



## **XARAXONE.COM TUTORIAL TRANSCRIPT**

November 2012 Tutorial transcript

*This transcript is not verbatim, but it's what Gary used during the filming of the tutorial.*

Hi, I'm Gary Bouton, and welcome to another XaraTV tutorial at XaraXone (*Crashing sound, Gary says something that is bleeped out*)...at XaraXone.com.

This month, we're going to take a look at (*pause*) lighting. How you can add photorealistic elements to your compositions through the use of highlights and shadows.

First go to [Xaraxone.com/tutorials](http://Xaraxone.com/tutorials), and download the zip file that contains this month's examples. Unpack them, and get them ready for the steps to follow.

So I tell you what: this month I'm going to take you through a couple of tutorials that I think you'll find very...illuminating. I wonder what this button does? (*Presses button, flashlight emits a light saber light.*) Oh wow. Oh Luke? Obi-Wan...?

Rule number one when you want to draw something that's photorealistic, is any object that is illuminated that has a surface underneath it is going to cast a shadow. And with shiny objects, you can see a highlight that indicates the light source. Even when you're drawing dull objects—such as politicians—you're going to have a light area, and a darker area.

In addition from left and right, you can also set up a scene that suggests lighting from front-to-back, or back-to-front. You have three axes of illumination, and all the degrees in-between when you want to draw something that has lighting.

The first example I'll ask you to draw this month is three stacked cubes. You'll use the Extrude tool, so open a new document in Xara. Take the Rectangular tool,...let's draw a background first, and I'll show you why. Color it something like red. Let's make it a little bigger here...

Now hold Shift, and I want you to create a square. And give it sort of a green color. Holding Shift constrains it to a square shape instead of rectangular.

Now what I want you to do is to take the 3D Extrude tool and drag on the face. This rotates and sets an extrusion. Now click and drag the back lip to the right to increase the depth. On the Infobar, click on the lighting icon to reveal the light sources in this scene.

Then click on the Color Editor. Now, in the list, I want you to scroll up and find Light color number 2 and I want you to make that black. I also want you to take the Light color number 3 and make it black.

We're going to be dealing with one light in the scene. Get it casting *left* and into the scene. Then with the Selector tool, drag and drop a copy of the cube. Now notice that there is a little bit of perspective—that is what the yellow lines were for. Press Ctrl+Shift+B to put it behind the first. Double click on the extrude edge and that will bring up the extrusion handles. And what you can see here is that I've more or less matched the perspective and I want you to do that. When the bottom edge lines up, you're good. Then I want you to drag and drop another copy. Double-click *the side* to bring up the extrusion features. Rotate it a little bit until it's lined up with the second one. Shrink it a little bit, because in perspective, objects get smaller. Once you have the three cubes, let's make the composition more interesting.

Double-click the middle one, and choose Angle 2 and drag the Angle 2 slider left than right. As you can see, the lighting changes in the middle one. Angle 2 is the Y axis. Do the same with the bottom cube and you now have a more visually interesting composition, but all the lighting is *still* from the upper left.

So now we're going to draw the shadow for this. It's going to be a *cast* shadow. Take the Shape tool and click points while you are in Line mode and Cusp connection. And you'll be surprised that you can create a cast shadow merely by accurately drawing the silhouette. We close at top...let's make this color black. And then with the Selector tool, take the top handle and drag down. Click it a second time to put it in skew-and-rotate mode. And then press Ctrl+Shift+B to put it behind the cubes. And you need to do a little bit of editing to line up the bottom edge, but basically this looks like a pretty good shadow. Let's enhance it with the Transparency tool, dragging upward. Let's make this a little darker and let's make the beginning point a little bit lighter. And in just about no time—with the help of these steps and the Extrude tool—what you have is a pretty neat composition. Notice again the lighting casts down and right into the scene and the shadow is in the opposite direction.

