Ornamental Pro 2010
Component Drawing Manual

Introduction

This manual explains the methods for creating your own components for the component library. Component mode is for advanced users only. You must already know how to draw lines and connect them together using the "Ctrl" key, as well as having knowledge about OP2010 polylines and accent lines. Make sure that you have read the **OP2010 Quick Start Guide** and the **OP2010 Instruction Manual** before learning to draw components.

Component Overview

A finished component will have the following features:

- Two control points for component manipulation.
- At least one enclosed polyline perimeter for coloring
- Accent lines if needed

Component Drawing Example

This manual will walk you through the process of creating a component to add to your library. Often you will use a picture of something that you would like to draw to trace the design. Images are optional and are not required.

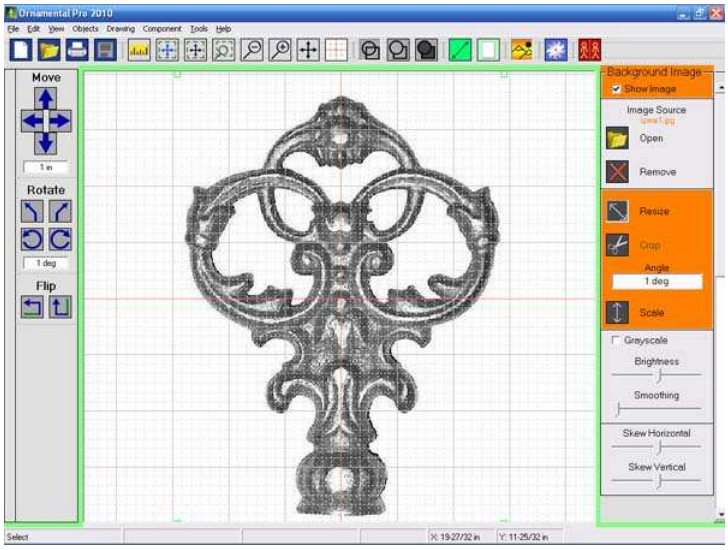
For this example, we will create a component drawing from an intricate crown spear cap.

This component file will contain with one continuous polyline for the outer perimeter combined with five interior polylines (abstract holes in the part).

There will also be dozens of accent lines to show the detail of the texture.

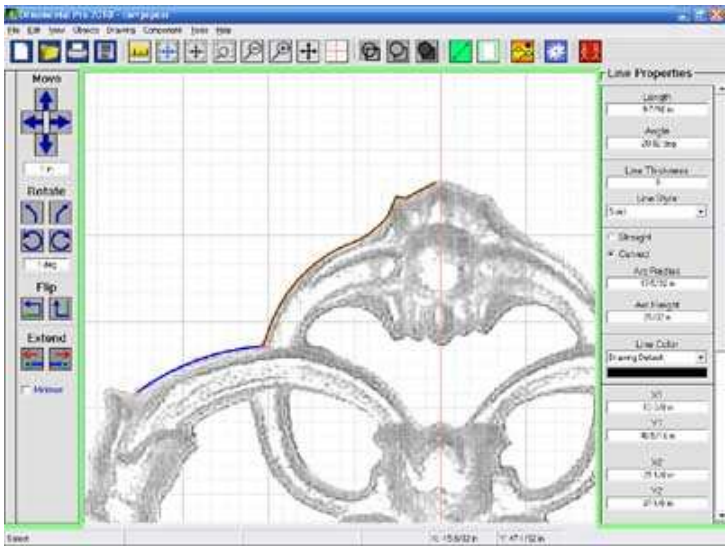
Loading and Adjusting the Image

1. Turn on your gridlines by clicking the grid button  at the top of the screen.
2. Go to the menu (Drawing>Mode>Component) and click. Component should be checked.
3. Click on the image button  at the top of the screen.
4. Click the Open image button  .
5. Locate the Image and click "Open"



