear the clone image with Edit: Clear, or create a "semi-transparent" layer using the following commands:

Edit: Select All
Object: Make Object
Object: Options Opacity 50%
Edit: Clear

Average: When averaging is turned on the pixels underneath the cloning source brush are averaged to produce the painting color. This feature is useful for creating "painterly" clones out of ordinary images.

Repeat: When the cloner is "outside" of the source image, it typically ceases to clone. To override this behavior, and continue cloning as in a pattern fill, turn the Repeat switch on.

5.5 Retouch Options

The Retouch Options contain a selector which make the brush behave like a specialized retouch tool. See chapter 4.0 for a description of the retouch tools. A slider is available to modulate the strength of each tool. This is fairly self explanatory, except for the Mosaic tool, where "Strength" has the interpretation as "tile size".

5.6 Editing Brush Sets

If you change a brush parameter using the brush options box, and then switch to another brush, Matisse will ask you if you want to save the changes. If you say yes, Matisse will register the brush set as "changed" and at the end of the program prompt you for a filename to save it under. You can then overwrite the default brush file (matisse.brs) or create your own brush file under the name you choose.

When Matisse starts up the next time, you can open your saved brush set by using the **Edit: Brushes: Open** command. You will also find other easy to understand editing commands in the **Edit: Brushes** sub menu .

See also: [Edit: Brushes](#)

Chapter 6: Selecting Colors and Palettes

6.1 Color Models

6.2 The Color Selector

6.3 Palettes

6.4 Opening and Closing Palettes

6.5 Changing the Colors in a Palette

6.6 Searching a Palette

6.7 Creating a Palette from an Image

6.8 Resizing a Palette

6.1 Color Models

In order to classify colors, researchers have come up with a number of different "models" or "color spaces". Matisse supports the three most frequently used of these:

The RGB model breaks up each color into Red, Green and Blue components. This color model is used internally by all computer programs, and reflects the way light beams "add together" in a cathode ray tube.

The HLS model is a more intuitive classification, breaking each color into hue (dominant wavelength), luminosity (brightness) and saturation (degree of purity).

Finally, the CMYK model, splits color into Cyan, Magenta, Yellow and Black channels. Since this model mimics the way inks "subtract" out light when mixed, it is the standard model in the printing industry.

6.2 The Color Selector

The Color Selector allows you to select colors based on one of three most popular color models: RGB, CMYK and HLS. You can also specify gray-levels directly.

For a given color model, you can select the active color either using the sliders or by clicking on a color swatch.

6.3 Palettes

In addition to the color selector, you can select colors from a palette. In Matisse, a palette is a rectangular array of color swatches, each of which can have a name up to 21 characters long. The only restriction on palettes is that they cannot contain more than 5000 colors.

6.4 Opening and Closing Palettes

Palettes are saved as files with .pal extensions. The File: New, File: Open, and File: Save commands all work for palettes exactly as they work for images. Palettes can be minimized and stored in folders along with images.

6.5 Changing the Colors in a Palette

When the cursor is over a palette, the eyedropper tool becomes automatically active. Clicking with the left mouse button will "pick up" color from the palette, and change the active color. Clicking with the right mouse will "drop" the active color into the palette. If you have a middle mouse, it is used to drop "a bit" of the active color.

You can select rectangular regions of the palette by holding down and dragging with the left mouse button. This selected area can be cut or copied and then pasted onto another area or another palette. You can also use the Edit: Palette: Interpolate and Edit: Palette: Rectangle Interpolate commands to interpolate within the selected area.

6.6 Searching a Palette

Palettes can be viewed in two modes: with or without names. The Edit: Palette: Names command toggles between these modes. If you have named the colors in your palette, you can look up a color by name using the Edit: Palette: Find By Name command.

Alternatively, you can use the Edit: Palette: Find command to match the foreground color to the nearest color in your palette. Note that if you have too few colors in your palette the results can sometimes be unexpected: what the computer thinks of as "nearest color" may not be your top choice.

6.7 Creating a Palette From an Image

One of the most powerful commands relating to palettes is the Edit: Palette: Sample Image command. Applying this command automatically creates a 16x16 color palette out of an image, by extracting out the top 256 "representative" colors.

