This mini-tutorial is a step-by-step tour to help you quickly familiarize yourself with the ModelPro Interface, and to access particular features. For more detailed information regarding the Interface (Tools, Windows, and Palettes) consult the appropriate Reference Manual chapter. ModelPro 3.0 also incorporates an on-line Help feature located under the Apple menu.

Start-up Window layout

Get Started

Locate the ModelPro application icon, and launch ModelPro by double-clicking on the icon. Note that ModelPro automatically opens a New blank file upon launch. Your double-width Tool palette is on the left; your Snapping palette is directly below the Tool palette; your Groups palette is on the right over the 3-D preview window titled Angled; counter-clockwise from top-left are your Top view, Front view, and Right view drawing windows; at the top of the screen is the Tool Info palette, and at the bottom of the screen is the Status Line palette. The Statistics palette and Libraries palette may be accessed and displayed through the Palettes sub-menu (Windows menu).

Fine-Tune Your Interface

In the Edit menu choose Preferences. Click on the icon named Drawing to the left side of the Preferences dialog (note that the default dialog is the top item (General). Set your Scale Units to Decimal Inches and your Decimal Places to 1.000. Next, scroll down the list (to the left of the dialog box) and click on the icon named Colors. Click in the color box labeled Background Color. Set the color to a darker gray by moving the slider (to the right of the color wheel) down. Take a moment here to look at your other options in the Preferences dialog boxes (there are five types of Preferences: General, Screen, Drawing, Grid, and Color.
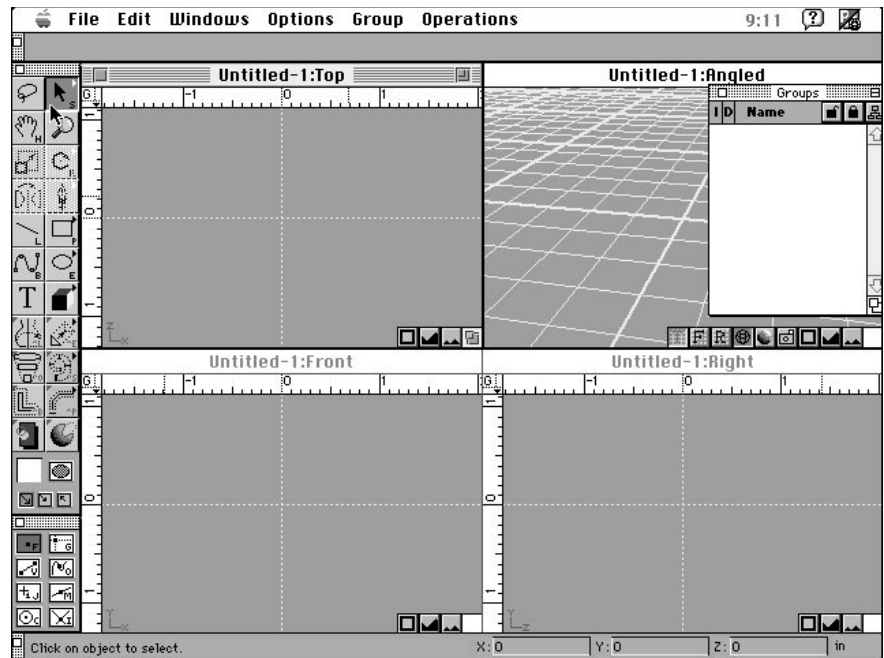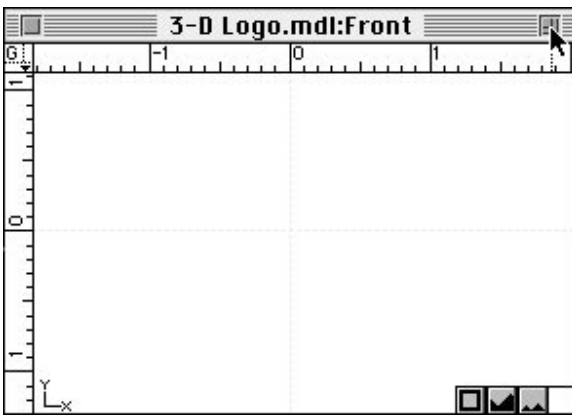

