



This is a free, user-editable, open source software manual.  
Please feel free to contribute and improve it online at FLOSS manuals:  
<http://flossmanuals.net/Alchemy>

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# Alchemy

Alchemy is software for sketching or drawing using a computer. Unlike other paint programs, Alchemy is not necessarily about creating finished artwork, instead it focuses on using experimental interaction to come up with new ideas completely. 'Experimental interaction' in this case means things like using your voice to control how lines are drawn on screen, generating random shapes, or drawing with symmetry to create a quick and dirty face or body.

You might use Alchemy to draw for fun and experiment with, or if you're a more serious artist you might use it as a digital sketchbook - a place where you can experiment with new forms and drawing techniques. For example, like in the image below, you can create a quick and chaotic silhouette in Alchemy then later move to a more conventional paint program to add the finishing touches.



First time users may notice that Alchemy is missing a lot of the features we expect paint programs to have: no undo, no selecting, and no editing! But don't worry, this is all part of the plan to output a great number of good, bad, strange, and beautiful shapes, rather than a single 'perfected' one. To keep track of all these sketches we will make, Alchemy has a recording function that saves pages in a PDF (Portable Document Format) file either manually or automatically.

You can install and run Alchemy on **Mac OS X**, **Linux**, and **Windows**. Drawing can be done with a mouse or laptop touchpad, but a pen tablet is the best choice.

# Installing Alchemy on OS X

**Software name :** Alchemy

**Homepage :** <http://al.chemy.org>

**Software version used for this installation :** ALPHA 005

**Operating System use for this installation :** OS X (10.4)

**Recommended Hardware :**

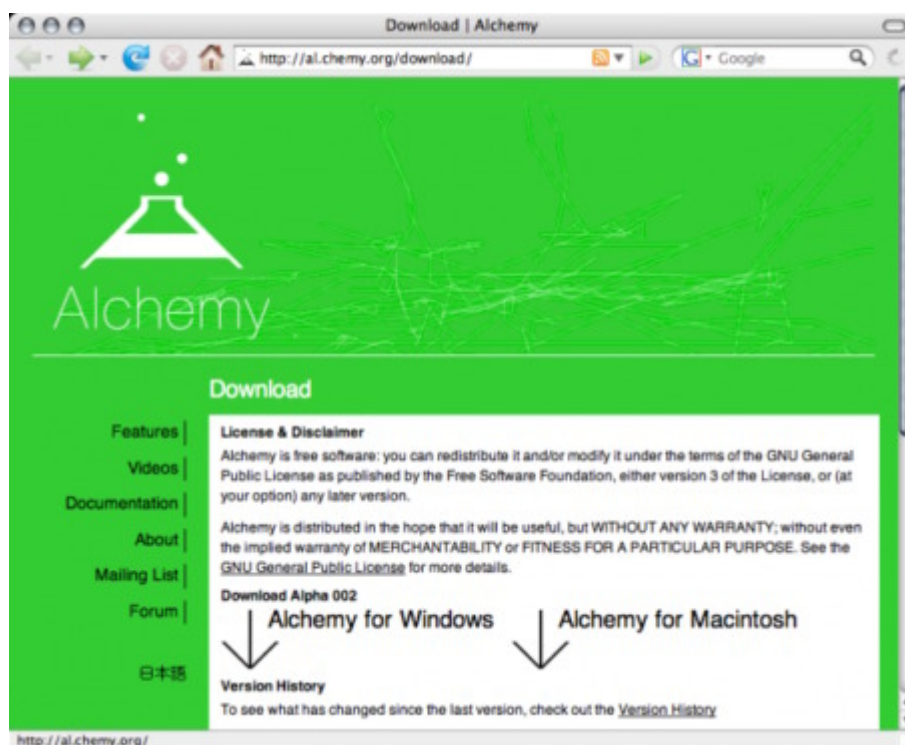
**Required Software :** Java Runtime Environment Version 1.5 or above

## Downloading Alchemy

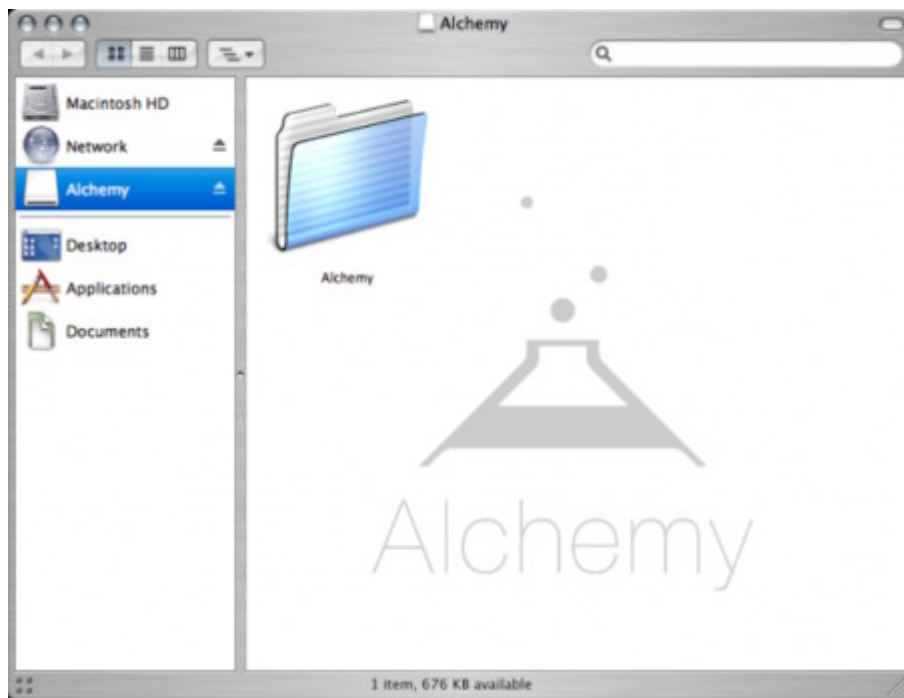
The latest version of **Alchemy** for **OS X** can be downloaded from:

<http://al.chemy.org/download/>

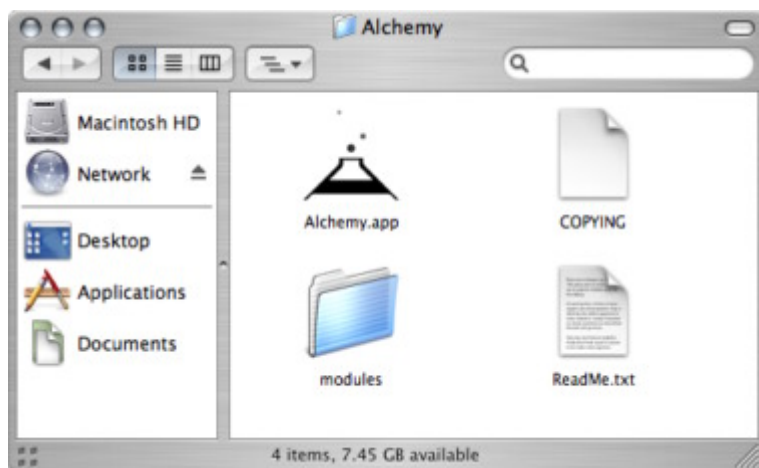
The latest version at the time of writing this document is **Alchemy ALPHA 005**.



