



## **What is Lineform?**

Drawing, art and design are everywhere. Fliers, posters, logos, sketches, floor plans, Web sites, t-shirts, and magazines. To communicate your idea, drawing and design are key.

Lineform is designed so you can have fun drawing. It provides a simple and easy interface to complex drawing tools. Powerful features such as artistic strokes and Boolean operations combined with the great interface let you forget about the interface and enjoy drawing.

If you want to do any drawing, from simple logos to complex designs, then Lineform is the ideal program for you.

Lineform is a vector drawing tool, similar to Illustrator, Freehand, and CorelDraw. Lineform works with lines, curves and shapes to create drawings that both look amazing and are entirely editable.

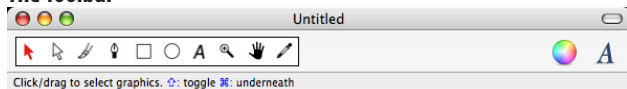
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## THE INTERFACE

Lineform's interface revolves around a document window that displays the canvas and objects being edited. Objects on the canvas are manipulated by the mouse or keyboard and can be altered from the inspectors that float above the document window.

### The Toolbar



Each document in Lineform has its own toolbar at the top of the window. This toolbar shows which tool you are currently using and allows quick access to other tools.

 **Selection** – Selects and moves objects.

 **Editing** – Alters curves and lines.

 **Brush** – Draws smooth lines.

 **Pen** – Draws lines and Bézier curves.

 **Rectangle** – Draws rectangles and squares.

 **Oval** – Draws ovals and circles.

 **Text** – Draws text boxes.

 **Zoom** – Zooms in and out of the canvas.

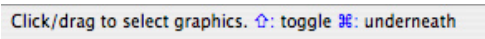
 **Drag** – Moves around in the canvas.

 **Dropper** – Picks up styles from objects in the canvas.

The tools can also be selected by pressing the digits 0-9 or their corresponding shortcut keys. The toolbar can be customized to contain several handy functions, like combining and Boolean operations.

To customize the toolbar, choose **Customize Toolbar...** under the View menu.

## The Status Bar

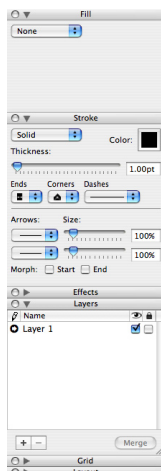


Below the toolbar is the status bar. This shows hints and information about what action you are currently performing. It shows the possible modifier keys for any action in blue, and it shows the current size or state of any transformation of objects being modified.

## Inspectors

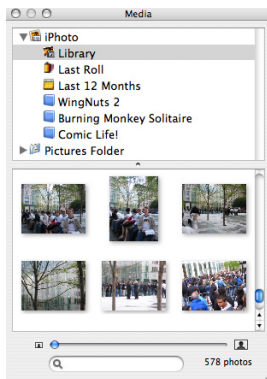
Lineform uses inspectors that “float” above all the other windows. These provide access to object and canvas properties. The inspectors can be minimized or hidden and snap to each other. Inspectors can be toggled on and off in the Inspectors menu.

The Fill, Stroke, and Effects inspectors affect the appearance of objects in your document. The Grid, Layout, and Layers inspectors affect the canvas itself. Finally, the Filters inspector provides advanced options to apply effects to objects.



## Media Browser

The Media Browser is accessed from the Inspectors menu. It provides access to images and pictures stored in iPhoto or elsewhere on your computer. You can search for and drag images into any Lineform document.



## Keyboard

Several keyboard shortcuts and modifiers are used in Lineform. These are mentioned in this manual where they are relevant. The Shift, Option, and Command (⌘) keys affect most operations. The Escape key cancels the current action.

## MANIPULATING THE CANVAS

### **Zoom (z)**

Click with the zoom tool to magnify the canvas, and Option-click to zoom back out. To zoom in on a particular area of the canvas, click and drag the zoom tool around the area of interest.

The canvas can also be magnified to a specific zoom level by selecting a level from the pop-up menu in the bottom right of the document window, or zoomed to fit from the View menu.

Press Control-Space bar once to select the zoom tool temporarily, allowing you to zoom in quickly on part of the canvas. After zooming, the tool reverts to the previously selected tool.

### **Drag (g)**

The drag tool is used to move around the canvas. To move the visible part of the canvas, click and drag with this tool.

Temporarily select the drag tool by holding down the Space bar.

## CREATING OBJECTS

The brush, pen, rectangle, oval, and text tools are used to create line and shape objects. When one of these tools is selected, click and drag on the canvas to create new objects. Newly created objects use the style from the inspectors.