Edit Menu
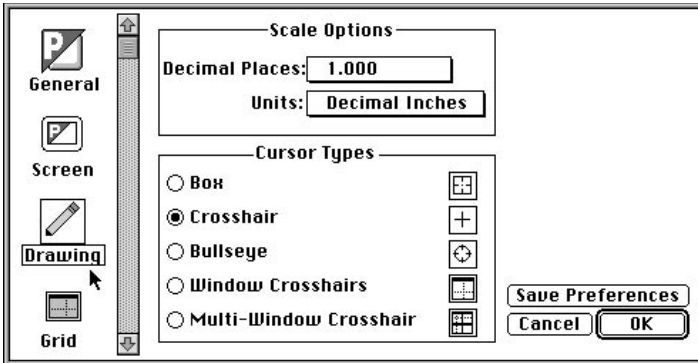
Drawing Preferences dialog box

Zoom Front view window to full screen

Spline Tool

When you are ready, choose OK to return to the start-up screen. Choose Save Preferences to make any changes permanent, so that the next time you launch ModelPro, Preferences will be as you have set them here. Remember to Save often, so as not to lose important, time-consuming operations.

Window Control

Do not be overly concerned about exactly duplicating what is shown in the following diagrams. Use the illustrations only as reference in following the tutorial; some of them have been edited for clarity.

Make the Front view active by clicking anywhere in the Front view window. You may have already noticed that the Selector tool is chosen as the default at start-up. Click in the Zoom box on the Front view window to bring that view to full screen.

Now we should be working with one drawing window (Front view). Click in the Zoom box on the Groups palette to compress the palette to show only its title bar.

Using the Spline Tool

Use the Spline tool to draw a closed 2-D shape. To be sure that the last point lands on the first point (thereby closing the shape), click on the Vertex Snap button (Snap palette) just prior to placing the last point. Place the last point on the first point (or on the shape, close to the first point) to automatically close the shape.
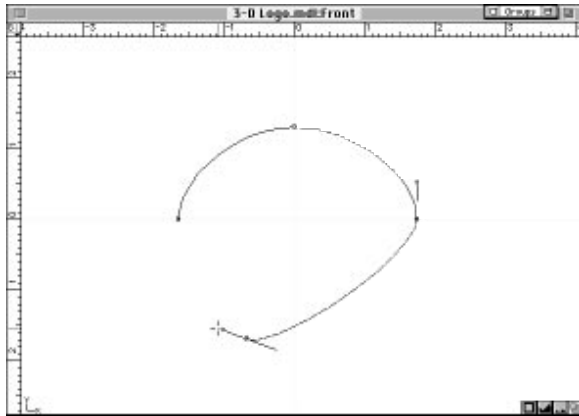
A spline shape is a succession of connected points. If you want the connection between any two points to be a straight line, click just once at each point. If you want the connection to be a smooth curve through a point, click-drag the point, as you draw, to expose its "handle bars." For more information about the Spline tool, consult the Reference Manual.
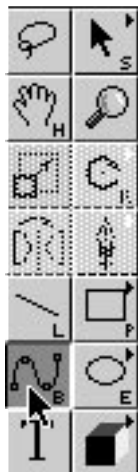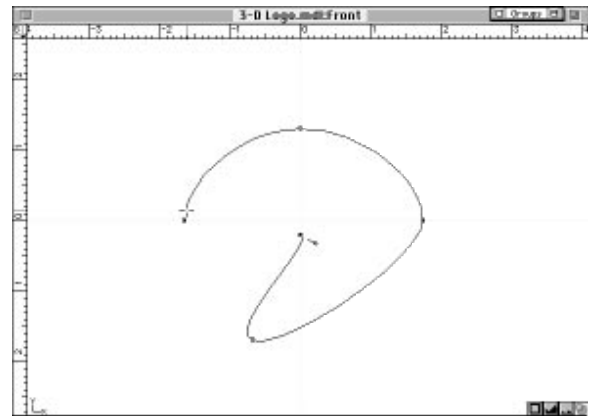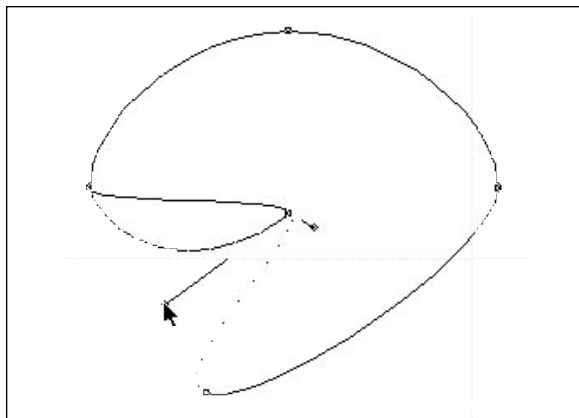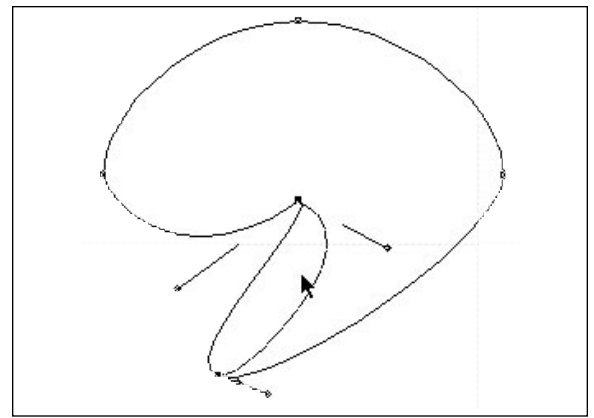
Draw curved spline shape
through a vertex