Click on the link labeled 'Alchemy for Macintosh' to download. Once the download is complete, check your default download directory for the Alchemy file. If you see a .zip file, double-click it to extract the main .dmg disk image file. Next, double-click the .dmg file to mount the disk image, then open the disk image from your desktop like so:



To install Alchemy, copy the "Alchemy" folder into your Applications folder simply by dragging the folder icon from in the Disk Image to your Applications folder. That completes the installation of Alchemy and you should now be able to see the Alchemy folder inside your Applications folder.



To open Alchemy simply double-click on the Alchemy icon inside the Alchemy folder.

# Installing Alchemy on Linux

**Software name :** Alchemy

**Homepage :** <http://al.chemy.org>

**Software version used for this installation :** ALPHA 005

**Operating System use for this installation :** Ubuntu 8.04

**Recommended Hardware :**

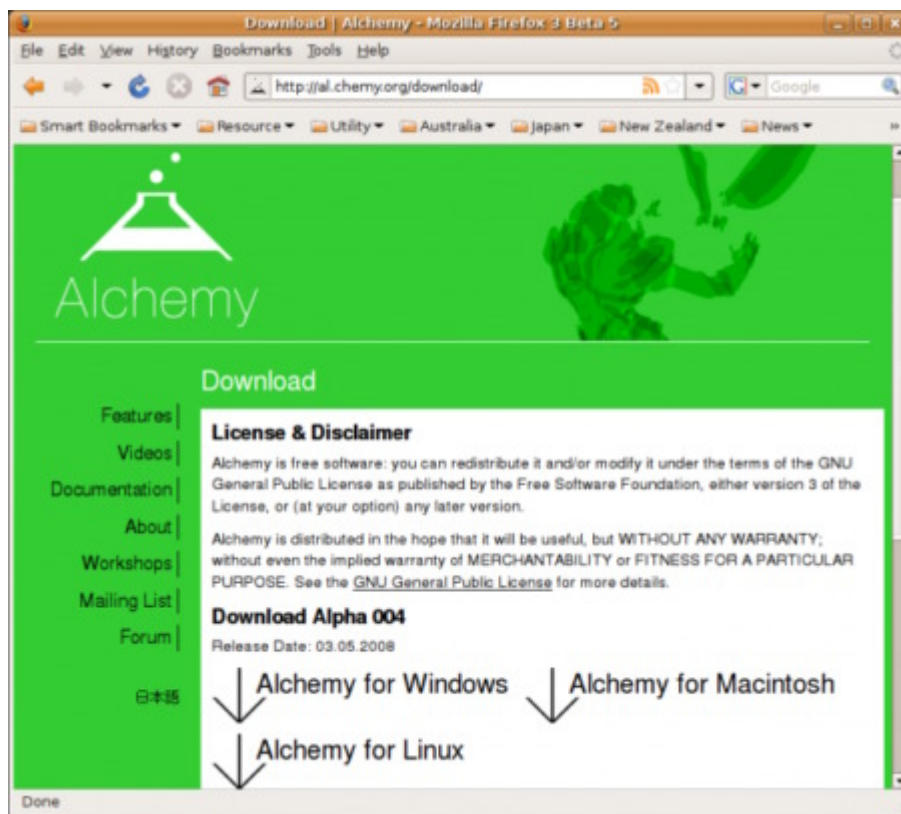
**Required Software :** Java Runtime Environment Version 1.5 or above (OpenJDK will also work, however it has a bunch of display bugs)

## Downloading Alchemy

The latest version of **Alchemy** for **LINUX** can be downloaded from:

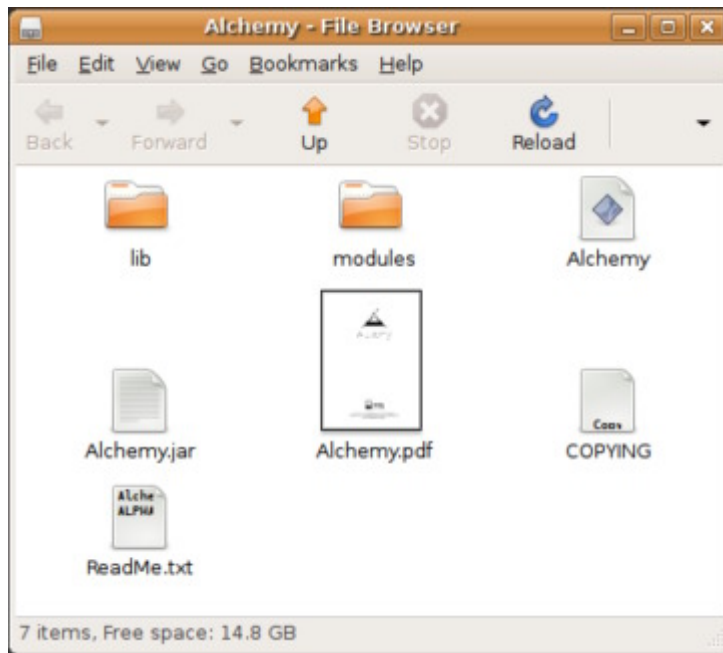
<http://al.chemy.org/download/>

The latest version at the time of writing this document is **Alchemy ALPHA 005**.



Click on the link labeled 'Alchemy for Linux' to download.

Once the download is complete, check your default download directory for the Alchemy file. This is a compressed zip file and inside is the Alchemy application itself. Extract the files, use your favourite unzipping utility and inside will be a folder called 'Alchemy'. Copy this folder to wherever you keep your applications. That completes the installation of Alchemy and you should now be able to see the Alchemy folder inside your applications folder:



To open Alchemy simply double-click on the 'Alchemy' file inside the Alchemy folder to launch the .jar file.



# Installing Alchemy on Windows

**Software name :** Alchemy

**Homepage :** <http://al.chemy.org>

**Software version used for this installation :** ALPHA 005

**Operating System use for this installation :** XP Service Pack 2

**Recommended Hardware :**

**Required Software :** Java Runtime Environment Version 1.5 or above

## Downloading Alchemy

The latest version of **Alchemy** for **Windows** can be downloaded from:

<http://al.chemy.org/download/>

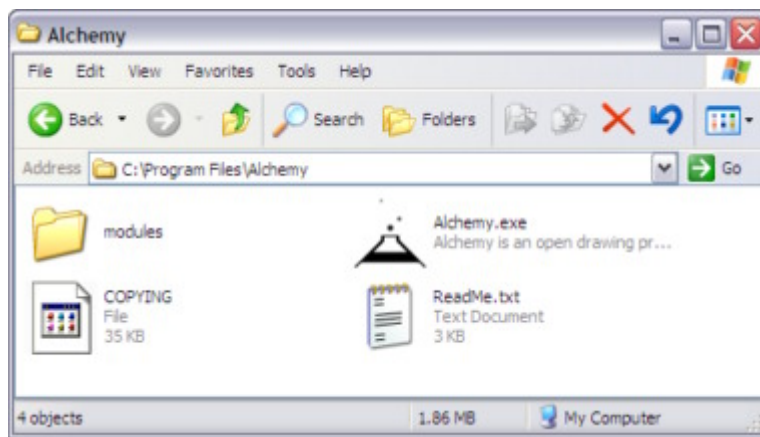
The latest version at the time of writing this document is **Alchemy ALPHA 005**.



Click on the link labeled 'Alchemy for Windows' to download.