Once you have such a palette you can turn around and apply the Image: Tune: Colorize command to colorize another image.

6.8 Resizing a Palette

The default palette size is 16x16 (256 colors). You can resize a palette to an arbitrary number of rows and columns using the Edit: Palette: Resize command.

Chapter 7: Working with Objects

7.1 Objects : an Overview

7.2 Image Objects

7.3 Shape Objects

7.4 Text Objects

7.5 Selecting and Moving Objects

7.6 Grouping and Ungrouping

7.7 Object Cut and Paste

7.8 Changing the Object Ordering

7.9 Snap To Grid

7.10 Align

7.11 Merging Objects

7.12 Resizing and Distorting Objects

7.13 Object Compositing

7.14 The Make Marquee Command (Version 1.2)

7.15 Opacity Commands (Version 1.2)

7.1 Objects: an Overview

One of the things that makes Matisse very different from other Paint and Image processing programs is its support of **objects**.

If you have used a paint program before, you are already familiar with the concept of "**floating selections**", which float in a separate layer on top of a background image. Matisse pushes this concept one step further, allowing you to have any number of "independent" image objects floating on top of the background (and each other). In addition to Images, both Text and Shape objects are implemented in one unified fashion.

The power of objects is that they can easily be grouped, aligned, resized, rotated, distorted and even dragged between Windows. The order of the objects on the desktop can be changed. Finally the way objects are composited one on top of another can be to create "ghosting" and other effects.

7.2 Image Objects

Image objects are very similar to the concept of "floating selections" in other paint packages. They appear as "pieces" of images that "float" above the background. To create an Image Object, first use one of the Marquee Tools to define a current Marquee. Then, apply the Object: Make Floating(Ctrl+0) command to turn that Marquee into an object.

All Image Objects have a hidden "Opacity layer". This is nothing more than a gray scale image which tells Matisse which parts of the object are transparent and which parts can be painted on. One of the most powerful aspects of the program is the ability to indirectly edit this layer using one of the Opacity Brushes. These tools allow you to easily and precisely define the boundaries of free-form image objects in a way that it is close to impossible with the traditional lasso tool. Furthermore, the Gradient Fill Tool has an option which will apply the fill directly to the opacity layer allowing you to create ultra-quick cross fades.

7.3 Shape Objects

Shapes are objects such as rectangles, circles and curves. They are initially created with the the shape tools on the toolbox. Like all objects they can be moved, resized and distorted. They can also be merged into the background image with the Object: Merge command.

Matisse represents every shape internally as a set of control points. By changing these control points you can change a circle into a moon, an oval or a pie. In fact, you can create virtually any shape you want by altering the control points. To see how this done, check out the [topic](#).

All shapes have an outline, which Matisse will use to draw the border of the shape. When a shape is first created, the outline drawing mode is set by the current brush and the current foreground color. To change the outline, use the Object: Set Outline command. You can suppress the outline by selecting No Border in Object: Merge Control. (**Version 1.2**) Closed shapes are initially created with a "no-border" option, ie: they are drawn without outlines.

Closed shapes such as the circle also have interiors. When the Shape is created, its interior is filled to the current background color. You can change the fill mode to a gradient fill by applying the Gradient Fill Tool to the shape. You can also fill the shape with the current pattern with the Edit: Fill command. To change the color(s) used for the current fill, apply the Object: Set Interior command.

See Also:

Shape Tools

7.4 Text Objects

Text Objects allow you to place movable and editable text in your composite images. Unlike the "selection text" of other retouch programs, our text objects keep around a high level description of their contents, allowing you to easily correct for mistakes, change the font or change the alignment at any time. Another new feature is the ability to print text at printer resolution. For those of you who like to combine 75-dpi bit maps with 300-dpi characters this feature should definitely be checked out!

See Also:

[Text Tool](#)

7.5 Selecting and Moving Objects

Selection of Objects is done with the Selection Tool (Arrow) on the Toolbox. When you click with this tool on any object that object becomes *selected*, and all other objects become *deselected*. If you want to *add* an object to the current selection use the Shift key while pressing down. If you want to toggle the selection state of one particular object, use the Control key while pressing down.