Now I'm going to add a couple little extra pieces—and this is mostly guesswork—we would think that from the left, the right-hand side is going to cast a little bit of a shadow, so I've created this triangular shape to make the second cube a little bit darker—as though the top cube is casting upon it. And then, create a second triangle down here revealing part of the top edge of the bottom cube. And again with the

Transparency tool we'll make this a little less than 100% opaque. And that's a pretty neat illustration, that is lit accurately with highlights and shadows.

Let's move on now to a round shape. I'm going to show you how to draw this pumpkin—It may not *breathe* like this one—but take the Quick Shape tool, set it to Star, and eight sides. And then with the Extrude tool, extrude it a little. And by default, the edge type is Rounded. Now you'll see it only goes up to about 250 there on the slider. However, you can *type* up to 999, and that's the secret to getting this shape looking more pumpkin-ish and less like an extrude. Now we have three light sources again, as we do with all extruded shapes: the white, the slightly blue and the slightly green.

Now with the Rectangle tool, create a rectangle and put it behind the pumpkin, Ctrl+Shift+B to put it behind, and the reason why we have a green background now is because...first of all, let's put this blue arrow behind the pumpkin, we only want two sources of lighting here. I'm going to show you Main and Catch lighting.

Now, this secondary light that is green right now? I'd like you to choose it with the Color editor and pick kind of a warm yellowish glow, and again the reason why I asked you to put the background behind that is also because this arrow is going to disappear against the white background unless you have something to contrast against it. So let's main light this pumpkin from the upper left, going into the scene. The catch light, a secondary light source, at the bottom right helps make this object look more round.

Next we pick the Shadow tool—and let's choose the Floor shadow type. And increase the intensity a little bit and feather it somewhat. And that's fairly good looking; it's not completely accurate, but the Shadow tool removes a lot of manual work you might have to do otherwise. Now I'm going to take the Shape tool and rough out a stem to the pumpkin. And you may want to do this too, and as long as you have the Shape tool, what you can do is drag on a line segment and curve it, as I've done here. I'm just going to finesse this. It's not great art, but it will get us where we want to go design-wise.

Now, if you are illuminating from the left as these highlights suggest, what you want to do is illuminate *the stem* from the left. Now a good quick way to do this is to click on green, click on the Fill tool, and then drag a linear gradient from left to right. It's going to be darker green on the right, lighter green on the left. Use the Color editor as you're clicking on the control handles of the linear gradient. And by default, every new object has the same fill as the previous one you created, so once we have this, I'm going to ask you to draw an ellipse now to cap off the pumpkin. And as you can see, it's got the same fill, but the direction is the wrong way. It should be denting *in*, and we are suggesting this through lighting, dark *at the left* catching the *light at the right*. And that wasn't too hard to do. You can also do this step with cylinders you might draw. It provides contrast and suggests a certain kind of reality. And I'm going to skew it a little bit...

Next, what you want to do is draw a shadow of the stem casting down on the pumpkin. And I'm roughing this out a little bit here. Interestingly, it is more important that a shadow is in a picture than it is accurate. People don't really criticize inaccurate shadows, but they *will* criticize you *if there isn't* a shadow there. I've colored this with brown. Used the Transparency tool in Stained glass mode, and adjusted a little bit Uniform transparency so you can see a little bit of the pumpkin underneath. And what we have here now is a fairly decent illustration of a pumpkin.

Now I'm going to call up the Color editor and dim the catch light—the opposing light—here, for a moment, just to show you the importance of a secondary light source on a round object to help make it round. Now watch: I'm going to take this secondary light source, the Light 2 color, and make it black. Now that still looks like a 3D image, but it is not *nearly* as visually interesting, nor is the pumpkin as round without that catch lighting. What I'm going to ask you to do is to take the Ellipse tool, hold Shift, and drag yourself a circle. And I'm going to show you how to apply the same catch lighting principal using a Circular gradient fill on the circle. Now I want you to take the light color at top, a darker color at bottom, and then double click on the gradient line to add a color stop there. Add brown to it, if you are using orange like me. And let's add a third stop to that, and bring it up around to the highlight area.

And as you can see, to the upper left and what you have is some catch lighting on a circle that suggests a sphere...and I hope you've had a ball with lighting this month.

*(Credits)*

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