Once the download is complete, check your default download directory for the Alchemy file. This is a compressed zip file and inside is the Alchemy application itself. Extract the files, use your favourite unzipping utility and inside will be a folder called 'Alchemy'. Copy this folder into your 'Program Files' folder to install Alchemy.

That completes the installation of Alchemy and you should now be able to see the Alchemy folder inside your Program Files folder.



To open Alchemy simply double-click on the Alchemy icon inside the Alchemy folder.

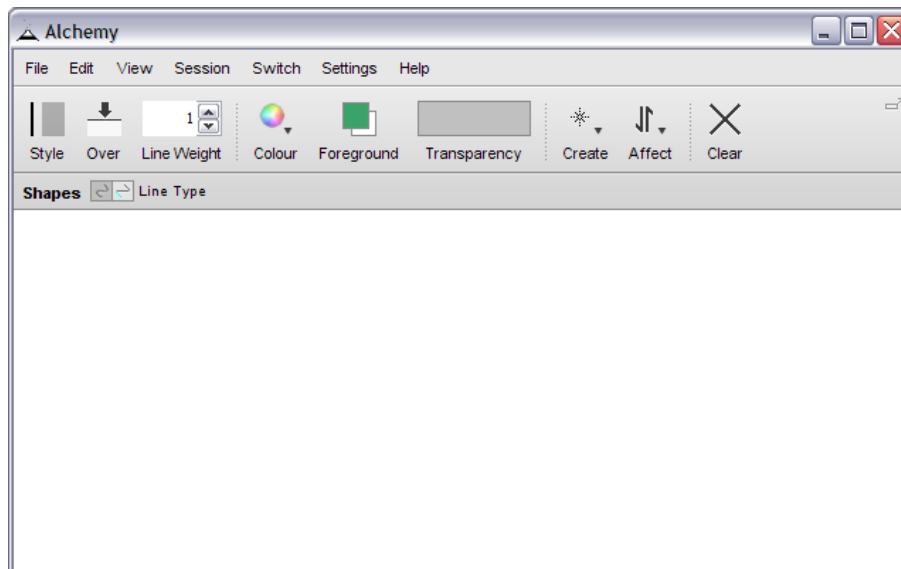
If you see a warning message telling you 'Java Install Required', be sure to follow the download link and install Java before using Alchemy.

# Interface Basics

## Standard Interface

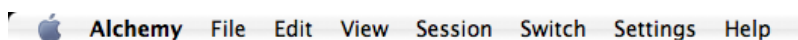
When you open Alchemy you will see the main window and little else. Why, you ask? The Alchemy interface is designed to stay out of the way, letting you concentrate all your creative energies on just doing the drawing.

To reveal the interface, roll your mouse into the top part of the main window. It will magically appear like this:



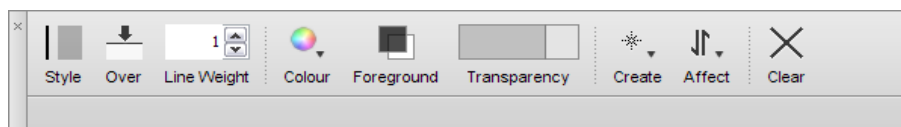
When you leave the interface area it will automatically disappear back where it came from. You can also toggle the tool bar on and off by pressing the **space bar**.

The Alchemy interface has two main elements: the menu bar and the tool bar. On OS X, the menu bar is located in the main *Apple Menu* area.



On Windows/Linux the menu bar and the tool bar are by default grouped together and show/hide automatically.

On all systems it is possible to detach the tool bar into a separate floating window, by clicking on the detach button on the top left of the tool bar. This removes the tool bar from the main window and on Windows/Linux make the menu bar behave a bit more normally, i.e. be visible all the time.



To re-attach the tool bar to the main window, simply click the close button in the top left corner.

## Simple Interface

Since version Alpha 005, Alchemy has an alternate simple interface that is ideal for kids.



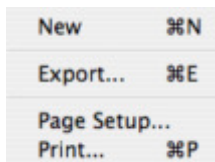
Using the simple interface is well... simple, it can be turned on in the Preferences/Options and will kick in as soon as you restart Alchemy.

# Menu Bar

The Alchemy menu bar provides access to basic functions such as printing, entering fullscreen mode, and accessing the Alchemy help. More advanced features such as automatic saving and 'switching' to another application can also be accessed from the menu bar.

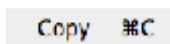
Lets go through the menu bar one item at a time. Keep in mind that the menu bar looks different on each operating system, but the basic functionality is very much the same.

## • File



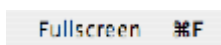
- ◆ **New**  
Clear the canvas.
- ◆ **Export**  
Export the canvas as a single page PDF file.
- ◆ **Page Setup**  
Define the page settings for printing.
- ◆ **Print**  
Print the canvas.
- ◆ **Exit**  
Exit Alchemy (Windows only).

## • Edit



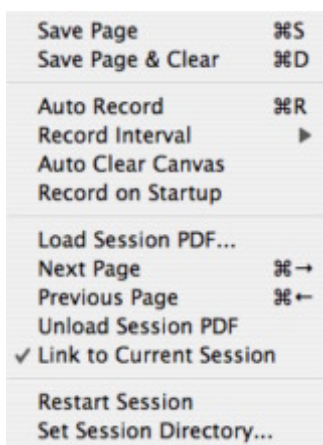
- ◆ **Copy**  
Copy the canvas to the clipboard as a bitmap.

## • View



- ◆ **Fullscreen**  
Enter fullscreen mode. To exit fullscreen mode, hit the ESCAPE key.

## • Session



The session menu controls how a Alchemy 'session' is recorded. When using the session menu a multi-page PDF file is created, with pages saved either manually or at timed intervals. The file is saved to the session directory with an automatically date-stamped filename.

◆ **Save Page**

Manually save a page to the session PDF file.

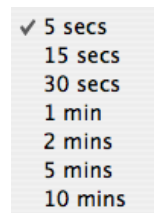
◆ **Save Page & Clear**

Manually save a page to the session PDF file, then clear the canvas.

◆ **Auto Record**

Start/stop timed recording.

◆ **Record Interval**



Set a timed interval to automatically save pages into the session PDF file.

◆ **Auto Clear Canvas**

Automatically erase the canvas when 'Auto record' is turned on.

◆ **Record on Startup**

Begin recording a new session when Alchemy is started.

◆ **Load Session PDF...**

Load an previous Alchemy session to draw on top of. Please note that PDF files not created in Alchemy, in particular those containing text, can cause errors. It is also not possible to load the existing Alchemy session onto itself. Once a session has been loaded, the four menu items below will also become available.

◆ **Next Page**

Go to the next page of the loaded session PDF.

◆ **Previous Page**

Go to the previous page of the loaded session PDF.

◆ **Unload Session PDF**

Unload the session PDF - removing it from the canvas.

◆ **Link to Current Session**

When this option selected, using the save settings of the current session (Save/Save & Clear/Auto Record) will automatically advance the the loaded session PDF to the next page. This is useful for adding to a each page of a previous session one by one to create a new PDF session file.

- ◆ **Restart Session**

Begin a new session. Creates a new session file when saved next.

- ◆ **Set Session Directory...**

Set the directory where the session PDF file will be saved.

## • Switch

Switch Vector	⌘V
Switch Bitmap	⌘B
Set Vector Application...	
Set Bitmap Application...	