### **The brush tool (b)**

The brush tool is used to draw smooth curves and paths, and is ideal for drawing smooth arbitrary shapes and tracing pictures.

The Bézier paths are automatically smoothed; if a more accurate path is required, the Option key can be held to limit the smoothing.

### **The pen tool (p)**

The pen (Bézier) tool creates a sharp node for each click, building an arbitrary shape out of a series of nodes. To create smooth nodes and curves, click and drag the pen tool.

Double-click on the canvas or a node to complete the line, or press Escape to cancel it. To cancel only the last segment of an unfinished line, press the Delete key.

Click on the initial node to close the path being drawn, creating a loop. To continue drawing path nodes, hold the Option key. Hold the Shift key to limit the line and curve drawing to 15° angles.

Both the pen tool and the brush tool allow new paths to be drawn onto either the beginning or end of existing paths. When either tool is selected, nodes appear at the ends of selected paths that are available to append to. Drawing from one of these nodes automatically appends the new path to the existing path. This allows both tools to be used to draw different parts of the same shape.

### **The rectangle (r) and** **oval (o) tools**

The rectangle and oval tools draw their respective shapes. Hold the Shift key to restrict the new shape to a 1:1 aspect ratio, creating either squares or circles. Hold the Option key to create shapes from the center.

### **A The text tool (t)**

The text tool can be used in two modes. It can be dragged to create a text region, or by simply clicking and then typing, the region created will be the same size as the text typed.

The text tool does not create a special object: it is just a handy shortcut. The same effect can be achieved by creating a rectangle with a text fill style.

## MANIPULATING OBJECTS

### 🖱 Selecting objects

Select an object using the selection tool by clicking on the object. Multiple objects can be selected by Shift-clicking or by dragging a selection around the objects you want to select. The selection tool starts a drag-selection when clicking and holding down the mouse button in empty part of the canvas. The ~ key will toggle between current scale and position of the mouse. To add to the current selection, hold the Shift key while dragging the new drag-selection. Objects can be deselected by Shift-clicking on them after they've been selected.

Objects with no fill can be selected by clicking on the stroke line or drag-selecting the object.

Selected objects are drawn with a transparent halo around them. The primary object is drawn with a light green halo and all other selected objects are drawn with a light blue halo. Press the Tab key to change the primary object. This cycles through all the currently selected objects.

The primary object is the object displayed in the inspectors when more than one object is selected. It is useful for some operations like Boolean subtract or align, where these operations alter the selected objects relative to the primary object.

To select *only* objects that are entirely within the selection region you are dragging, hold the Option key as you drag. This is useful for selecting small objects or objects that are on top of each other.



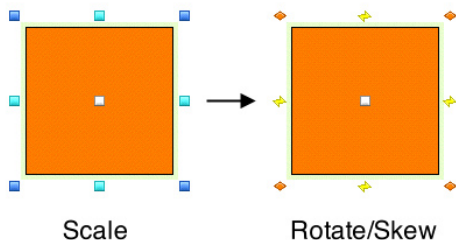
You can select all the objects on the canvas with **Select All** from the Edit menu, or deselect all objects with **Select None**.

Often, one object will obscure other objects hidden below, and these are impossible to select normally. Command-click to select these objects.

The first Command-click selects the top object like a regular click. Each subsequent Command-click will select the object below the current selection. Several Command-clicks will cycle through the objects below the mouse in order, eventually returning to the topmost object.

### Moving, scaling and rotating

Once some objects have been selected, nine handles should appear around the selection. These handles manipulate the selection. The Control key toggles the mode from scale to rotate/skew.



You can:

- Move objects by dragging on them or the dragging the white center drag handle. Constrain the movement vertically or horizontally by holding the Shift key.

- Create a copy of the objects by holding the Option key while dragging.
- Scale the objects by dragging any of the blue and green edge handles. The blue corner handles scale the objects both horizontally and vertically. The green edge handles scale only in one axis.

The Shift key constrains the corner scaling to preserve the original height/width aspect ratio. Holding the Option key transforms the objects from the center.

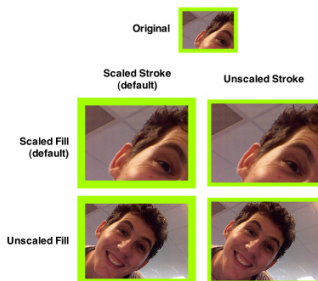
To rotate or skew an object by its handles, hold the Control key. Now you can:

- Rotate the objects by dragging the orange corner handles. Hold the Shift key to constrain to rotation 15° angles.
- Skew the objects by dragging the yellow edge handles. Hold the Shift key to constrain the skewing to 15° angles.

