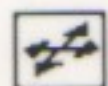# Swivel 3D Professional

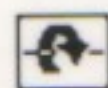*Quick Reference Guide*

World View Tools

*XY Arrow* moves objects across the plane of the screen. Click on an object and drag it to a new XY.

XZ Arrow moves object in and out of the Z axis. Drag upward to push object back, downward to pull it forward.
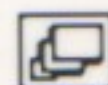
Yaw Arrow pivots the object around the Y axis. Drag the object to a new attitude.

Pitch Arrow pivots the object around its X axis. Holding the Command Key and dragging from top to bottom will also activate this tool.
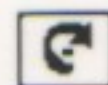
Roll Arrow pivots the object around its Z axis. Holding the Command Key and dragging from top to bottom will also activate this tool.

Scale Tool makes the object larger or smaller. Drag the object downward to enlarge, upward to make it smaller.

Lathed Object creates a new object. Select this tool and click where you want to put a new object. The object will always be a default cube.
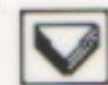
Extruded Object creates a new object whose scale is determined in the Cross Section View. The object will be created as a flat triangular solid.
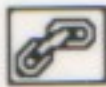
Free Link attaches one object to another. Drag link from child to parent object. The child object is free to be manipulated independently.
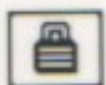
Lock Link creates an completely constrained link. Neither object can move separately. Drag from the child to the parent object.
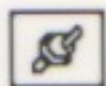
Ball Joint Link creates a link that is constrained in X, Y or Z but is free to rotate as any ball joint should. Drag from the child to the parent object.
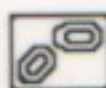
UnLink Tool breaks the link between a parent and child object by clicking on the child object.

Zoom In Tool zooms in to the selected rectangle. Drag a rectangle around the portion of the World you want to view more closely.

Zoom Out Tool zooms out to the selected rectangle. Drag a rectangle showing the area you want to shrink the current view into.

Palette Tool opens the Macintosh Color Picker, or Reflectance dialog for black and white.
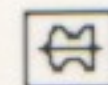
Design Object Tools

Double Arrow Tool edits the upper and lower contours of any of the section views. Double click to choose whether to edit one or two Sections at a time.

Single Arrow Tool edits a single contour in any one of the section views at a time.

Free Poly Tool creates a new contour with a series of clicks in any of the sections. Works in theTop and Side sections simultaneously.
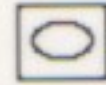
OvalTool draws a circle in the Cross Section View with a single click, or drags a circle in Top Section and Side Section Views. Double-click to choose the number of points around the circle (polygon).
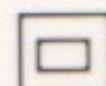
Rectangle Tool creates a four-sided section by click-dragging in Top Section and Side Section Views. In the Cross Section View, it creates a square with a single click.

NOTE: When editing the Cross Section of an Extruded Object, the Oval and the Rectangle Tool work by clicking and dragging the new cross section.

Command Keys

File Menu

⌘ - N   **New**: Creates a new document.

⌘ - O   **Open**: Presents a file dialog from which to open a Swivel document.

⌘ - S   **Save**: Saves the file you are currently working on.

⌘ - U   **Export File...**: Asks for a file name, then creates a file of the type selected in the Output Style dialog box (Edit Menu).

⌘ - P   **Print...**: Prints the current document in the format selected in the Output Style dialog box.

⌘ - Q   **Quit**: Quits the application.

Edit Menu

⌘ - Z   **Undo**: Cancels the last action.

⌘ - X   **Cut**: Cuts an object and its links and places it on the clipboard.

⌘ - C   **Copy**: Copies an object and its links and places it on the clipboard.

⌘ - V   **Paste**: Pastes an object from the clipboard into a document or if an object is selected, will replace the selected object in its position, orientation and scale.

⌘ - D   **Duplicate**: Duplicates the current object and all objects linked to it.

⌘ - L   **Duplicate Link**: Duplicates the current object inheriting constraints, position, attitude and scale.

⌘ - 7   **Paste Command**: Pastes a Command File Language command from the clipboard.

⌘ - 8   **Paste Background**: Pastes a PICT image from the clipboard onto the back ground of the current world.

⌘ - 9   **Clear Background**: Deletes the PICT image on the background.