The switch menu allows you to quickly open the current Alchemy canvas in another user-defined application. The idea is to be able to quickly continue working in a more 'conventional' software application without losing the creative 'flow'.

- ◆ **Switch Vector**

Open the current Alchemy canvas as a vector graphic in an external application.

- ◆ **Switch Bitmap**

Open the current Alchemy canvas as a bitmap graphic in an external application.

- ◆ **Set Vector Application...**

Choose an external application to open the Alchemy canvas in vector format.

- ◆ **Set Bitmap Application...**

Choose an external application to open the Alchemy canvas in bitmap format.

## • Settings

✓ Smoothing
✓ Line Smoothing
Keyboard Shortcuts...

- ◆ **Smoothing**

Turn smoothing on/off. With smoothing off, lines will have hard edges, i.e. no anti-aliasing. Depending on the system this can result in better performance.

- ◆ **Line Smoothing**

Turn line smoothing on/off. Line smoothing is the process of curving lines to make them look smoother. With line smoothing off you may notice kinks or hard angles in the line when drawing with fast movements. This is usually more noticeable when drawing with a mouse, rather than a pen tablet. Turning line smoothing off can result in better performance.

- ◆ **Keyboard Shortcuts...**

Launch the keyboard shortcuts window and customise the various Alchemy keyboard shortcuts.

- ◆ **Options (Windows/Linux)**

Launch the Preferences/Options window to change the interface and module loading settings.

## • Help

Alchemy Help
Alchemy Website
Alchemy Forum

- ◆ **Alchemy Help**

Open the Alchemy help

- ◆ **Alchemy Website**

Open the Alchemy website in the default browser.

◆ **Alchemy Forum**

Open the Alchemy forum in the default browser.

◆ **About Alchemy**

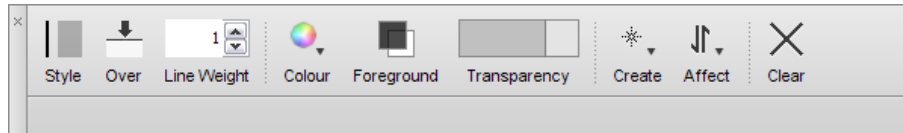
Open the 'about' window (Windows only).



# Tool Bar

The Alchemy tool bar is used to control how shapes look when they are created. For example, you can change the style of the shape, the transparency, the line width and so on. When it is attached to the main window, the tool bar can be toggled on and off by pressing the **space bar**.

Let's go through the controls on the tool bar one by one.



## Style

Toggle between drawing with a line or solid fill.

Keyboard Shortcut: **S**

## Over/Under

Toggle between drawing over other shapes on the canvas or under them.

Keyboard Shortcut: **D**

## Line Weight

Increase/Decrease the line weight.

Keyboard Shortcut: **[ ]**

## Colour

Set the colour of the foreground or background. Firstly select either foreground or background, then click on the colour button to bring up this colour picker:



Click on an area inside the colour picker to choose a colour. The area at the top of the colour has *black*, *grey* (50%), and *white*. Use the button with three dots (...) to open a more precise colour chooser window.

## Foreground/Background

Select either the foreground or background colour to draw with. You can use the colour picker to change either of these colours.

Keyboard Shortcut: **X**

## Transparency

Adjust the transparency of the foreground colour. The background colour is always opaque.

## Create & Affect

These two buttons control the currently selected Alchemy 'module', and also the controls that appear in the bottom part of the tool bar.

## Clear

Clear the entire Alchemy canvas.

Keyboard Shortcut OS X: **Command + Backspace**

Keyboard Shortcut Windows: **Ctrl + Backspace**

# Keyboard Shortcuts

Alchemy has a range of keyboard shortcuts which you can use. Starting from version Alpha 003 you can also customise which keys to use for which function. To set your own keyboard shortcuts, from the **Settings** menu choose **Keyboard Shortcuts...** to open the following window:



Listed below are the default keyboard shortcuts. These can be changed by clicking on the textfield and entering a unique key sequence. Modifier keys such as *Ctrl*, *Shift*, *Alt* and so on, can not be used on their own.

Click the **OK** button to save the new set of shortcuts.

Use the **Restore Defaults** button to revert back to the default set of shortcuts.

Alchemy uses a different modifier key based on the platform and keyboard. When 'MODIFIER' is listed below, this refers to the *Ctrl* key on Windows/Linux and the *COMMAND* (Apple) key on Mac. For example 'MODIFIER+1' on Windows refers to pressing the *Ctrl* key and the number *1* key.

## General Shortcuts

Toggle Tool Bar: SPACE

Show/Hide Cursor: H

## Tool Bar Shortcuts

Style: S

Over/Under: D

Line Weight -: OPEN BRACKET

Line Weight +: CLOSE BRACKET

Foreground / Background: X

Clear: MODIFIER+BACKSPACE

## Menu Bar Shortcuts

New: MODIFIER+N

Export...: MODIFIER+E

Print...: MODIFIER+P

Copy: MODIFIER+C  
Fullscreen: MODIFIER+F  
Save Page: MODIFIER+S  
Save Page & Clear: MODIFIER+D  
Auto Record: MODIFIER+R  
Next Page: MODIFIER+RIGHT  
Previous Page: MODIFIER+LEFT  
Switch Vector: MODIFIER+V  
Switch Bitmap: MODIFIER+B

## **Create Module Shortcuts**

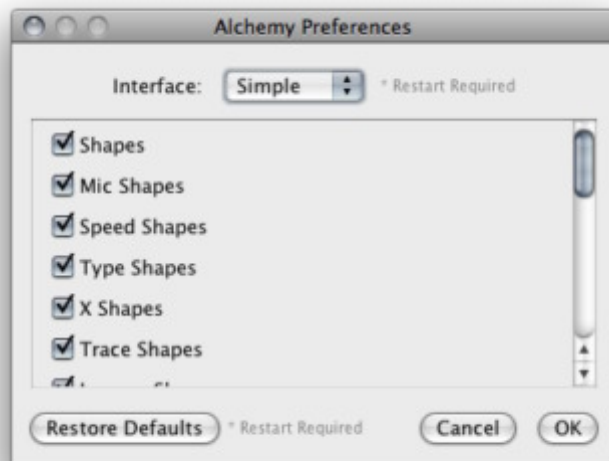
Create Module shortcuts use the number keys across the top of the keyboard. Which shortcut key will depend on which modules you have installed and activated.

## **Affect Module Shortcuts**

Affect Module shortcuts use the number keys across the top of the keyboard with the modifier key. Which shortcut key will depend on which modules you have installed and activated.

# Preferences / Options

Alchemy has several options that can be set in the Preferences/Options window. This can be accessed on Windows/Linux under the Menu bar > Settings > Options... or on OS X using the Menu bar > Alchemy > Preferences...