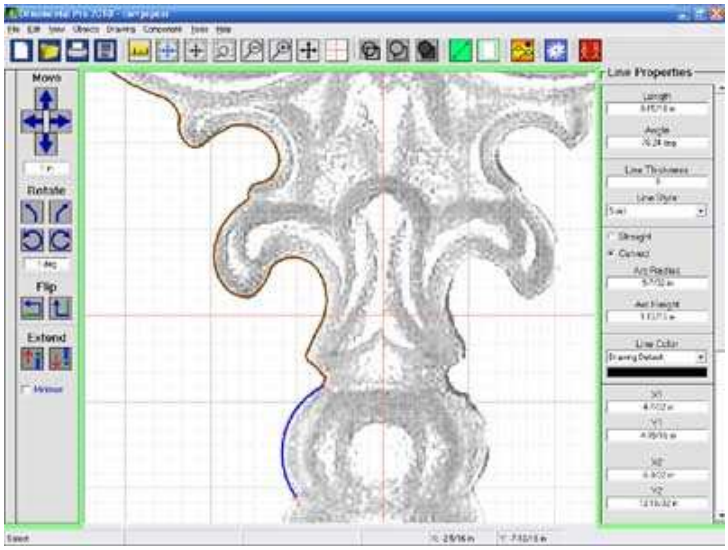
1. **Rotate** the image if necessary
2. **Skew** if necessary.
3. **Scaling** the image is not recommended at this time. It is often better to scale the finished drawing.
4. If the part is symmetrical you will need to **center the image**. Align the center of the part with the red vertical guideline.
5. Adjust the **brightness** to a level that you will be able to see the lines that you draw.
6. Click the Image button at the top of the screen to lock the image in place and to begin drawing.

Tracing the Image

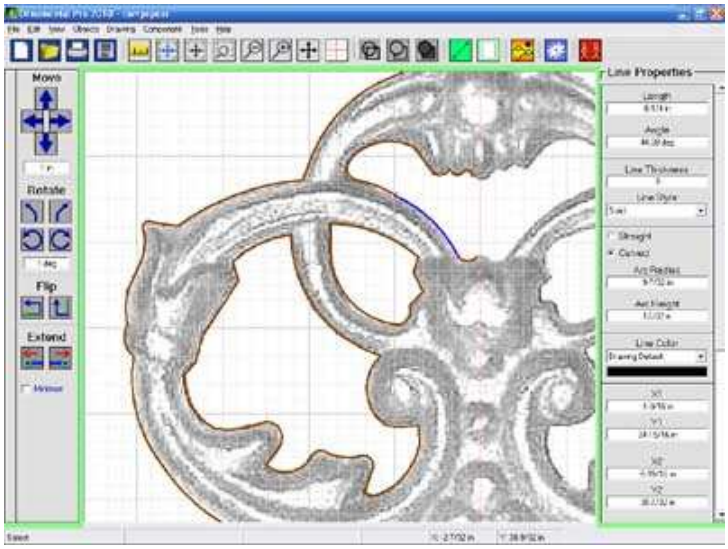


This part is symmetrical (has identical halves), so we will only draw one half of the part and mirror it to create the other half. You will be drawing many lines connected together.

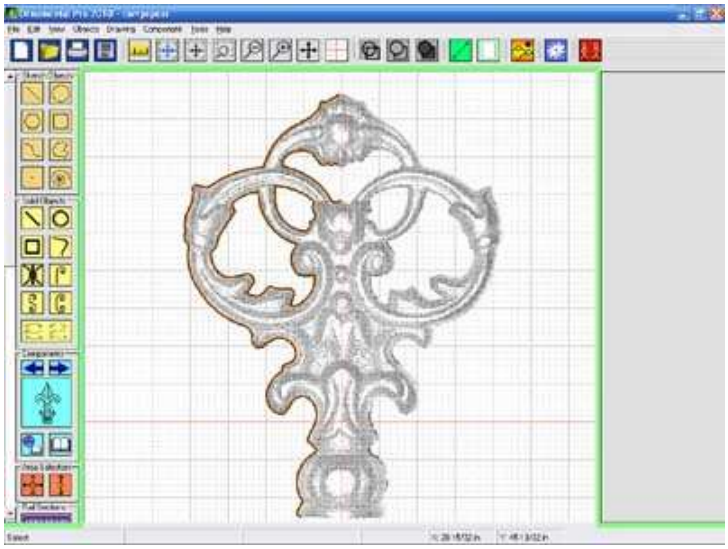
- Zoom in close to the area that you will start the tracing.
- If you will be mirroring the part, only trace on one side of the vertical guideline.
- Add new lines by clicking the line object button  or by pressing the space bar on your keyboard



- Use the “Ctrl” key on your keyboard to snap the end points of lines together.
- Continue tracing the outside of the new component with lines.
- If a curved line is nearly straight, click on the “Straight” option button in the Line Properties.