⌘ - 0   **Copy Background**: Copies to the Clipboard the PICT image on the background.

⌘ - F   **Find...**: Opens a dialog in which objects can be searched and named.

⌘ - 6   **Info...**: Opens a dialog where by objects can have TEXT associated with them (Output Style dialog box).

⌘ - I   **Inherit...**: Opens a dialog offering six inheritable options which can be passed from parent object to a qualities down through all objects linked to it.

Object Menu

⌘ - R   **Redesign Object/Return to World...**: Opens the selected object to the Design Object View and toggles back to the World View.

⌘ - W   **Object Position...**: Opens a dialog for editing the current position of the object and its allowable range of motion.

⌘ - E   **Object Attitude...**: Opens a dialog for editing the orientation or Yaw, Pitch and Roll of an object.

Effects Menu

⌘ - G   **Effects...**: Opens a dialog box with six special rendering options and will render when Effect Render is select or during a Tween.

⌘ - H   **Effects Render**: Renders the World with all selected Effects.

⌘ - J   **Select Color**: Opens the Intermediate Palette for color selection.

⌘ - 1   **Set Key**: Makes the current World View the current keyframe.

⌘ - 2   **Add Key**: Inserts a new keyframe after the current keyframe.

⌘ - 3   **Clear Key**: Deletes the current keyframe.

⌘ - 4   **Next Key**: Displays the next keyframe in the Tween sequence.

⌘ - 5   **Previous Key**: Displays the previous keyframe in the Tween sequence.

⌘ - T   **Tween**: Starts the Tween with all options selected.

⌘ - Y   **Preview**: Allows a *fast Tween* of a model as simple wireframe cubes.

KeyBoard Equivalents

KeyBoard Equivalents for Moving and Scaling Objects

Select either the Shift, Option, or Command Key then choose the object by clicking and holding the mouse button down. Next drag the mouse to the see effect. You can use these tools one after another by continually holding the mouse button down.

To select:		Hold down:	To select:	Hold down:
	Yaw and Roll	**Option**	Select up-tree Object	Up Arrow
	Yaw and Pitch	⌘	Select Down-tree Object	Down Arrow
	Scale Object	**Shift**	Select Left Sibling	Left Arrow
	Retain Same Tool As long as Caps Lock Key is down	**Caps Lock**	Select Right Sibling	Right Arrow

Keyboard Equivalents for Adding/Deleting Points and Zooming

To add points in the Top, Side and Cross Section, hold down the Command key and click on a place along a line, A new point will appear at the spot where the mouse was clicked.

Before   After Adding a point
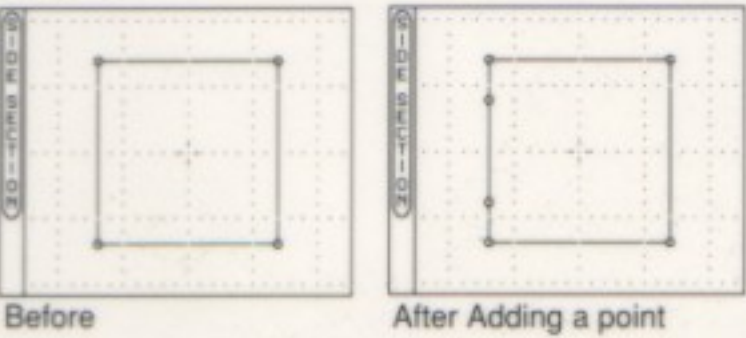
To delete a point hold down the option key and click the mouse on an existing point.
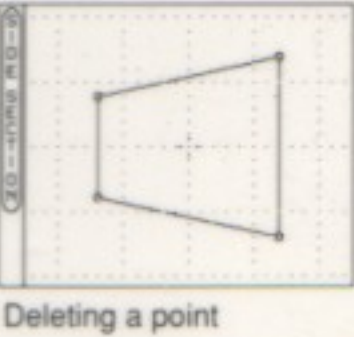
Deleting a point

Option + SIDE SECTION

To Zoom in on a Object View and Side, Top and Cross Section hold down the Option key and click on the view's

⌘ + CROSS SECTION

To Zoom out, hold down the Command key and click on the view's sidebar.