Use the Snap Vertex button to
complete the spline shape

Edit the spline shape by dragging
a "handle bar"
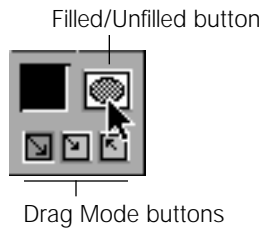

Edit the spline shape by dragging the
shape between vertices

Editing a Spline Shape

Select the spline shape with the Selector tool. Click on one of the vertices to expose its "handle bars." (Remember, points connected by straight lines may have only one handle bar showing (or none at all)). Click drag one of the "handle bars" (by one of its end points) to reshape the smooth curve through the point. Click-drag the shape between two vertices to reshape another portion. Consult the Spline tool information in the Reference Manual to learn more about how to edit spline shapes.

Snap palette

Filled/Unfilled button

Drag Mode buttons

Edit

Undo Move	⌘Z
Cut	⌘X
Copy	⌘C
Paste	⌘U
Clear	⌘B
Select All	⌘A
Can't Redo	⌘R
Clone	⌘W
Duplicate...	⌘=
Preferences...	

Clone and move the spline shape

Using the Filled/Unfilled button

Note that the Filled/Unfilled button default is set to Filled. This mode must be set prior to completing the shape for it to take effect. This is true for spline shapes, quickdraw shapes, and Text shapes. Click on the button to toggle between the Filled (shaded ellipse on the button) and Unfilled (clear ellipse on the button) modes.
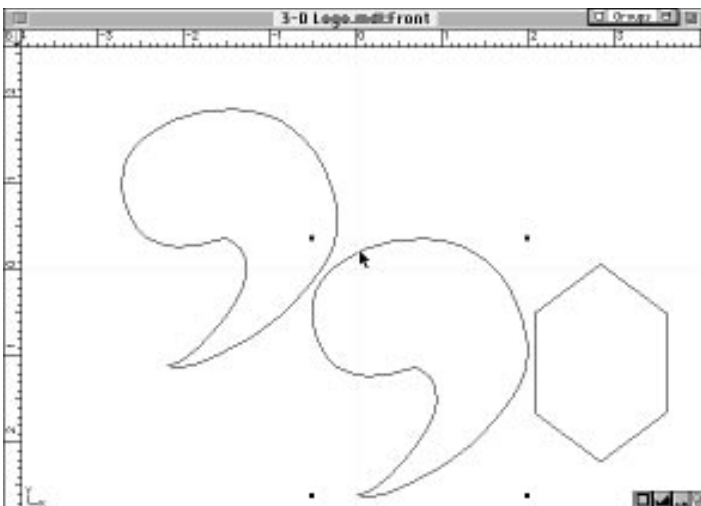
Using a Quickdraw tool

Select one of the Quickdraw shapes (ellipse or polygon) to draw (drag out) a second 2-D shape. The default Drag Mode (bottom of the ToolBar) is corner-to-center. Try dragging out several quickdraw shapes using different Drag Modes. Then, select and delete all of the extra Quickdraw shapes; leaving just one.

Duplicating Objects

Select the spline shape with the Selector tool. Choose Clone from the Edit menu. Clone makes an exact duplicate of the selected item,and positions the duplicate exactly on "top" of the original. De-select all shapes by clicking in an open area with the Selector tool.

Select the clone as a whole object (bounding box corners only will show) by holding the Option key while making the selection, and move (drag) it to a new position, not overlapping the original. Remember to release the Option key after selecting the object, and before moving the shape. Remember to Save.

Controlling Your View

In the following section, using the Hand tool and the Zoom boxes does not affect your model (the shapes); it just changes your view of the model in the window.