Hold down the Command key while manipulating objects to stop their fill style from changing. This allows you to clip pictures easily. Command-drag scale handles the to scale the *shape* but not the *picture*. Command-dragging also allows you to increase the size of a text box without changing the size of the text.

In a similar manner, holding the Z key down while manipulating objects stops the stroke style of the objects from changing size. This allows you control whether to scale a line with the drawing or separately.

The following diagram shows the difference between scaling the fill or stroke.



## Transform Inspector

The Transform inspector makes it easy to manipulate width, height, layout, rotation, and skew of an object. Click grid control in the upper left to set the origin of the transformation. The Shape, Stroke and Fill checkboxes enable or disable transformations for the object's respective elements.

## Transforming with the keyboard

Lineform also allows you to use the arrow keys to nudge objects. Objects are moved 1 pixel by default or 10 pixels if the Shift key is held. You can also nudge objects at the current zoom level by holding the Option key.

## Align and distribute

An object can be aligned both horizontally and vertically with the edges and centers of other objects. Commands for alignment can be found in the Objects menu. The selected objects are aligned relative to the primary selected object.

Objects can also be distributed horizontally and vertically from the Objects menu. The distributing commands space the selected objects out so that the size of the gaps between the objects are the same.

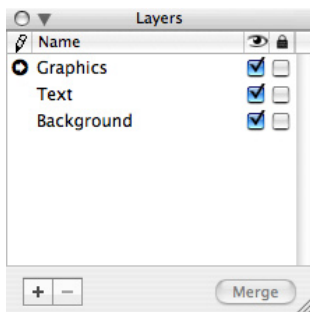
## Flip

Objects can be flipped around their center horizontally and vertically. Objects are flipped from the Objects menu.

## LAYERS AND Z-ORDER

Z-order refers to the order in which objects are drawn, i.e., which objects are drawn on top of others. In Lineform, you can change the ordering of objects with the **Bring to Front** and **Send to Back** commands in the Objects menu. These move the selected objects all the way to the bottom or top of the stack.

You can also raise and lower objects one step at a time with the **Bring Forward** and **Send Backward** commands. These will move objects up or down, respectively, as long as the next layer is visible and unlocked.



Each layer contains its own objects. The layers also have their own z-order, and can be rearranged in the Layer inspector by dragging. An arrow to the left of the name highlights the currently active layer; all new objects will be created in this layer. To make a layer the active layer, click in the left-most column by that layer.

Each layer can be toggled visible/invisible and locked/unlocked with the checkboxes in the last two columns. Hiding individual layers sometimes makes it easier to concentrate on the remaining visible layers. Locked layers are visible but not editable, which is useful when editing objects stacked on top of each other.

Layers are created and deleted by the + and – buttons, and can be merged together with the Merge button in the Layers inspector. Layers are named by double clicking their names and editing.

## GROUPING AND COMBINING

Several objects can be grouped into a single object. A group behaves like a single object when it is manipulated. Grouping objects is a useful way to keep objects together, for example keeping text positioned over an object.

Objects can be grouped together with the **Group** command in the Object menu. This creates a new group from the selected objects. The **Ungroup** command reverses the grouping of selected groups, separating out their components.

Objects within groups retain their separate styles and shapes. A different way of combining objects together is to use the **Combine** command. Objects combined

together are merged into one object. The combined objects lose their separate style. Combining objects is a good way to create shapes with holes.

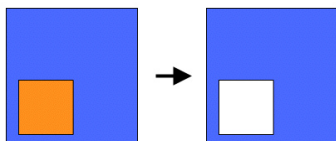
A group can be edited easily by double-clicking the group or clicking the Edit Group... button in the Fill inspector. When a group is being edited, double-click outside the group or select a layer to finish editing the group. When a group is being edited it is displayed without and effects applied to it and everything else is dimmed out.



Groups do not have stroke or fill styles like other objects but they can have effects. Thus it is possible to use a group to combine several objects together before a drop shadow or applying a transparency. Above-left, two objects have a drop shadow effect, and the result looks ugly because the drop shadows are drawn separately on top of each other. Above-right, the objects are grouped together and the *group* has a drop shadow effect, which results in one single drop shadow for the combined objects.

Groups are also useful to clip objects. Enable Clip to Top Path in the Fill inspector to enable clipping for a group. All the objects inside a group are then clipped to the topmost path in the group. If the topmost object has a text fill then the group is clipped to the bounds of the text.