Menus

File
New	⌘N
Open	⌘O
Open Command File	
Close	
Save	⌘S
Save As	
Export File...	⌘U
Revert to Saved	
Halftone...	
Page Setup...	
Print...	⌘P
Quit	⌘Q

Edit
Undo Move	⌘Z
Cut	⌘X
Copy	⌘C
Paste	⌘V
Clear	
Duplicate	⌘D
Duplicate Link	⌘L
Paste Command	⌘7
Paste Background	⌘8
Clear Background	⌘9
Copy Background	⌘0
Find...	⌘F
Info...	⌘G
Inherit...	⌘I
Output Style...	

World
World Position...	
World Attitude...	
World&View ▸	
View Angle ▸	
Normal Size	
Reduce	
Enlarge	
Size To Fit	
Snap-To Grid	

Object
Redesign Object	⌘R
Create Skin Object	
Object Position...	⌘W
Object Attitude...	⌘E
Align Object ▸	
Object's View ▸	
Rulers...	
Attitude Grid...	
Object Form...	
Extrusion Depth...	
Use Draw Grid	
Polar Grid	
Show Rulers	

Render
Resize Workspace...	
Render Separately	
Fast Cubes	
Wireframe	
Hidden Line	
Outline Shade	
Shade	
Smooth	

Effects
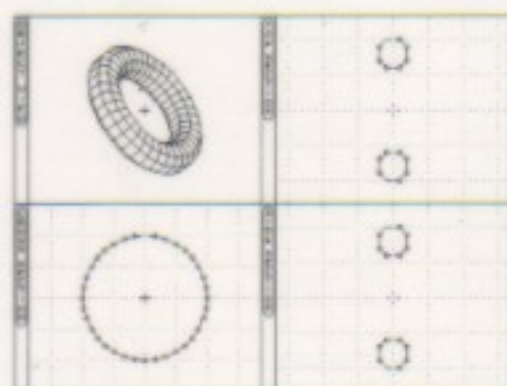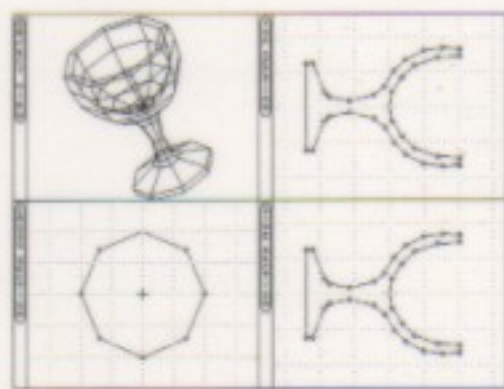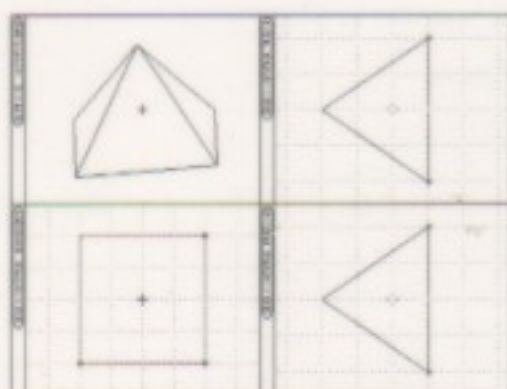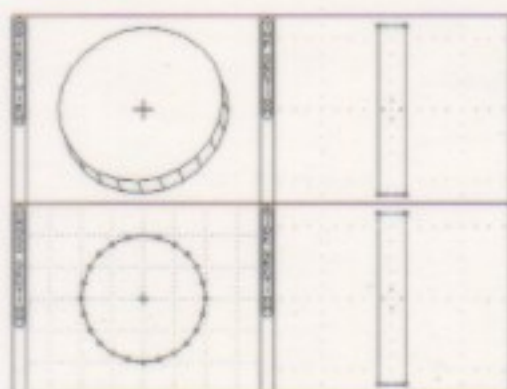| Open Tween Panel | |
Open Light Panel	
Effects...	⌘G
Effects Render	⌘H
Remap Color	
Select Color	⌘J
Set Key	⌘1
Add Key	⌘2
Clear Key	⌘3
Next Key	⌘4
Previous Key	⌘5
Tween	⌘T
Preview	⌘Y

Swivel 3D Object Library

This library of images is a guide to the Design Object Views of a few of the endless number of object forms that Swivel can create.

use

use