Select the quickdraw shape and move it to a position so that it is partially out of the field of view.

Select the Hand tool and drag in the window to reposition your view so that the element you just moved is completely visible in the window.

Use the Selector tool to again reposition one of the elements partially out of the field of view.

Click in the Zoom In and Zoom Out boxes (lower-right corner of the window) to adjust the view to once again make all of the elements completely visible in the window.

Move the quickdraw shape partially out of the view

One final time, reposition one of the elements partially out of the field of view.

This time click in the Fit-to-Window box to make all of the elements completely visible in the window.
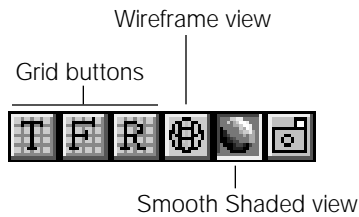
Finally, select the quickdraw shape and remove it from the data base by pressing the Delete key on the keyboard; you will not need that shape for your logo.

Click in the Zoom box to return to the 4-view interface.

Fit-to-window
Zoom Out
Window resize
Zoom In

Wireframe view

Grid buttons

Smooth Shaded view

Click in the Angled view window to make it active. Select the Smooth Shaded view button, to confirm that your shapes are closed and filled (surfaced). Use the Hand tool to manipulate your view in the window; click-drag in the Angled view window to rotate the view intuitively. Enable one of the grids, to find your orientation, by clicking on the Top, Front or Right Grid button.

Color box
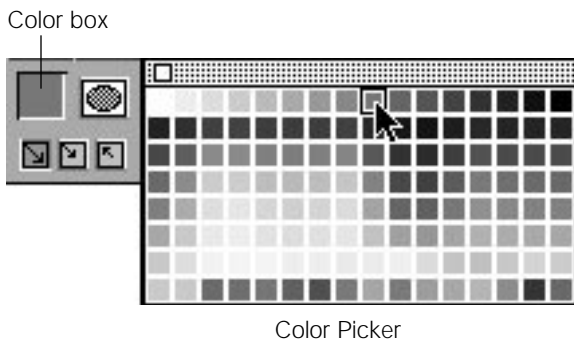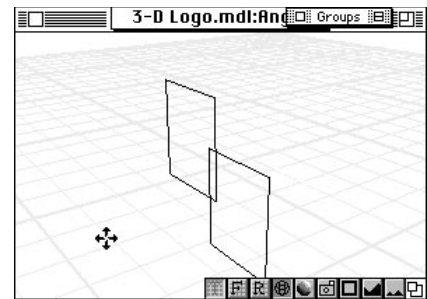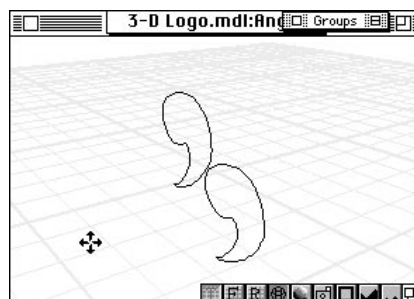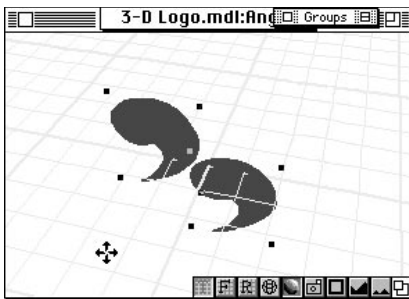
Color Picker

Using the Color Picker

Select one of the shapes and change its color by clicking and holding in the Color box, then drag to the desired color and release the mouse. Make each of the three shapes a different color.
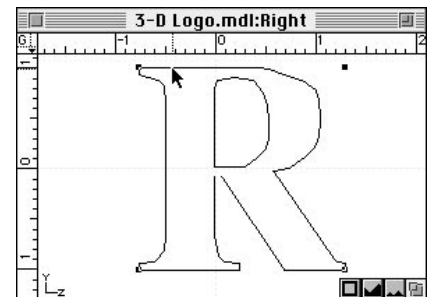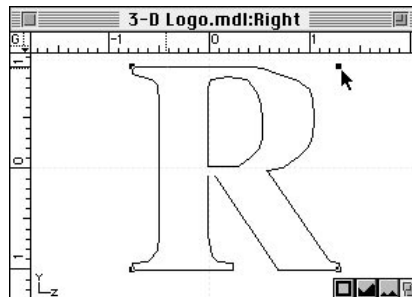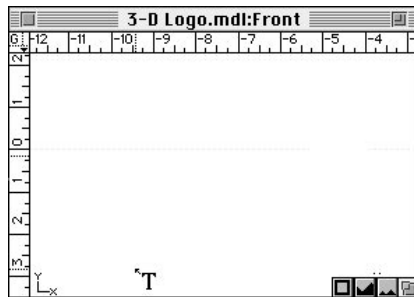
Using the Text Tool