On the Menu, the Object: Select All, and Object: Select None commands are self-explanatory.

Moving objects around on the desktop is simply a matter of drag and drop. You can move an object anywhere within its window, or move it clear to another window (implicit cut and paste). If you hold the Shift key down while you are doing this operation you will *copy* the object instead of moving it.

7.6 Grouping and Ungrouping

Once you have selected several objects you may want to group them together so that they can be moved as a single object. To do this, use the Object: Group command to unify all selected objects into one. At any time you can use the Object: Ungroup command to restore the objects back to their original state.

Note: you can group any types of objects e.g.: shapes with text. You can also have groups of groups, groups of groups of groups and so on.

7.7 Object Cut and Paste

Objects can be cut or copied to the clipboard with the Edit: Cut and Edit: Copy commands. You can then use the Edit: Paste command to paste the objects back into a window.

When you cut or copy an object in Matisse you are implicitly saving that object to the Matisse *private clipboard*. This allows you to paste that object back into Matisse at a later time. Matisse needs to use its own clipboard to fully save all the details of the object, such as the Marquee Information, Compositing rules etc...

In order to communicate with other applications, such as Microsoft Word, however, it is necessary to use the *Windows clipboard*, not the private Matisse clipboard. To make this easy for you to do, Matisse normally puts a separate copy of whatever is being cut or copied into the Microsoft Windows clipboard. This allows you to import images back and forth between applications without having to worry about which clipboard is active.

This default procedure has only one problem - it requires twice as much clipboard memory. If you are running low on memory, you can disable the double-copying in the Preferences menu. It can always be enabled at a later time

7.8 Changing the Object Ordering

In Matisse, as in all draw programs, objects are displayed one on top of another, like pieces of paper lying on a desk. And, like pieces of paper lying on a desk, objects can get buried below other objects and often need to be reorganized so that the objects you need right now appear on top. The Object: Order command contain the Move Up, Move Down, Send To Front and Send To Back commands which affect this ordering.

7.9 Snap To Grid

An invisible grid overlays each window in Matisse. The size of that grid is set with the File: Preferences : Grid Size command. The grid can be toggled on and off using the Object: Snap To Grid command. When the grid is on, objects will move on grid points, which is particularly useful for precision alignment.

7.10 Align

Matisse support two types of object alignment commands. The first type, the (regular) Object: Align commands are used for aligning a set of objects to their bounding rectangle. The second type, the Object: Align to Image commands, aligns the objects to the top, bottom, right, left or center of the image.

7.11 Merging Objects

A floating object can be "Merged" into the background image using the Object: Merge command. Once an object is merged it can't be moved or distorted.

7.12 Resizing and Distorting Objects

One of the great things about objects is that you can resize and distort them without losing image quality. The tools to do this are the distort tools, located on the top left "shelf" of the toolbox. They apply to all types of objects: Image Objects, Shapes and Text. For more information see [Distort Tools](#).

7.13 Object Compositing

Compositing is the process of overlaying shapes, images and text objects on top of each other. Matisse does this by having each object keep around a *composite rule* which tells the system how that object should be merged onto the ones below it. The following rules are supported:

Normal Compositing : The object is blended using an opacity parameter. The higher the parameter, the more opaque.

Blackness Compositing: A variant on Normal compositing with an extra parameter: a so called "blackness" value. The blackness value determines how much the colors turn to black as they are blended.

Additive Compositing: Straight addition of RGB values.

Lighter Compositing: The lighter pixels show through.

Darker Compositing: The darker pixels show through.

Emboss Compositing: The object becomes embossed on what's below it.

7.14 The Make Marquee Command (Version 1.2)

Fauve Matisse Version 1.2 contains a very powerful command on the object menu called "Make Marquee". This command creates a marquee around one or more selected objects. It can be used as follows:

To crop out an object using a bezier shape: To do this, first select the closed spline tool and define a bezier shape around a region of interest. Then, activate the reshape tool to suppress the filling of the shape and allow you to fine tune the shape definition. You can now apply the "Make Marquee" command to create a marquee, followed by the "Make Floating" command to create an object. This procedure allows you to quickly achieve precise, antialiased object crops.