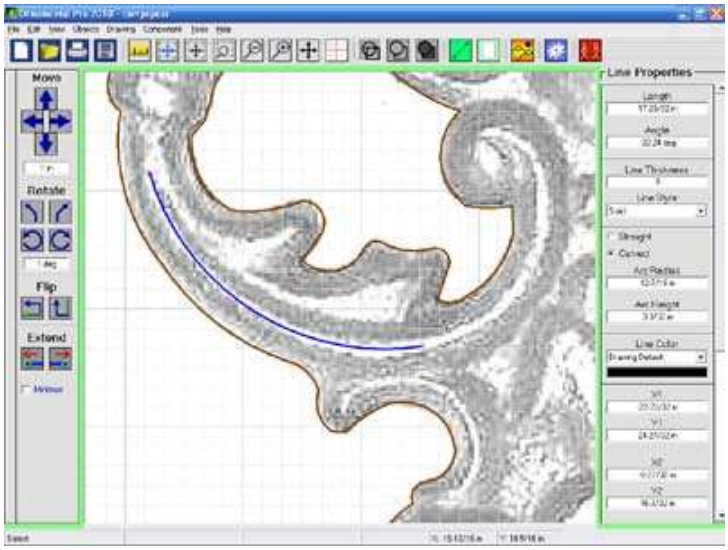


- Continue using lines connected together to trace any other interior openings in the part.

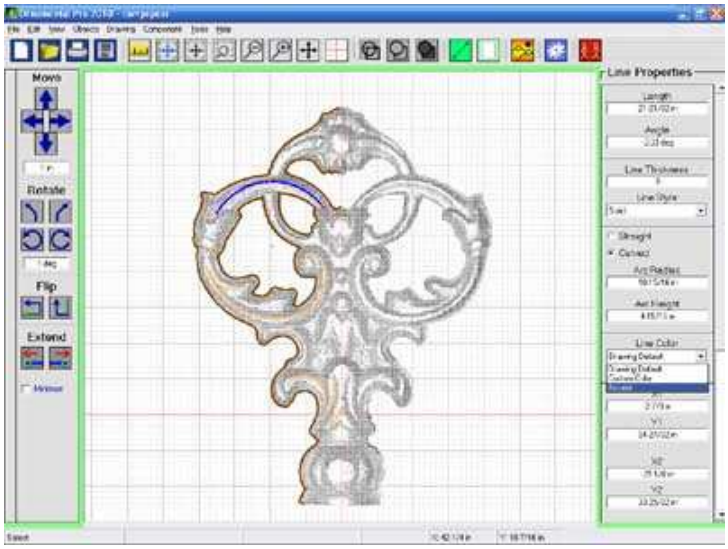


- When you are done with this step, you will have many lines connected together around the perimeter and openings of the part.
- Because the drawing will be mirrored, none of the lines have end points that cross the red guide line.
- At this point, you should select all lines “Ctrl-A” and go to the menu (Objects>Lock Selected Objects). Now these objects will not be selectable while you are drawing accent lines.

Adding Accent lines

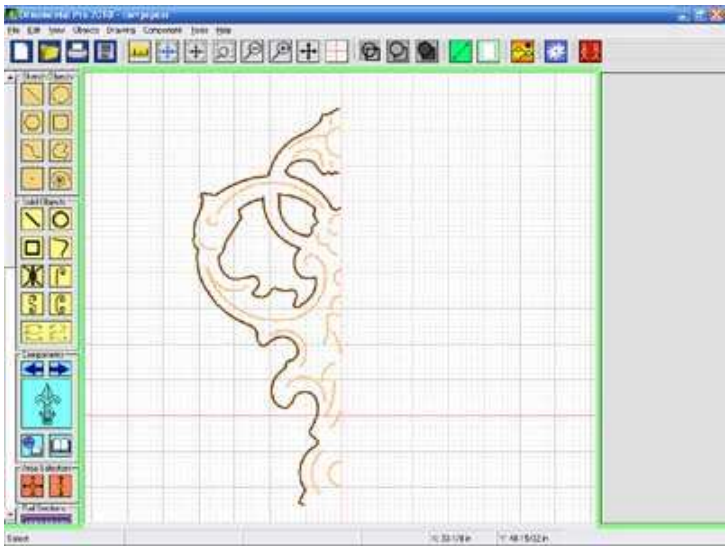


- Zoom in and start drawing lines in places where you see raised areas, lines, grooves, etc.
- Accent just enough features to make the component look detailed and not too many to make it look cluttered.