## Combining



Above, two rectangles are combined together. The resulting object takes on the style of the primary selected object. This is useful for creating shapes with holes or making bigger shapes where you want the different parts to have the same style.

**Separate Paths** splits the parts of composite objects out again. Split out objects will always be Bézier paths, so rectangles lose the ability to change their corner radius.

## STYLE

The style of an object determines how it is drawn. Each object can have its own style specifying the fill, stroke and effects. Fill specifies how the center of the object is drawn, the stroke specifies how the outline of the object is drawn, and the effects specify shadowing and how the object is composited onto the page.

When there are no objects selected, the stroke, fill, and effect palettes show the current tool style. This is the style used when creating new objects. Set the tool style to what you want to create many objects with the same style.

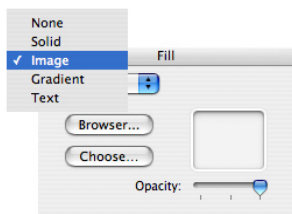
The dropper tool transfers styles between objects. Click on an object with the dropper tool to pick up that object's style. The style is applied to the currently selected

objects or to the tool style. The individual components of the style can be picked up with the dropper tool by holding the Shift, Option, and Command keys, which pick up the fill, stroke, and effects respectively.

## FILL

In Lineform there are five fill styles you can apply to objects from the Fill inspector: None, Solid, Image, Gradient, and Text. A fill style is chosen from the pop-up menu in the top-left of the inspector.

The fill of an object, image, gradient, or text is usually transformed with the object when it is resized or changed. Sometimes this is not the behavior wanted. Hold the Command key as you resize and alter the shape to allow the fill to remain unaltered. With this technique, you can crop pictures or expand the size of

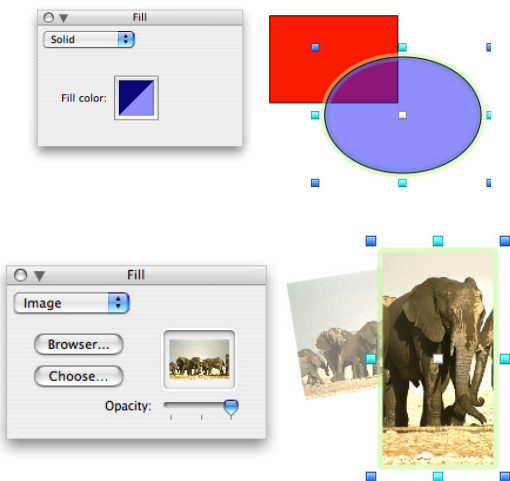


the text box without altering the text.

To reset the fill, use the **Reset Fill Transform** command in the Objects menu. This will reset any alteration that has been applied to the fill, such as the rotation of an image.

The content of the inspector is dependent on the type of fill that is selected. Selecting None simply does not fill the object, leaving the object completely transparent.





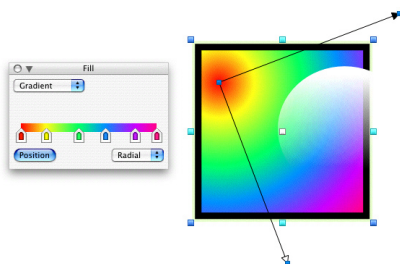
## Solid

Solid fills the object with a solid color. This color can have an opacity setting, allowing both opaque and transparent objects as extremes.

## Image

An Image fill draws an image inside the object. The image is clipped to the object's shape and can be clipped to arbitrary shapes. The slider in the inspector controls the opacity of the image. The Choose... button provides an open dialog for picking an image, and images can also be dragged onto the image preview in the inspector.

Images can be clipped easily by holding the Command key as you drag a scale handle.

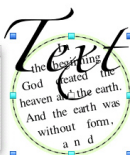
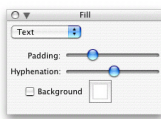


## Gradient

A Gradient fill creates a linear or radial smooth transition between two or more colors. The palette provides a horizontal preview and a sequence of color swatches. The color swatches can be edited by clicking on them and can be dragged around by clicking above the swatches on the gradient preview. To add additional colors, click underneath the gradient preview. To remove a color swatches drag it away from the gradient preview.

The Position button provides an interactive way to change the location and direction of a gradient. Click the Position button to begin editing the gradient, then drag the gradient around inside the object as you see fit. Click elsewhere on the canvas or press any key to stop positioning. The nodes can also be dragged around to alter the gradient position.