To convert a text or shape object to an image object. There are times when you may want to change a floating text object to a floating image object so that you may paint it, or apply a filter to it. To do this, simply select the text object, Apply "Make Marquee", and then again, "Make Floating". You now have a floating image copy of the text object and may delete the original text if you so desire.

To create precise fills and opacity fills of objects. By using the shape and make marquee command as illustrated above it is a snap to quickly define precise marquee areas. Since all filling and filter operations are clipped to those marquee areas, this allows you for example to apply an opacity fill to transparent to an object, thereby creating a hole in it.

7.15 The Opacity Commands (Version 1.2)

Fauve Matisse Version 1.2 contains an "Opacity" submenu of the Object menu. This submenu allows you to import or export the opacity layer of a selected object, fill the opacity layer of that selected object (ie: affecting the transparency), and even invert the layer, allowing you to use the object as a stencil.

Chapter 8: Filters and Image Processing

8.1 Filters - An Overview

8.2 Tuning Filters

8.3 Blur Filters

8.4 Convolution Filters

8.5 Distort Filters

8.6 Edge Detect Filters

8.7 Mosaic Filters

8.8 Noise Filters

8.9 Texturize Filter

8.10 Color Separation

8.11 Image Crop, Flip, Resample and Rotate

8.12 Auto Paint

8.1 Filters - An Overview

Filters are computer routines which act on images to achieve blurring, distortion and other effects. You will find all of the filters in Matisse in the Image Menu, grouped under subcategories ranging from "Tuning" to "Texturize". All these filters (with the exception of the Tone Adjustment filter) lead to a standard dialog box which allows you to preview the impact of the Filter on a small portion of the image.

8.2 Tuning Filters

Brightness/Contrast: Similar to the Brightness/Contrast controls on a TV. Increasing brightness adds pure white to the image. Increasing contrast tightens the color range.

CMYK: Adds/Subtracts a fixed amount of Cyan, Magenta, Yellow or Black to each pixel in the image.

Colorize: Colorizes an image using a 256-color palette. If you don't have such a palette, you can use the Edit: Palette: Sample Image command to extract one from another image. Note: This command only works on color images. If you want to colorize a gray scale (8 bit image) first convert it to True Color, and then apply the command.

Equalize: Equalizes out the image to contain an even mix of light and dark areas. It is particularly useful for re-touching under or over-exposed photographs, particularly gray-scale ones.

Invert: Inverts the image, producing a negative.

HLS: Adds/subtracts hue, lightness, and or saturation. Pumping up the saturation on an image is often a good way of adding life to it.

Posterize: The term "posterize" means to compress the range of color values. For example, on a gray scale image, setting the posterize level to five will result in each channel going from 256 shades to 5 shades. This results in images which are somewhat "blotchy".

RGB: Adds/Subtracts a fixed amount of Red, Green or Blue to each pixel in the image.

Tint: Creates a 256-shade image which "leans" towards the foreground color. Gives a very clean, "tinted" look to an image or area which you cannot get by other tuning adjustments.

Tone: Overall tone adjustment facility. Allows you to increase the shadows, midtones or highlights of the image and see the effects on the image interactively. The controls in effect re-ramp each of the gamma curves for the three channels R, G and B.

8.3 Blur Filters

Blur: Applies a 3x3 convolution blur to the image. A blur amount parameter is used to increase/decrease the weight on the center pixel, mildly changing the degree of blur.

Fragment: Superimposes a specified number of copies at random offsets. The variance of these offsets can be specified in pixels.

Motion Blur: Superimposes a specific number of copies at a given distance from each other and at a specified angle to create the impression of movement. Using 4 or more copies at a distance of 3 pixels yields good results.

Gaussian Blur: Applies a smooth normalized or "gaussian" blur filter to the image. More "soft" than other blur filters, but slower. Blur amount is specified by a radius in pixels (1-5).