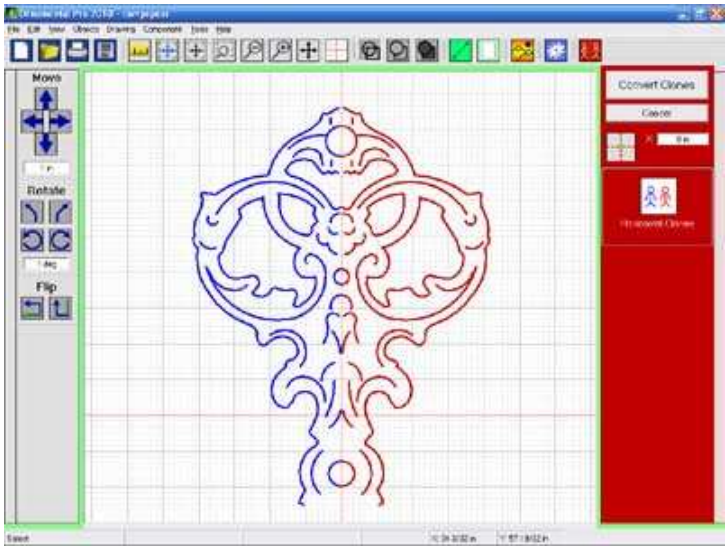


- Here, we have drawn many accent lines over the raised features of the part.
- The accent lines were drawn on one half of the part.
- When you are done, select all objects and the newly drawn accent lines will be selected.
- Most importantly, change the accent lines “Line Color” to “Accent”. This will ensure that the accent lines are treated differently than the perimeter lines.

Mirroring

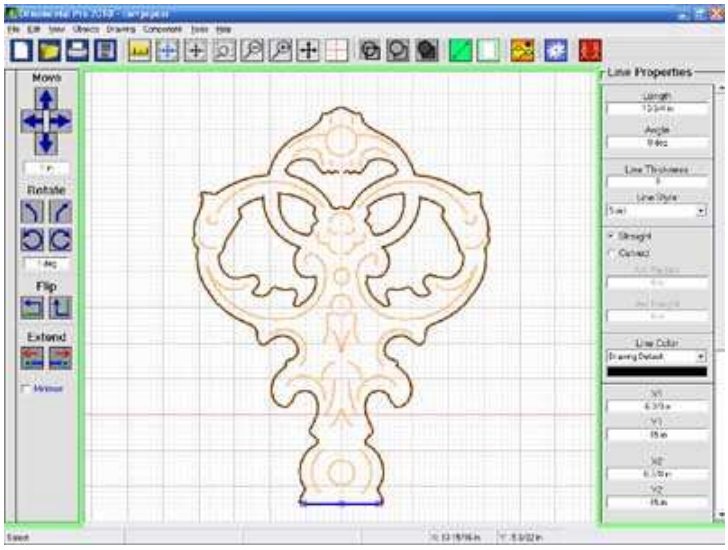


- Go to the menu (Objects>Unlock All Objects) so you will be able to select all of the lines that you have drawn.
- Click on the Image button  and un check “Show Image” so the picture in the background is not visible.
- Select all lines that you have drawn. “Ctrl-A”. All of the lines must be selected (blue).