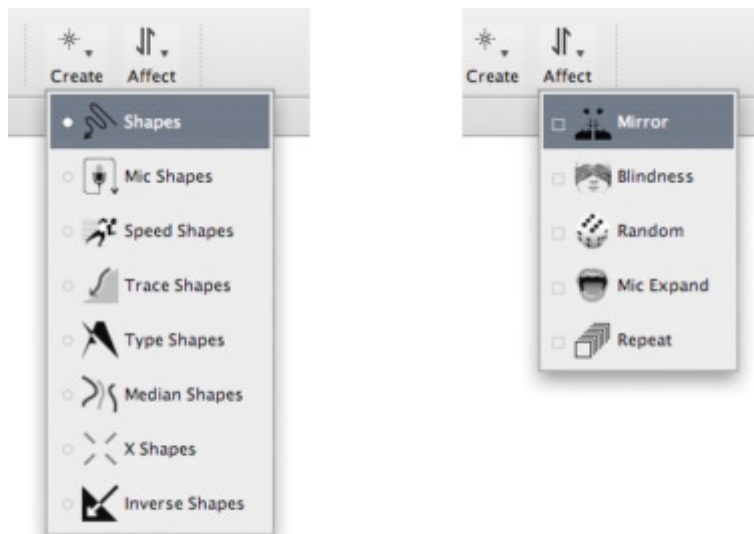
Here you can switch between the Simple and Standard interface and also select which modules to activate. Using the Restore Defaults button will revert to the default set of modules. Changes here take effect once you have restarted the application.

# What is a Module?

Alchemy consists of the main or *core* application, and then a series of independent plugin *modules*. At startup, the core application searches for and loads modules located inside the 'modules' folder. Alchemy modules each perform a specific and different function and they represent the main functionality of Alchemy itself. Modules determine the type of shape that is created and how that shape is affected (changed) when you draw. Modules are divided into two categories:

- **Create modules** produce shapes, and can be selected one at a time.
- **Affect modules** affect or change existing shapes, and can have more than one selected at a time.

Modules can be selected using the **Create** and **Affect** buttons in the tool bar. When you click on one of these buttons, a menu pops up like this:



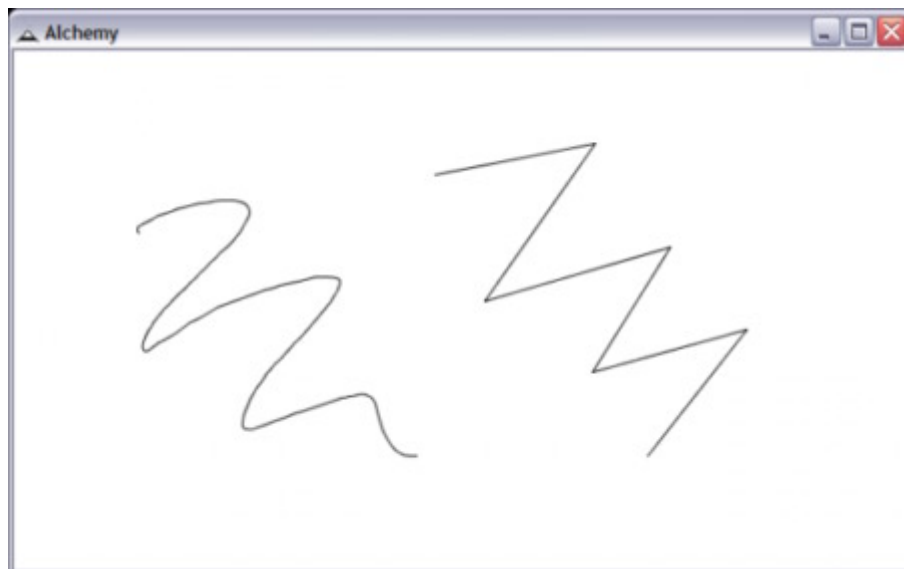
Listed here are all the currently installed **Create** modules on the left and **Affect** modules on the right.

# Create Modules

Alchemy comes with a range of different modules that do quite varying things.

*Create* modules are for creating shapes, and can be selected one at a time using the *Create* popup menu in the tool bar. Let's go through the *Create* modules one by one:

## Shapes



The *Shapes* module draws like a regular pen in **Freeform** mode or straight lines in **Straight** mode. When drawing straight lines, a double click will allow you to start a new shape.

## Mic Shapes



The *Mic Shapes* module uses the sound level from your computers microphone to change how shapes are created.

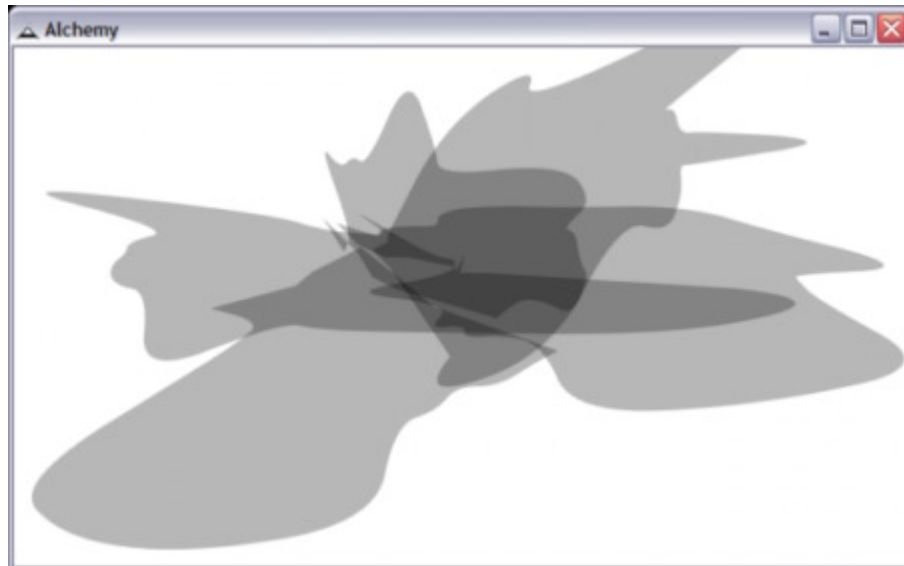
In **Fatten** mode the thickness of the line is determined by the microphone sound level. More noise creates a

fatter line and vice versa.

In **Shake** mode the location of the line is changed according to the microphone sound level. More noise creates a more 'shaken up' line.

The **Volume** slider can be used to control the level of noise required to fatten or shake the shape.

## Speed Shapes

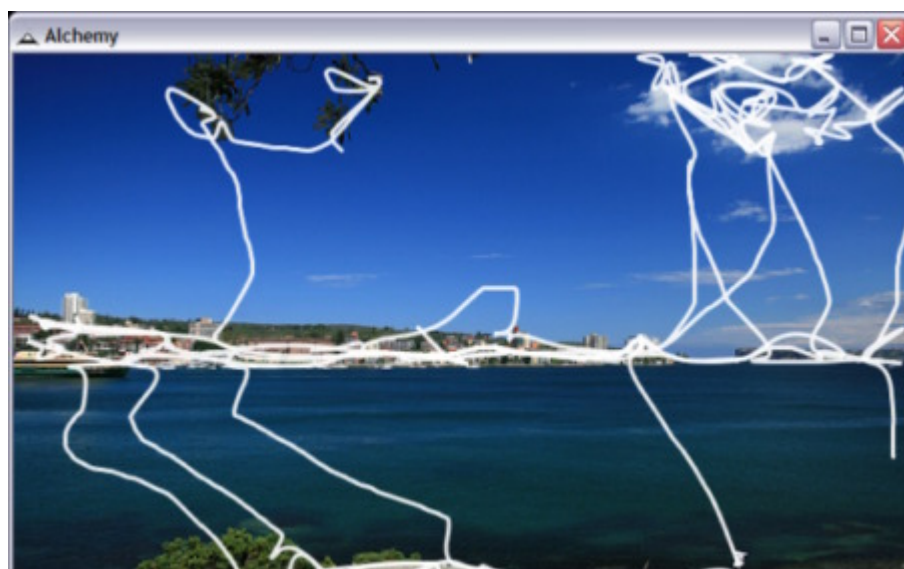


The *Speed Shapes* module accentuates the pen speed to create shapes that throw the line beyond the actual pen position. Faster movement of the pen will result in shapes extending well beyond the pen position and possibly off the screen itself.