Text tool

Select the Text tool. In the Tool Info palette, select a font from the pull-down menu; click in the character-string box, then type in a single capital letter (make the letter one with a counter (hole) in it, i.e. R or O). In the Front view window, position the cursor as desired to place the upper-left corner of the character-string, then click to place the character. Click-drag one of the two corner control points to resize the character (hold the shift key to resize proportionally). Double-click in the window, or click on the Engage button in the Tool Info palette to place the character. Click the Zoom box on the compressed Groups palette to uncompress it. Note that you have created a new item (folder) in the Groups palette, labeled with the letter you chose for the character (in this case "R").

Text Tool Info palette

Using the Text tool and selecting the
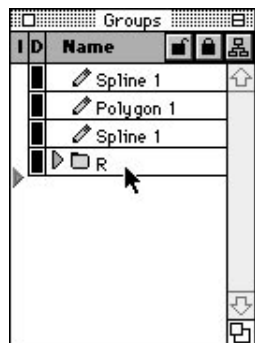Text character shape as a whole

Select the text character shape with the Selector tool (hold the Option key to select it as a whole). Ungroup it by selecting Ungroup in the Group menu (⌘-U). Remember to Save.
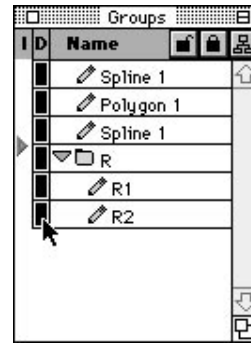
Using the Groups Palette

In the Groups palette, notice that the text character's folder has "opened" to expose its pieces. One of the pieces is labeled "Joined Splin 1." Select it by clicking on its name in the Groups palette, then delete Joined Splin 1 by pressing the Delete key on your keyboard. We do not need this piece for what we want to do. We are left with two pieces in the text character's folder: in this case, R1 and R2. These remaining two pieces are not displayed; the adjacent box in the Display column is clear. Click in these Display boxes to toggle the display "on" (black box) for R1 and R2. Now, choose Redisplay from the Windows menu (⌘-D), to redraw the screen showing all of the newly "displayed" items.
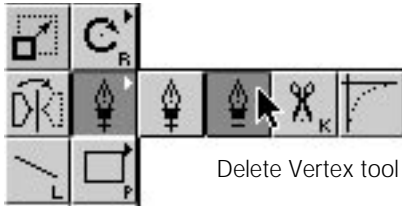

Groups palette
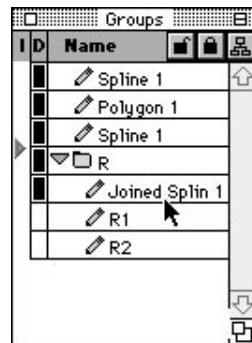
After Ungrouping

Display R1 and R2

Using the Delete Vertex tool

Use the Selector tool to select the counter (hole) in the text character shape. All of the counter's vertices should be visible. Select the DeleteVertex tool (pop-out from the Add Vertex tool). Click once on each of the counter's vertices until all have been deleted.

Hold the Command key and click on any Fit-to-Window button to make each of the four views Fit-to-Window.
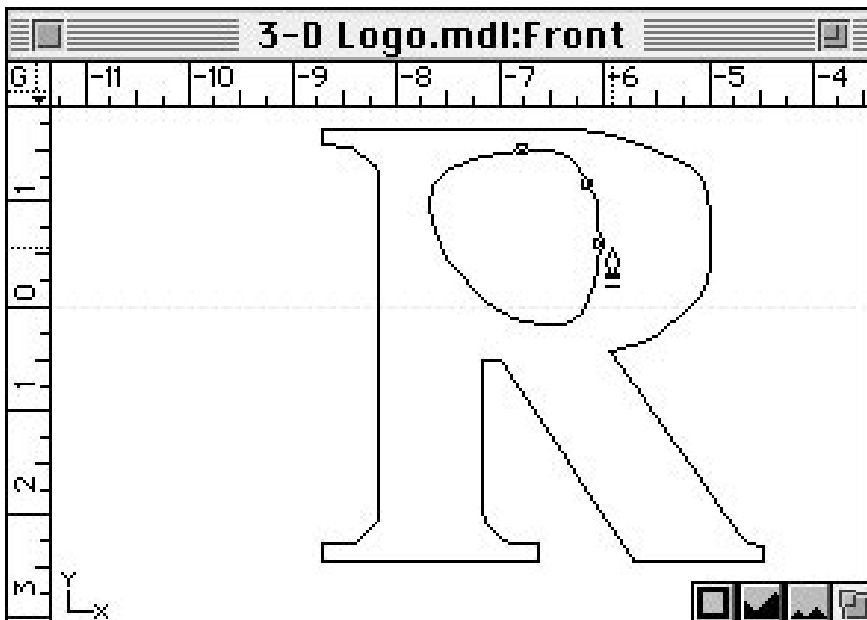
Using the Delete Vertex tool