Hold the Shift key while dragging to limit the angle of the gradient to 15°. Hold the Option key while dragging handles on a radial gradient to allow the setting of the individual position without affecting the other handles.



## Text

A Text fill allows any shape to contain text. The padding and hyphenation of each text fill is set from the inspector. To edit the text, double-click the object and type away. To resize the text object without resizing the text, hold the Command key as you resize.



Unhyphenated



Hyphenated

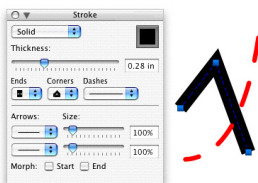
The background fill check box fills the object with a plain background color if it is required for the text. The above 8s shows text accurately filling a complex shape, using a blue background fill, an artistic stroke and a drop shadow. The text is fully justified: the left-hand 8 shows the unhyphenated text, while the right hand 8 shows the text fill with maximum hyphenation.

## STROKE

Strokes are applied to objects in the Stroke inspector, similar to the Fill inspector. There are three options:

None, Solid, Artistic, and Text.

Solid applies a solid color to the line drawn. In the inspector, the color, thickness, and style of the line can be set.



Ends can be (left to right) Butt, Round, or Square.



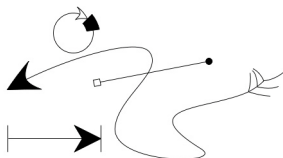
Corners can be set to Mitre, Round, or Bevel.



Lines can also be dashed and this can be set from the Dashes pop-up menu.

## Arrows

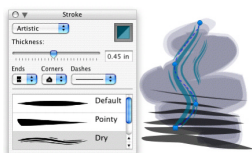
Arrows can be placed at the beginning or end of any line. This is useful for drawing diagrams and charts. Each arrowhead can be sized relative to the line size and can be morphed to the line shape.



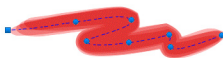
Notice how some of the arrows are morphed. This can

be applied to either arrow and can make the arrows look much more natural and professional.

## Artistic strokes



Artistic strokes are an expressive way to draw vector objects. The strokes remain fully editable, and provide a richness in appearance that vector objects often lack. With artistic strokes you can add a bit of flare to normal drawing:



Or you can let yourself free to draw art:

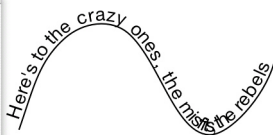


This quick sketch of a snail was drawn with a tablet, making use of the brush tool. Layers were used to build up the snail using different artistic strokes with transparency to achieve the final image. On the right you can see the “skeleton” of the snail, this is what it looks like without artistic strokes.

## Text

Text strokes allow placing text on a path. This can be any shape or size. Text is typeset out along the path

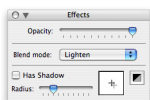
from beginning to end, and paths that contain multiple segments have text typeset along each segment in turn. The text is edited inside the Stroke palette. It is scaled with the line thickness and a baseline offset can be specified to move the text perpendicular to the line.



By using kerning it is possible to correct the compression and extension of the text that happens at sharp corners. Changing the text baseline alters the text layout. A baseline that centers the text over the line can eliminate some of the compression and extension.



## EFFECTS



Effects change how an object is drawn or composited onto the canvas. It is possible to control the object's opacity, blend mode, and shadow through the use of effects.

Opacity controls how transparent an object is. Especially useful is the ability to control the opacity of groups, as it

controls the opacity of the group as a whole.

Blend modes specify how the colors of objects should be mixed. Blend modes are extremely powerful compositing modes but also fairly complex. To understand how blend modes work it is probably best to experiment with them. The above screenshot shows a brush blended with different modes. (From top to bottom the blend modes are: Normal, Lighten, and Difference.) Blend modes are extremely effective when combined with artistic strokes to add extra depth to an object or image.

Drop shadows are a simple effect that adds a lot of depth to simple objects. A drop shadow can be applied to any object in Lineform. Shadows are added to objects in the Effects inspector. The radius (how fuzzy the shadow is) of the shadow and its color and position are also set from the inspector.

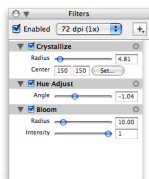
## **F I L T E R S**

Filters allow more complex effects, ranging from blurring and color adjustment to halftones, to be easily applied to objects, while retaining the ability to edit the objects.

Lineform provides a powerful set of filters, based on Apple's Core Image technology. Using Core Image allows many effects, which are impossible with pure vector objects, to be achieved. For example, filters make it simple to create a Gaussian blur of an object, as shown below. The same objects are shown on the left without filters applied and on the right with filters.