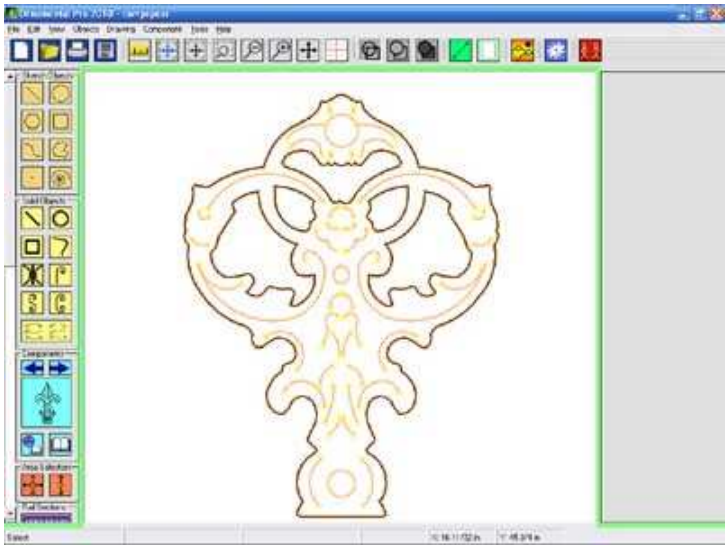


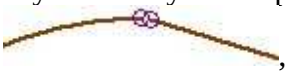
- Click the Clone button 
- Click the Horizontal Clones button 
- After the lines are mirrored, you will then click the “Convert Clones” button to turn the new red lines into real objects.
- Notice the red lines are not connected to the blue lines. We will connect them next.

Closing the Gaps

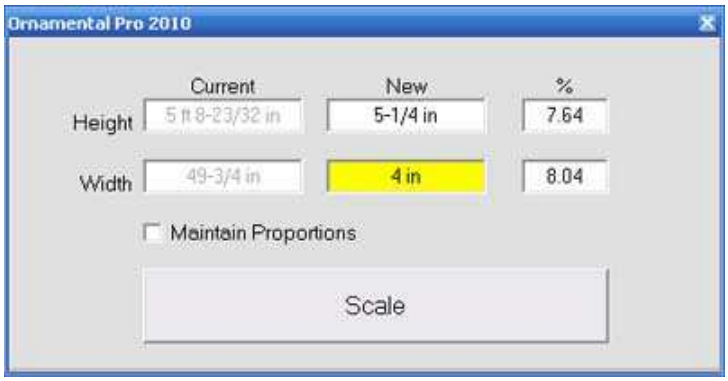


- Draw more lines to connect the two halves of the component together.
- Hold the “Ctrl” key while snapping line ends together.



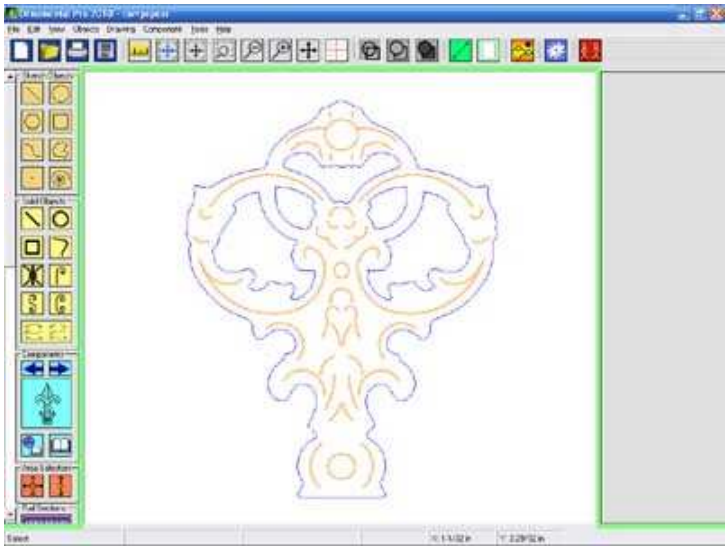
- Press the “F12” key to show any gaps that might be in the perimeter lines.
- If you see any red or purple circles  , zoom in and snap the disconnected line points together.
- Press the “F12” key to make sure there aren’t any disconnected lines on the perimeter. Ignore the disconnected accent lines.

Scaling the Component



- Select all of the lines (Ctrl-A)
- Go to the menu (Objects>Line Functions>Scale)
- Uncheck the “Maintain Proportions” check box.
- Type in the new height and width and press the “Enter” key on your keyboard.
- Click the “Scale” button.