Using the Scale tool

In the Front view, select one of the spline shapes as a whole (remember, use the Option key). Select the Scale tool. In the Tool Info palette, select Center of Object from the Anchor pull-down menu; this positions the point about which the scale will occur.
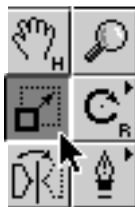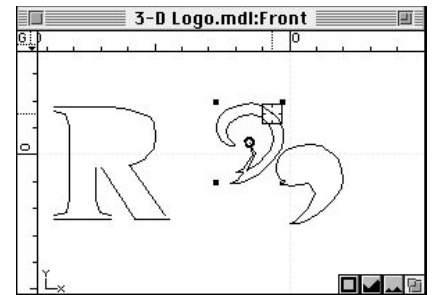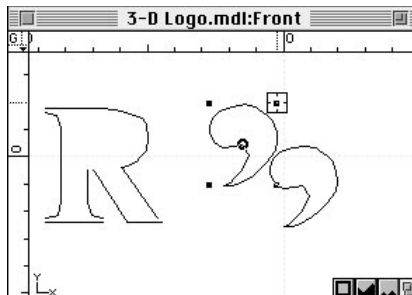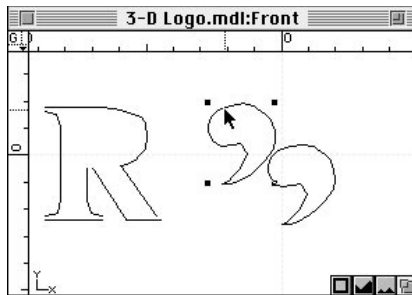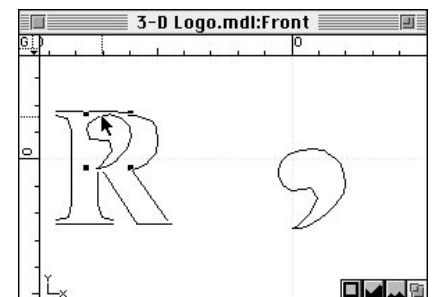
Scale tool

Rotate Tool Info palette


Using the Scale tool

Now, "grab" the upper-right bounding box point with the Scale tool, and drag diagonally toward the center of the shape, to reduce the size of the shape (hold the Shift key to constrain the scale to be proportional). Consult the Reference Manual for a detailed description of the Scale tool functions. Select the newly reduced shape, and reposition it to take the place of the hole that we deleted earlier from the text character.

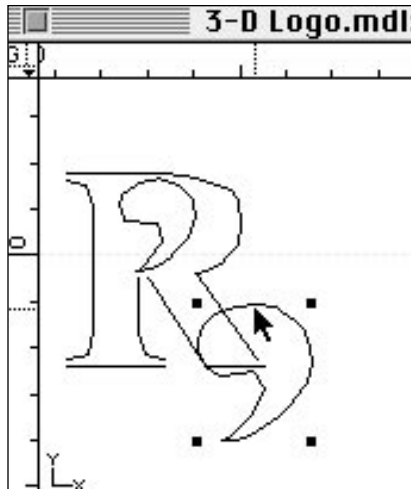Reposition the resized spline shape

Joining Elements

In the Front view window, select both the repositioned spline shape and the remainder of the text character shape. Choose Join Elements (⌘-J) from the Operations Menu. Now we have a 2-D character shape with a customized counter (hole).
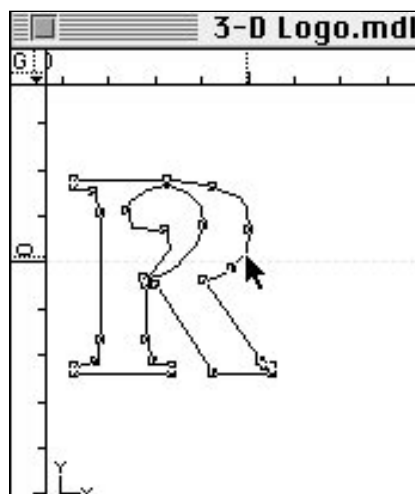