# *blur* Crystallize *blur* Crystallize

Filters are controlled through the Filter inspector.



At the top of the Filters inspector are three controls, from left to right: whether filters are enabled, the resolution at which the filters are applied, and an action button to add new filters. Below these controls is the stack of currently applied filters, which can be individually minimized, disabled, deleted, and re-ordered. Each filter also has its own parameters that can be set.

Many filters are available, and it is worth spending some time experimenting and exploring the possibilities. The filters are categorized by type as: Geometry Adjustment, Distortion Effect, Blur, Sharpen, Color Adjustment, Color Effect, Stylize, Halftone Effect, Tile Effect, Generator, Gradient, Composite, and Transition. To add new filters, click the top-right button in the inspector. To delete filters once they have been added, click the X button in the right of the filter title-bar.

The filters are applied in order from top to bottom. They filters can be re-ordered by dragging the gray title bar up or down to move the filter above or below other filters. The order of the filters can often have a large impact on the final result.



## **Filter resolution**

Because filters are, by necessity, bitmap operations that work at the pixel level, the resolution that the filters are applied at makes a difference to how they look. Lineform endeavors to keep the filters as independent of resolution as possible, however it does not provide complete resolution independence.

Each object can be set to have a resolution of 72, 144, or 300dpi, the lowest being screen resolution and the highest being good for printing. For print it is usually best to make use of higher resolution filters, but it's worth experimenting, as some filters with very gradual transitions, such as the Gaussian blur, often work well at low resolutions. Low-resolution filters are faster to draw and take up much less memory.

Bitmap images included in Lineform are optimized to have filters applied at their native resolution. This is only the case when the filters themselves are resolution-independent, such as color adjustment, and the image object does not have a stroke. This allows filters like color adjustment to be applied to images at their native resolution and at faster speeds.

## **EDITING OBJECTS IN DEPTH**

Objects can be edited and altered in different ways. The most flexible and useful way to edit objects is to use the Edit tool. This allows shapes to be changed and altered in any fashion wanted. Once the edit tool is selected, nodes appear on the object you are editing. The type of nodes depends on the type of object—rectangle and oval shapes have different nodes, for example.

Lineform provides several different ways to begin editing objects. The simplest is to select the edit tool from the toolbar. Any objects that are selected will become editable. The Return or Enter keys also toggle between the selection tool and the edit tool. It is possible to hit Return repeatedly to switch modes depending on what you're doing.

Lastly, it's also possible to double-click to start editing. A double-click acts like a normal selection click, except that it starts editing. Thus a double-click can select objects to add and remove from editing, just as clicking does with the selection tool. The same modifiers affect the selection. The Shift key allows objects to be added and removed from editing, the Option key selects only objects fully within the selection, and the Command key allows the selection of objects below the top object. A double-click-drag is also possible. These are effective both in and out of edit mode.

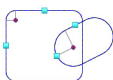
The double-click selection provides a simple mirror of the standard selection tool, and is a very effective way of quickly editing the objects you want.

Text objects work slightly differently. Double-clicking a text object or pressing return when one is selected will begin editing its text. The object itself can be edited by selecting the edit tool or by editing it at the same time as other objects.

## **Rectangles and Ovals**

Rectangle and ovals are different from other shapes. They are editable in different ways, providing easy methods to alter the shapes. If further editing is needed, these shapes can be converted into Bézier shapes. This

is done with the **Objects > Convert > To Bézier** menu command. Once a rectangle or oval is converted to a Bézier shape it is editable in any way.

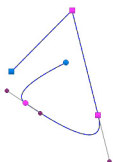


Editing a rectangle allows a rounded corner to be set and the rectangle to be scaled in its original axes. The cyan nodes above are used to scale the rectangle along its width and height. The small purple node sets the radius of the rounded corner.



An oval is edited in a similar fashion. Two small control nodes allow the oval to be set to an arc or pie. If the mouse is dragged *inside* the oval it when dragging a control node the oval becomes a pie. If the mouse is dragged *outside* the oval, it becomes an arc. Hold the Shift key to force the angles to be constrained to 15° intervals. Ovals are drawn when the two control nodes are close. You can prevent this by holding the Option key.

## Bézier paths



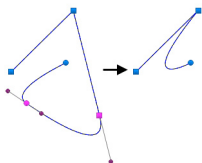
The shape above is being edited, and the squares and circles represent the nodes of the shape. These nodes specify the shape and can be altered. In the above example there are two blue nodes and three pink nodes.