Uniform Blur: Applies a uniform blur filter to the image. Essentially the same as the standard blur filter, but with a variable radius of up to 5 pixels (10x10 convolution). Like the gaussian blur, can be slow, especially on large images.

8.4 Convolution Filters

The term "convolution" is an image-processing term for a class of filters which are defined by a matrix of numbers. For each pixel, the new RGB values are defined as a weighted sum of the adjacent pixels. The convolution matrix allows you to enter these weights. The result is divided by a scale factor, and shifted by an offset.

8.5 Distort Filters

Cylinder: This filter maps the image to a cylinder, like a "special effects" mirror at an amusement park. You can specify an amount between -100 and +100. A positive amount will cause the image to "bulge", a negative amount will cause it to be "squeezed". You can also specify whether the cylinder is vertical or horizontal.

Fish Eye: Creates the impression the picture was taken through a fish-eye lens. The degree of "bulge" is controllable with an amount parameter. Specifying a negative amount will cause the image to be "pinched"

Ripple: Creates a "rippled" wave over the image, similar to looking through heavy plate glass on a rainy day. The ripple is controlled by a wavelength and an amplitude factor. The best way to see how these two parameters interact is by playing around with them!

Wave: Creates a horizontal or vertical wave on the image. The wavelength and the amplitude of the wave can be specified. Like the Ripple filter, this one takes some trial and error to get comfortable with.

Whirlpool: Passes the image through a whirlpool vortex, creating a "twirl" effect. A twist amount in degrees (between -360 and +360) controls the degree of twirl.

8.6 Edge Detect Filters

Filters that detect and act on the edges of the image.

Emboss: Creates an "embossed look" using directional gradient information. The emboss depth controls how "protruded" the embossing looks. The contrast parameter is useful for increasing the sharpness of the embossing. The emboss angle is entered in degrees. Finally, you can specify a background color for embossing: foreground, background or gray.

Find Edge: Standard filter which finds all edges of the image and displays them in white on a black background. By checking the invert box, you can specify black edges on a white background.

Sharpen: Accentuates the edges of an image to increase the perceived "sharpness". A single parameter, amount, is used to regulate the degree of edge enhancement.

Threshold: This filter classifies all pixels into two categories: those whose R,G,B values are above a certain threshold and those who are below. The R,G,B threshold values are entered with three sliders and can be constrained to be equal by clicking on the constrain checkbox. You specify one color for the "above" pixels and one for the "below" pixels.

Variable Edge: A highly versatile filter for the image professional. For each pixel an edge gradient is computed. Depending on whether the edge is greater or less than a specific threshold, the pixel is colored in the "above" color or the "below" color. Color choices include HiLite (which sharpens the pixel) , Unchanged (leaves the pixel as is) and Raw (the raw gradient number, as displayed by the standard Find Edge filter).

8.7 Mosaic Filters

Included under this heading are filters which produce a clustered "mosaic" effect.

Maximum: This filter replaces each pixel with the lightest (maximum) pixel in a neighborhood around it. The neighborhood radius is given in pixels. Using values greater than 1 can slow this filter considerably.

Median: This filter replaces each pixel with the median lightness pixel in a neighborhood around it. The neighborhood radius is given in pixels. Using values greater than 1 can slow this filter considerably. The effect of the median filter is to blur the image without destroying edges. It is perfect for removing noise from an image, or blurring flat parts of an image while keeping straight lines relatively crisp. While not really a "mosaic" filter, we included it here to be next to the minimum and maximum filters.

Minimum: This filter replaces each pixel with the darkest (minimum) pixel in a neighborhood around it. The neighborhood radius is given in pixels. Using values greater than 1 can slow this filter considerably.

Mosaic: Creates the "police suspect" look by grouping pixels in tiles and coloring each tile with its average color. You can specify the width and height of the tiles, and constrain these to be equal by click the square checkbox.

Shatter: Creates a "David Hockney" look by cutting the image up into tiles and moving the tiles randomly around. You specify the tile width and height, the average movement in pixels, and optionally an amount of random tinting that is applied to each tile.

8.8 Noise Filters

Add Noise: Adds a specific amount of white noise to the image. The amount is specified between 1 and 255.