Select both shapes

Re-position the remaining spline shape

Using the Extrude Tool

In the Front view, select the remaining spline shape, and position it so that it overlaps the customized text character shape. In the Right view, position the spline shape so that it is just forward (left) of the text character shape. Select both the text character shape and the shape which overlaps it; each as a whole. Choose the ExtrudeTool and double-click in any of the drawing windows to extrude the shapes using the default setting. Remember to Save.
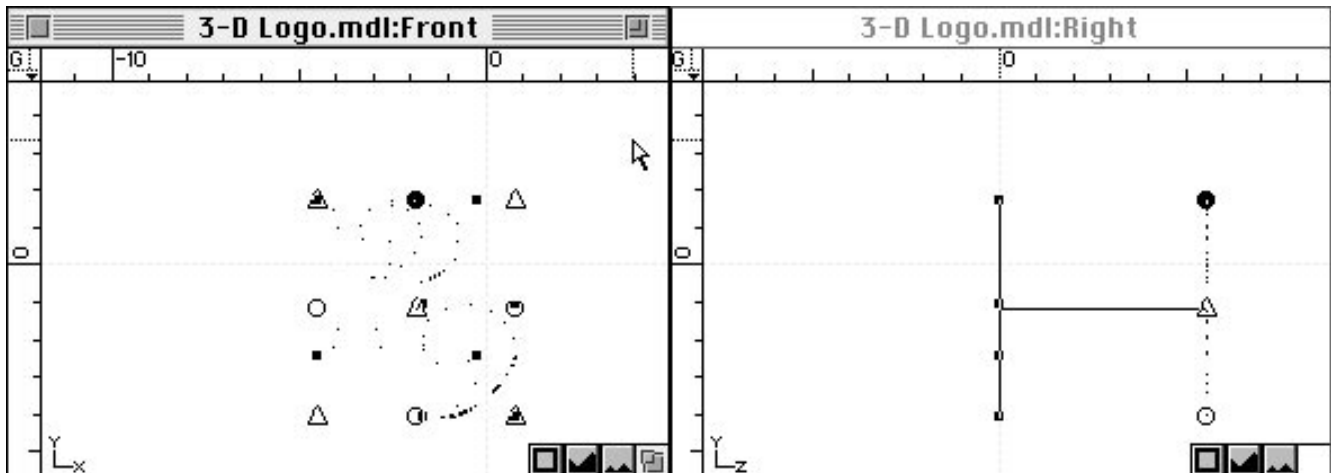
The intuitive Extrude tool controls

Extrude tool
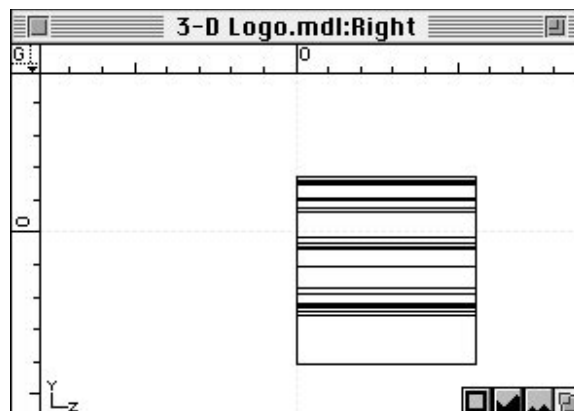
Right View after the Extrude

Create a Torus Shape

In the Right view, position the cursor roughly centered above the extruded shapes. Press the Space Bar on the key board. You will hear the computer say "Lock." This sets the Depth Lock in the y and z dimensions; meaning that objects drawn in the Front or Top views will be located at this position in the y or z dimension.
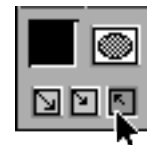
Select the Center-to-Corner drag mode. Select the Torus 3-D primitive tool, and click-drag in the Front view window from near the center of the extruded shapes. Drag until the preview in the all windows shows the torus as you want it, then release.