Square nodes represent a line segment of the shape and the circle nodes represent curve segments. Above the smaller purple circles connected to some of the nodes are control handles that affect the shape of the curve. These control handles only appear on selected nodes that are adjacent to a curved segment of the shape.

Nodes work in a similar fashion to objects. Clicking on nodes or dragging around them selects the nodes. Hold the Shift key to add or remove nodes from the selection. The Command key selects nodes from underneath, allowing access to nodes on top of one another.

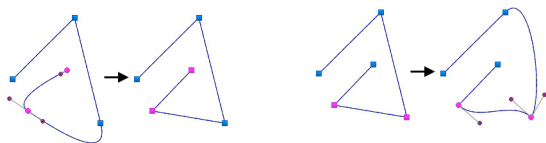
Once nodes are selected they act in a similar way to objects. Dragging moves them, and holding the Shift key limits the movement to horizontal or vertical. They can also be nudged using the arrow keys in the same fashion as objects.

Control handles can be dragged but not selected. Each curve node has two control handles, which are automatically aligned. Hold the Option key as you drag a handle to move the handles independently. Hold the Shift key to constrain the handles to 15° angles. Hold the Command key to keep the control handles at a constant angle as you drag them.



Deleting nodes removes them from the shape; the shape is joined up between where the nodes were removed. You can delete the selected nodes by pressing

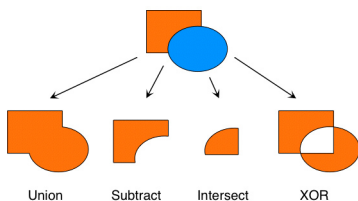
the Delete key.



Changing nodes to lines (above left) alters the shape so that the nodes selected are now lines and not curves. This and the other editing functions can be accessed from the Objects menu or the contextual pop-up menu. The reverse (above right), changing nodes to curves, converts any selected nodes to curve nodes. Initially this will look the same until you drag the control handles. To add a node at any point in a Bézier path without altering its shape, Option-click at the point in the path where you want to place the new node.

There are three extra editing commands: duplicate, connect, and cut. Duplicate creates two nodes on top of one another. This is useful for adding in extra nodes and detail into shapes. Connect joins nodes together within the same object. Finally, cut breaks the shape at the nodes selected, creating multiple segments.

## Boolean operations



Boolean operations are a way of combining two or more objects together. The resulting object is created from a

Boolean (yes/no) combination of the selected objects and takes the style of the primary object.

The Union Boolean operation combines two or more overlapping shapes into one larger shape, consisting of the outer contour of those shapes.

The Subtract Boolean operation removes or subtracts the shape of the selected objects from the primary object. In the case above, the orange rectangle is the primary object. If the circle were the primary object, the resulting object would look like the blue pie below.



Using the Intersection Boolean operation results in a shape that consists of the overlapping area(s) of the selected objects. If the objects do not overlap, an Intersection is the same as deletion.

The XOR Boolean operation creates a shape where one of the selected objects was but not both. If more than two objects are selected, XOR creates a shape where an odd number of objects overlap. The same effect can be achieved by simply combining the objects together. However, XOR creates a new shape with new control points that allow editing.

## Outline

Outline converts the outline of the text or objects into a path. This creates an outline that can then be edited, filled, and manipulated.



The above shows a rounded rectangle with a gradient fill (left) and the result of outlining the rectangle with the same fill applied (right). Before outlining, setting a gradient stroke is impossible.

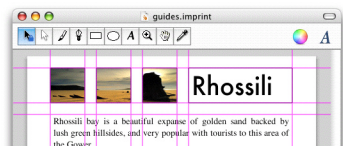


There are many other possible uses of outlining, such as drawing walls in a floor plan, creating logos out of text, and using Boolean operations on artistic strokes. The image above shows text that has been outlined and then edited to join the T and L and rotate the INE and drawn with an artistic stroke, which gives it a pen drawn look. A background that has some outlined artistic strokes subtracted from it and some flames, which are the union of more artistic stroke outlines.

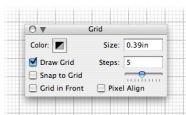
## THE CANVAS IN DEPTH & EXPORTING

### Rulers, guides and grid

Lineform provides several methods of aiding accurate positioning of objects and shapes. Rulers allow accurate measurement of distance, horizontally and vertically. Guides can be added to both rulers—these draw pink lines across the drawing area that objects automatically snap to.

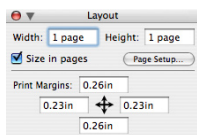


Guides can be easily used to align objects, size objects, and create objects with accurate sizes. Guides can be hidden or cleared from the View menu.