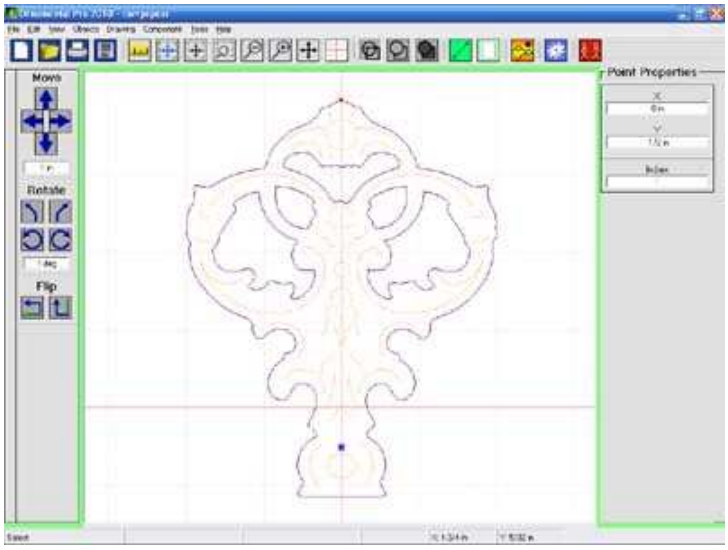
Polyline Combining and Converting



The next step is to convert all perimeter lines into polylines and combine them together.

- Press the “F9” key on your keyboard and the lines will convert and combine.
- The “F9” key will not function if you still have disconnected lines that are nor accent lines.

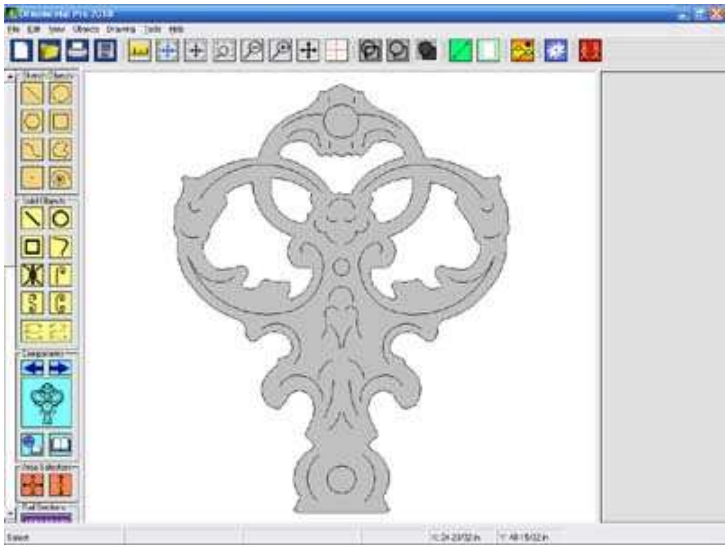
Adding Points



Your component needs two points for placing, moving, rotating and snapping.

- Component points need to be exactly horizontal or vertical from each other (same X coordinates or same Y coordinates)
- In this drawing, the first point (point 1) will be placed where the finial will attach to a bar.
- Add two point objects to the drawing. In this case, the X coordinate value is 0 on both points. The second point was placed at the top of the component.

Final Inspection and Saving



If everything was properly connected, converted, and combined, the pattern can be shaded.

- Click the Shaded button  and your drawing should fill.
- The fill colors, outline colors and accent colors are controlled by the menu (Drawing>Color Defaults)
- At this point, your drawing is not a moveable component.

Saving

To save the component, it must be exported.

1. Go to the menu (File>Export>Ornamental Pro Component)
2. Enter a description if any. The description appears in the library only and is optional.
3. Click “Ok”
4. Choose a location to save the component in your library.
5. Click “Save”

Review

The steps to drawing a component are:

1. Draw the outer perimeters using many lines connected together by drawing line objects and connecting them with the “Ctrl” key on the keyboard.
2. Draw the inner perimeters if your component has any openings, using many lines connected together using the “Ctrl” key on the keyboard.
3. Use the “F12” key to check for disconnected lines.
4. Draw accent lines to represent markings, raised edges, grooves, etc on the part.
5. Change the accent lines “Line Color” to “Accent”.
6. Press the “F12” key again to check for disconnected lines on the perimeter.
7. Press the “F9” key to convert and combine lines into polylines.
8. Add two points to the drawing. They must be horizontal or vertical with each other. The first point that you place is the most important primary point.
9. Export the component with the menu (File>Export>Ornamental Pro Component) to a place in your component library.

Optional but not required:

- Background image
- Cloning