Hint: Use the Depth Lock to position objects in 3-D space as you draw in the 2-D orthogonal views.
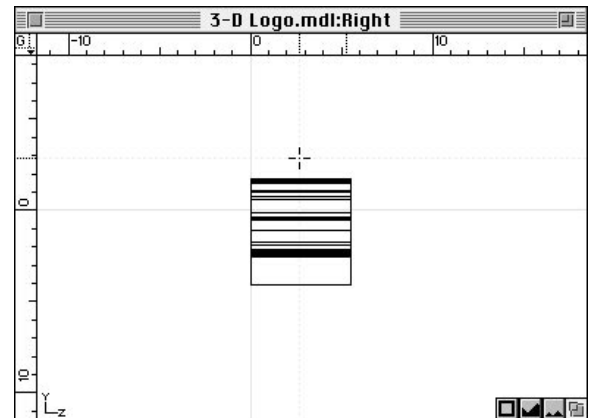
Setting the Depth Lock
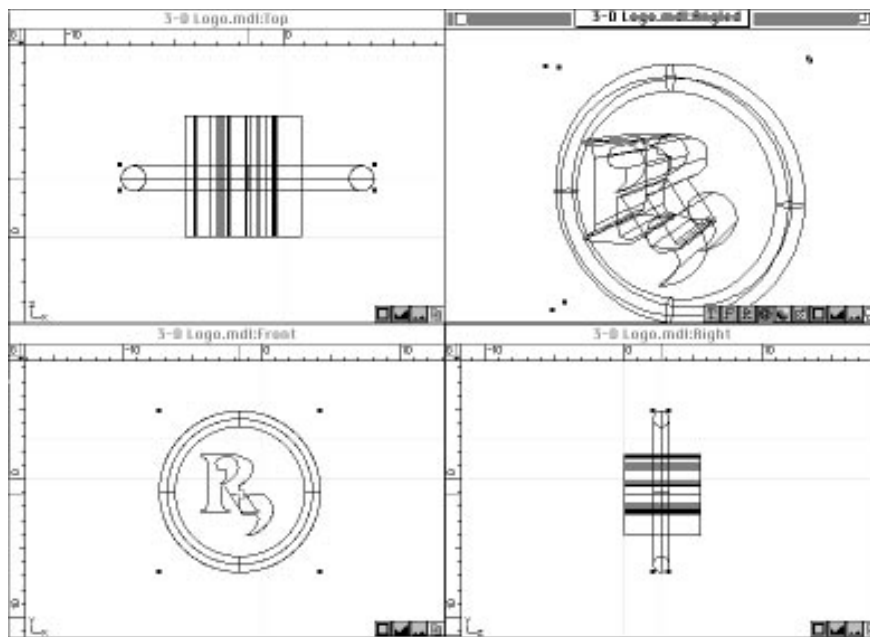

Torus preview in all windows

Center-to-Corner drag mode

Torus 3-D primitive tool

Complete the Logo

To complete your 3-D logo, select the Torus shape as a whole. Choose the 3-D Rotate tool (pop-out from Rotate tool). Set the Anchor to Center of Object in the Tool Info palette pull-down menu. Click-drag in the Front, Top, or Right view window to rotate the lathed shape to the desired position. Note that your preview in the drawing window is 3-D (not orthogonal). Click on the Smooth Shaded view button in the Angled view window to preview your 3-D logo. Now, you are ready to apply surface textures and animate your logo in Presenter 3.0; choose Render/Animation from the File menu. Remember to Save.
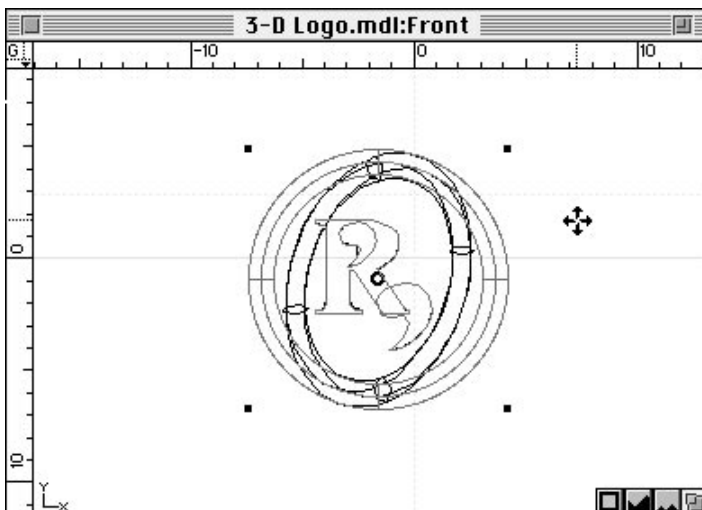
Using the 3-D Rotate tool

Final shaded Angled view