The **Speed** slider can be used to control how much speed is applied.

The **Line Type** can also be toggled between drawing straight lines and curved lines.

## Trace Shapes

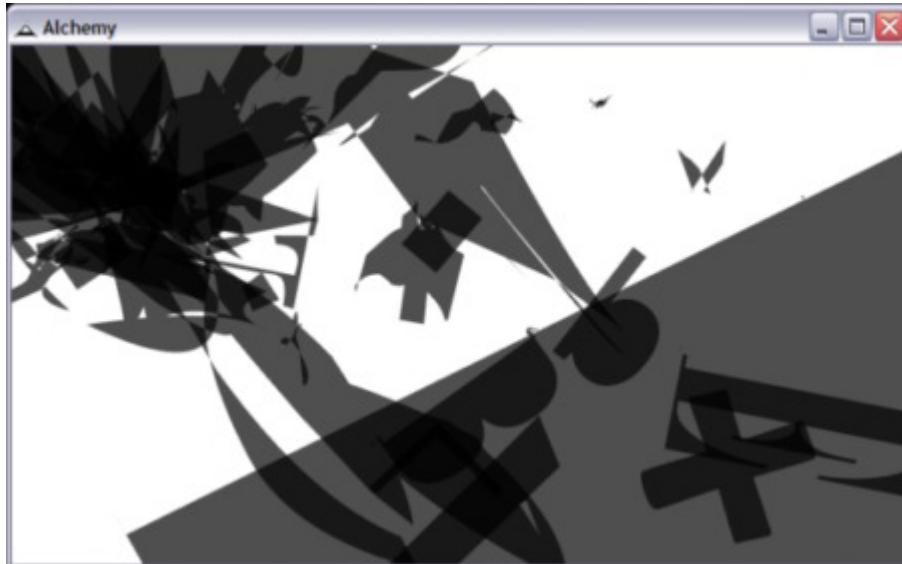


The *Trace Shapes* module downloads a random image using Flickr and loads it hidden behind the canvas. The pen then snaps to the edges of the hidden picture, creating unknown forms.



Display of the image can be turned on and off using the **Display Image** button.  
A new image can be loaded by clicking on the **Load Image** button.  
The **Snap Distance** slider allows you to set the maximum distance at which snapping occurs.  
The **Tolerance** slider determines how 'hard' the edge must be for the line to snap.

## Type Shapes



The *Type Shapes* module creates random shapes from type forms. It looks for fonts on your computer then layers and distorts them to create abstract shapes. These shapes that can be used as a starting point for characters, spaceships, or whatever shape you see in the 'clouds'.

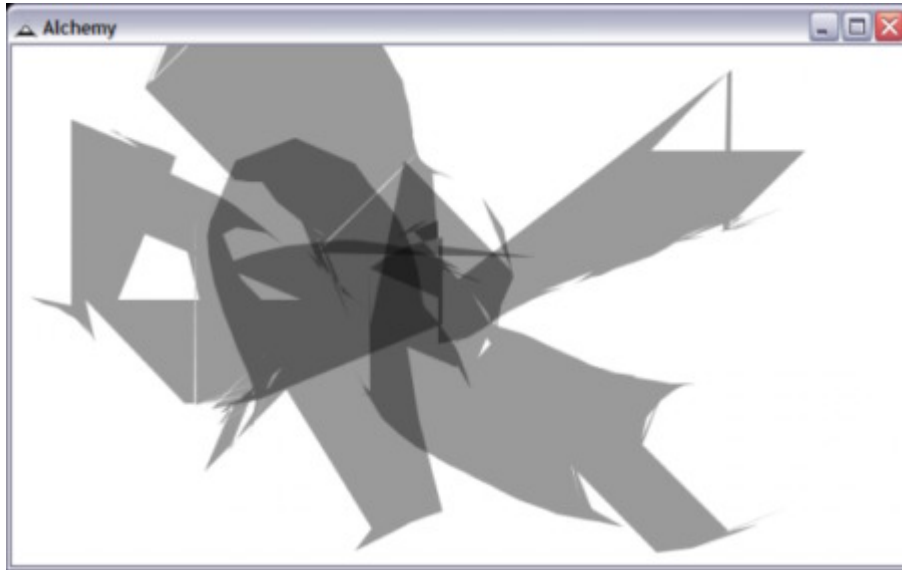
The **Distortion** slider determines how much distortion is applied to the shapes.  
The **Auto-generate** button creates more complex shapes by layering and joining multiple type-forms together, then placing them on the canvas.  
The **Size** slider changes the size of the shapes created.  
The **Key Drawing** button lets you draw with the keys of your keyboard, placing shapes on the canvas according to the keys pressed.

## Median Shapes



The *Median Shapes* module draws a 'median' line between the last line and current line.

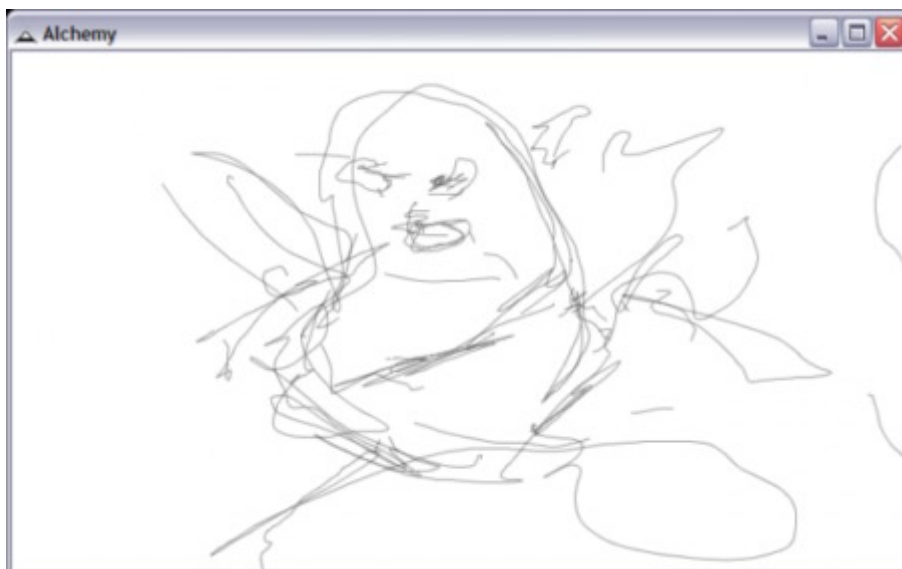
## X Shapes



The *X Shapes* module creates hard and sharp edged shapes that move erratically according to the line duration and pen speed.