A grid provides a uniform set of guides that objects can snap to throughout the document. The grid size, steps, and color are all set from the Grid inspector. A grid is useful for drawing many different things including technical drawings, floor plans, and typesetting layout. The grid can be set to any major spacing size with minor spacing or steps. The color and drawing properties of the grid can also be altered from the Grid inspector. Pixel Align aligns the grid lines in the center of pixels so that bitmap drawings along grid lines are not anti-aliased.

## Page layout



The Layout inspector sets the size of the canvas in number of pages. Changing the actual page size, for example to A3, is done in the page setup dialog box. To access this either select Page Setup... from the File menu or click the button inside the Layout inspector.

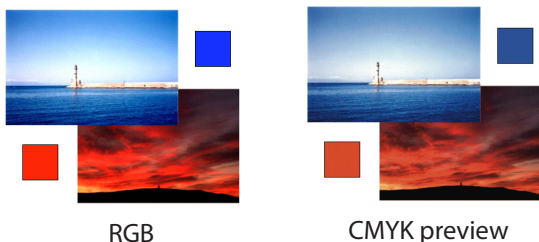
The layout panel also allows the canvas margins to be changed—useful if drawing to the exact size of the paper, however most printers will not print to the edge of paper. To use a specific document size, uncheck the



“Size in pages” option.

## CMYK preview

Printers and screens use different methods of creating color. Screens use an additive combination of red, green, and blue (RGB). Printers mostly use a subtractive combination of cyan, magenta, yellow, and black (CMYK). Because of the difference in how colors are created it is possible to show colors on screen that cannot usually be printed. This is disappointing if you have spent a long time getting the colors right.



(note: these images will appear the same in a printed version of this manual)

To avoid this problem Lineform provides a CMYK preview. It is toggled on and off from the View menu. This provides a clearer idea of how the drawing will appear when printed out. Above shows two screen shots of a composition, the left hand screen shot is the normal view of the document, the right hand shot shows the CMYK preview of the same document. Notice how the bright blues and reds are more muted in the CMYK preview. This is closer to what will be printed on a CMYK printer.

## Outline view

Outline view renders all shapes as outlines, allowing easier selection and editing of overlapping and complex drawings. It is toggled on and off from the View menu. In outline mode, shapes are rendered as outlines, without any effects or fill. The composition of the Lineform logo can be seen on the next page. The artistic strokes composited on top of the hands, which cannot be seen normally, can be seen as outlines.



## Export

It is possible to export objects from a document to both vector and bitmap file formats. To export objects, select the objects then use **Export...** command in the File menu. Objects can be exported to BMP, EPS, JPEG, PDF, PNG, and TIFF file formats. It is also possible to specify the exported transparency and resolution.

EPS, PDF, and SVG are vector formats and are resolution-independent. Use these formats if the exported file will be printed.

PNG and TIFF are the only bitmap formats that support transparency, and PDF is the only vector format that

supports transparency.

SVG

SVG is a modern XML-based standard for vector-based artwork that is independent of resolution. Lineform supports SVG as both an import and export format. SVG support is growing in many places like web browsers, and also provides a good intermediary format between Lineform and other programs.

Lineform’s support for SVG provides comprehensive support for the basic SVG standard. This table summarizes Lineform’s SVG W3 test suite compliance:

Color	✓
CSS	
Coordinates	✓ (excluding font-based units)
Filters	
Fonts	
Masking	✓ (excluding gradients)
Metadata	
Painting	✓ (excluding markers)
Paths	✓
Color Gradients	✓
Rendering	✓ (excluding fonts)
Shapes	✓
Structure	
Text	Partial support

## AppleScript

AppleScript support is built into Lineform. If you need to extend or compliment Lineform's abilities with additional features or automation, then it is simple to do so using AppleScript.

For help on using AppleScript, load Lineform as a dictionary in Script Editor.

## S U P P O R T

For technical support with Lineform please visit Freeverse on the Web:

[www.freeverse.com/support](http://www.freeverse.com/support)

## Installation & Registration

To install Lineform, drag the Lineform application from the CD or disk image to your Applications folder. You may then eject the CD or disk image volume.

The first time you run Lineform it will ask you to register. Click **Enter Serial Number** if you installed from a CD, or **Enter Code** if you are registering a download.

Enter your name, e-mail address, and registration code. The code can be found on the cover of this printed manual, or in your confirmation e-mail from Freeverse.

**Note: You must be connected to the Internet for registration. Once you are registered you do not need to be on-line.**

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