Diffuse: Moves each pixel by a random amount, creating a very nice "grainy breakdown" of the image.

Remove Noise: Checks each pixel's color relative to the median color of the neighboring pixels. If the difference is greater than a threshold, the pixel color is replaced with the median color. The strength parameter controls the noise threshold.

8.9 Texturize Filter

Texturizes the image using the current texture. The texture amount can be set to a number between 1 and 200. The angle of the light source can be entered in degrees.

Use for: adding paper texture to images.

8.10 Color Separation

The Image:Separate commands break an image down by channel. You can specify whether you want to use RGB, HLS or CMYK channels in the separation.

To optimize CMYK separations, you can modify any of the following parameters:

Threshold: Starting threshold in % below which there is no black being generated.

Black generation: max % of black that will be generated.

Under color removal: % of black that will be removed from each C,M,Y triplet.

After separating out an image, each channel is given its own window, and can be modified using any of the paint or image processing commands. The Image: Recombine command can then be used to re-create a composite of the different channels.

8.11 Image Crop, Flip, Resample and Rotate

These four commands are located on the Image menu and have one thing in common - they apply *globally* to all objects in a given window. For instance the Image: Flip command flips all objects in the window, unlike the Object: Flip command which flips only selected objects.

Image: Crop: Crops the image to the current marquee. To use, first define a crop area with the Rectangle Marquee tool.

Image: Flip: Flips the entire window (including all objects) either horizontally or vertically.

Image: Rotate 90 Rotates the entire window (including all objects) by 90 degrees.

Image: Resample Resamples the entire window (including all objects) to a given new width and height. These can be entered in either in pixels, inches, or as percent of the original image. You can also constrain the aspect ratio to be fixed to the aspect ratio of the old image.

8.12 Auto Paint

This switch toggles on auto painting mode. With Auto Paint, when the brush tool is active the right mouse button causes Matisse to automatically fill the image using the last brush stroke. (Normally the right mouse button simply repeats the last stroke *once*).

Chapter 9: Folders

9.1 Overview

9.2 Icon Drag and Drop

9.3 Nested Folders

9.1 Folders : An Overview

Folders are an intuitive, graphical way of organizing your image files. For instance, you could construct a folder called "Vacation" with all your vacation photographs. When the folder is brought up, you would see one small slide, or "icon" for each snapshot in the series. By clicking on that slide you would be able to bring up the corresponding image in full size, ready for editing.

The way folders work is by keeping around a filename for each image in the folder. Since the folder only contains the *filename*, not the actual image, you can include the same image in two different folders. For instance, the same picture of "little johnny" could be included in a folder called "Kids" and another one called "1993". It is very important to recognize this distinction between folders - which contain *references* to files and DOS directories which contain the *actual* files.

The easiest way to get acquainted with folders is to open one of the sample folders included with Matisse and play around with it. You will quickly see how easy they are to work with.

9.2 Icon Drag and Drop

The easiest way to move images around in folders is to simply pick them up with the cursor and then drag them to their desired location. The Shift and Control keys can be used here and have the same meaning as in the Microsoft FileManager.

In selecting images: Shift is used to select a *range* of images. Control is used to *toggle* the selection status of individual images.

In moving images outside of the folder: Shift is used to make a *copy* of the images.

You can of course, use the Cut, Copy and Paste commands on folders just as you would anywhere else.

Note: To add an image, palette or folder into another folder first minimize it to create a slide. Then drag the slide into the desired folder.

9.3 Nested Folders

One of the most powerful aspects of folders is that you can nest them - i.e: a folder can contain other folders. This feature allows you to create hierarchies of images, one level leading to another. The Master.fld folder included with Matisse illustrates this point. This folder contains several other folders including Images.fld and Palettes.fld. By clicking on the "Images.fld" slide, you bring up *another* folder of choices, in this case sample images.

The thumbnail that is used to represent the folder itself is called the folder *cover*. This image is by default blank, and can be set using the Edit: Folder: Set Cover command. If you want to modify an existing cover use the Edit: Folder: Get Cover command to retrieve it for editing.