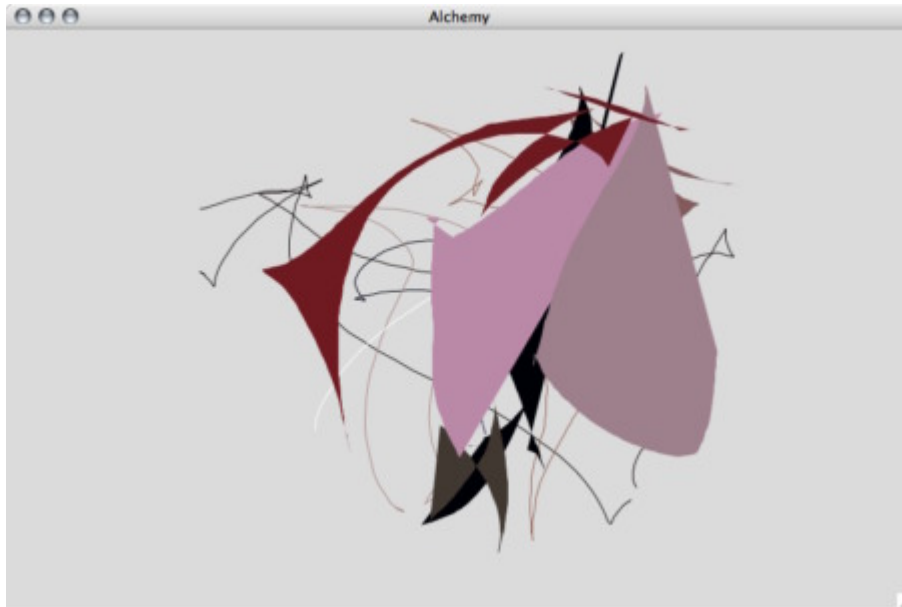
The **Distance** slider controls the maximum distance from the pen where shapes are created.

## Inverse Shapes



The *Inverse Shapes* module draws like a regular pen except inverted. When the pen is up it draws, and when down it does not.

## Detach Shapes



The *Detach Shapes* module creates shapes by moving independently in a separate location from the pen. use the **Distance** slider to set how far detached from the pen the drawing point is.

## Scrawl Shapes



The *Scrawl Shapes* module creates shapes that form randomly scrawled lines. Use the **Flow** slider to set how quickly shapes flow from the pen. Use the **Detail** slider to control how much detail you would like, less detail makes smoother shapes and vice versa. The **Noise** slider controls how widely the shapes spread out from the original location.

# Affect Modules

*Affect* modules are for affecting (changing) existing shapes. You can have more than one selected at a time by using the *Affect* popup menu in the tool bar. Having several selected at once can lead to quite strange behaviour! Thats a good thing! Lets go through the *Affect* modules one by one.

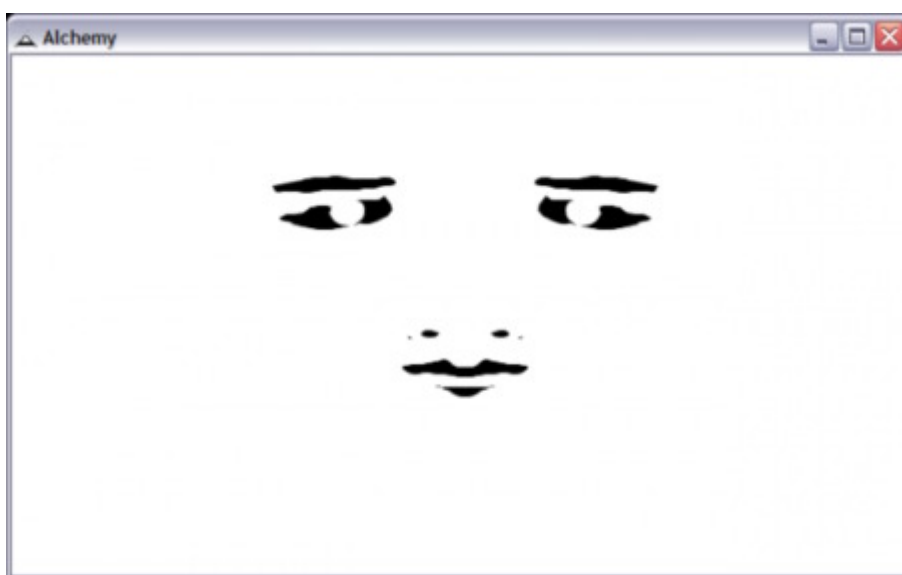
## Displace



The *Displace* module changes shape geometry by contracting or expanding the shape based on the movement of the pen. Faster movement causes the shape to contract closer towards the current pen location. Likewise, slower movements push points away from the current pen location.

Use the **Displacement** slider to change the amount shapes are contracted or expanded.

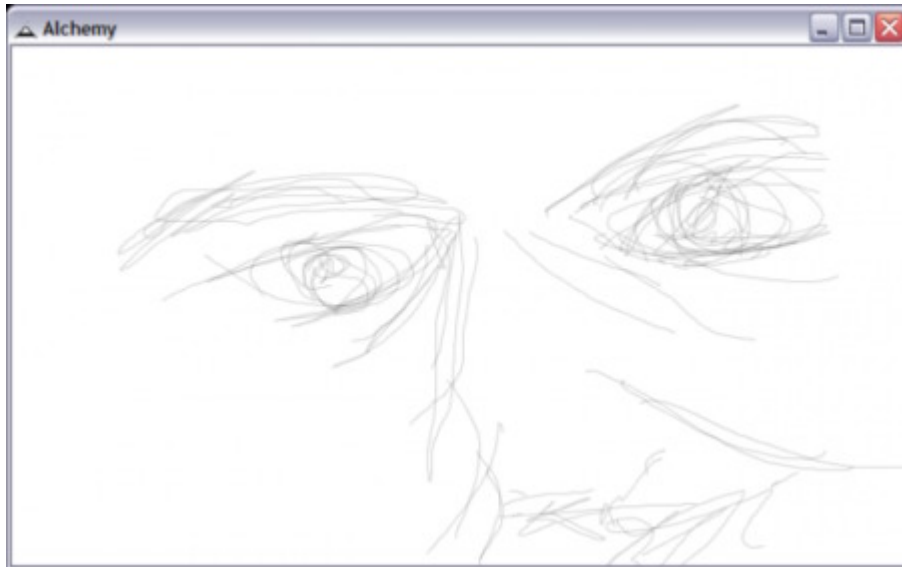
## Mirror



The *Mirror* module reflects shapes along a vertical and/or horizontal axis in real time.

Use the **Horizontal** and **Vertical** buttons to turn mirroring on and off.  
Use the **Move** button to set the location of mirroring.  
Use the **Reset** button to reset the location of mirroring to the middle of the canvas.

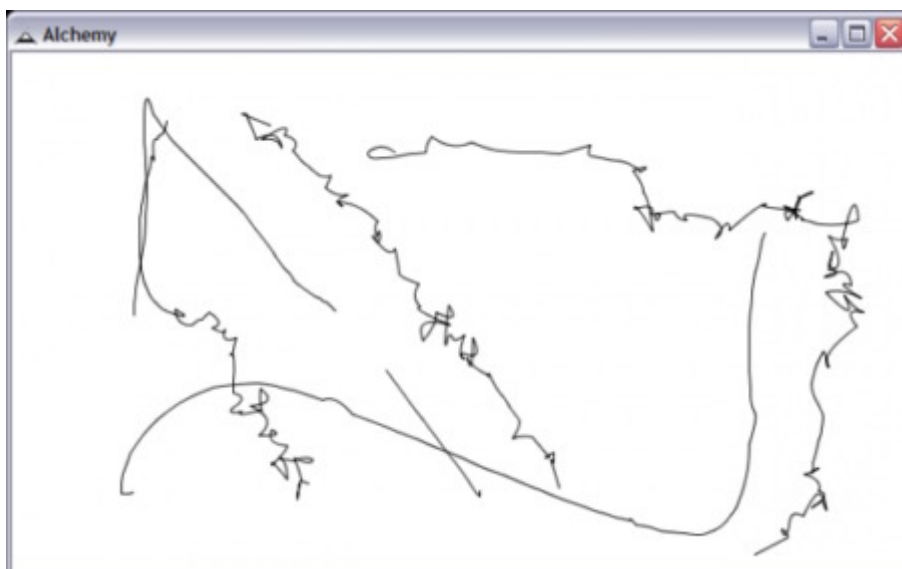
## Blindness



Drawing blind is an exercise used in conventional drawing, and is implemented here in the *Blindness* module by stopping the canvas display being updated.

Update the canvas display using the **Redraw** button.  
Allow the automatic redrawing of shapes each time the pen is lifted by toggling the **Autoredraw** button.

## Random



The *Random* module allows you to distort and change shapes. When rolling over a shape, the area around the mouse will have its points randomised.

## Mic Expand

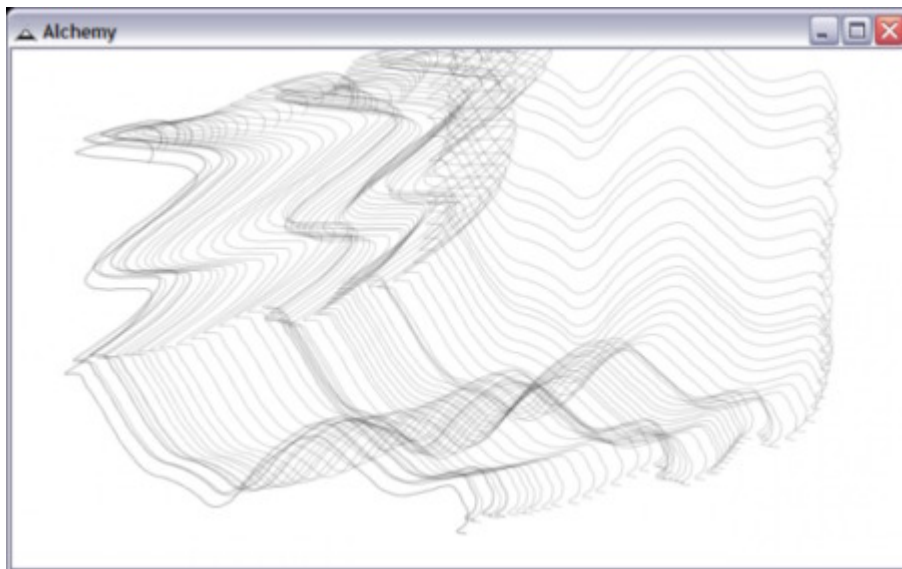


The *Mic Expand* module uses sounds from the microphone to expand, contort, and change shapes. When rolling over a shape, the microphone is opened and the shape is changed according to the incoming sound.

Use the **Volume** slider to control the level of distortion.

Use the **Mode** button to toggle between the two different modes. In **wave** mode shapes are distorted according to the sound wave captured from the microphone. In **level** mode, the size of the shape is changed according to the microphone volume.

## Repeat



The *Repeat* module duplicates shapes on rollover. This module can be used in combination with other affect modules such as *Random* and *Mic Expand* to create slightly different shapes in multiple.

Use the **Repeat Interval** slider to change the rate at which shapes are duplicated. A smaller interval produces more shapes.

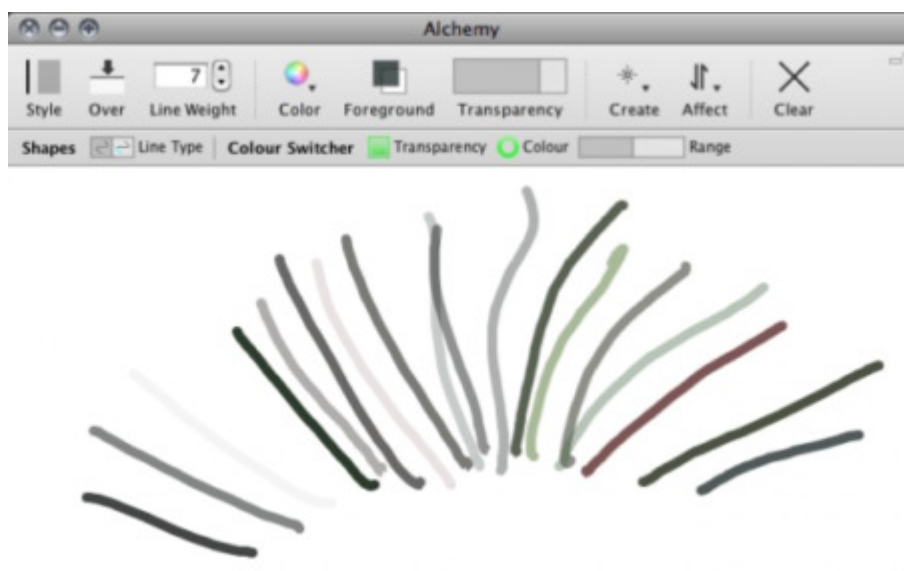
## Camera Colour



The *Camera Colour* module uses a camera attached to your computer to select live colours from the real world! Be careful to make sure you have a camera (such as a web-cam) connected and working on your computer before selecting this module.

Each time you create a new shape the colour will be set based on the part of the camera image you clicked. Use the **Display Image** button to turn on/off display of the camera image. Note that to keep things speedy, when the mouse is down the image is not updated.

## Colour Switcher



The *Colour Switcher* module can be used to change colours randomly. When the **Transparency** button is on, the transparency will change with each pen stroke. Likewise when the **Colour** button is on, the colour will change. Additionally a 'base colour' can be set and a range defined so as to produce very similar colours with a low range, and very different colours with a high range.

# Additional Help

For more help with **Alchemy** you can try these avenues:

## Alchemy Website

On the Alchemy site are a range of demonstration videos that can give you a good picture of how Alchemy works:

<http://al.chemy.org/videos>

## Online Forums

You can also try searching through the forums for information.

<http://al.chemy.org/forum>

The forums contain a lot of postings from users on many topics. You can use the search system to locate topics or just browse the categories. If you don't find what you want then try subscribing to the forums and posting your question to the relevant category. There are a few things to keep in mind when asking a question in a forum or to a mailing list. First, be as clear as you can with your question and provide any information that you might think would help some to try to help you. You might, for example, include information about the operating system you are using, or various specifics that relate to what you are trying to achieve. Additionally, it is always good practice to also post back to any forum or mailing list if you manage to solve your query and include clear information on how you solved the puzzle. This is so that someone else that may have the same issue can resolve it using what you have found out. If possible post back to the same thread (discussion topic) so that anyone searching through the forum can follow the discussion including the solution.

## Web Search

Searching the web is always useful. If you are looking for problems arising from errors reported by the software then try entering the error text into the search engine. Be sure to edit out any information that doesn't look generic when doing this. Some search engines also enable you to try searches of mailing lists, online groups etc, this can also provide good results.