create a cast shadow

How to create a shadow behind your masked subject so it integrates with a new, custom background.

a tutorial for: primatte chromakey & backdrop designer

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create a shadow to add realism

You may want to create a shadow between the person/object you have masked out with Primatte Chromakey, and the new background that you’ve added with Backdrop Designer. Often a shadow will help to visually integrate your subject and her new environment so the image doesn’t look flat or unnatural.

It’s often best to make sure that no shadow is cast in the original photograph during the photo shoot. A shadow cast during a photography session usually doesn’t look real once the person/object is digitally inserted against a new background. This is because the shadow may get pixelated, cropped, or faded during the masking process.

After the photo shoot and Primatte’s mask removal, you can easily recreate a shadow in Photoshop. This tutorial will explain how to create your own simple digital shadow.

cast shadow vs. drop shadow

There are two kinds of shadows. A ‘drop’ shadow is a decoration. It’s pretty easy to create since there is a ‘Drop Shadow’ Layer Style. This shadow is great for buttons or text, but it doesn’t add depth or realism to an image. [figure 1]

The second kind of shadow, a ‘cast’ shadow, is what we’ll focus on in this tutorial. A cast shadow simulates 3D depth, and it’s perfect for enhancing and integrating two images so they look right together. [figure 2]

Photoshop does not have an automated process to create a cast shadow, so we’re going to show you how. The blue background was created by Backdrop Designer, our Photoshop plugin which simulates material folds. [figure 1] A premade ‘drop shadow’ doesn’t make our bride look like she fits with the blue background. [figure 2] A custom-created ‘cast’ shadow brings the bride and background together visually. This method allows you to rotate, distort, scale, nudge, blur, and make the shadow semi-transparent. All part of designing the unique look of your photograph.
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Following is a step-by-step explanation of how to create a cast shadow. If you would like to follow along, you can download both photos used in this tutorial at this location: http://www.anarchyunderground.net/tutes/cast-shadow.zip

After you download, you will need to take the photos out of the Zip file. You can usually do this by double-clicking the Zip file and dragging the photos to your desktop.

step 01– set up the file

Your Photoshop file should have two layers in it. One layer has a person or object on it that has already been masked by Primatte, our chromakey removal tool (in our example, the 'Bride' layer).

The second layer has a new custom background (our 'Blue Bkgd' layer) and sits below the subject.

step 02– duplicate the layer

Duplicate the 'Bride' subject layer. Do this by dragging the layer over the 'Make Layer' icon in your Layers palette. Nothing will change in your Photoshop file, but a duplicate layer appears in your Layers palette.

step 03– make layer black

With the duplicated 'Bride Copy' layer selected, go to your menu. Choose Image> Adjustments> Hue & Saturation.

Set Lightness to -100, then click OK, to make the layer completely black.
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step 04– move layer below

Now move the black duplicate layer behind the original layer. The edits we will make to this shadow are easier to evaluate if it’s placed where it should be, behind the bride. [figure 6]

step 05– transform the shadow

Choose Edit> Free Transform. Use the menu choices to distort the duplicate into the shape/position of a shadow. Typically, you will play around with Rotate and Distort. [figure 7]

Sometimes you will want to skew or slant the shadow so it looks as if it’s laying backwards. We’re not doing that in this example because the figure is against a wall. In an environment that is further from the model, you can do more intense transformation. [figure 8]

step 06– move the shadow

Use the Move tool or Arrow keys to move the shadow slightly, depending upon where your light source falls. Light comes in from the top left of our photo, so we moved the bride shadow a bit to the right. [figure 9]

The ability to rotate and move your shadow is one of the big differences (and advantages) between using a Drop Shadow preset and building your own cast shadow. These functions allow you to manipulate the shadow as much as you want.

[figure 9] In this example, we edited the shadow a lot more. This was done with all of the Free Transform options: Scale, Rotate, Skew, Distort, and Perspective. We also changed the background material a bit (created by our plugin, Backdrop Designer) and the file’s physical dimensions (Image> Canvas Size).
step 07 – blur the shadow

Choose Filter > Blur > Gaussian Blur. Apply a Gaussian Blur to the shadow to give it a proper amount of falloff around the edges. Staying in a Radius of 10–20 pixels is usually sufficient to create a soft but believable blur. [figures 10a, 10b]

step 08 – reduce opacity

Last step! Adjust the opacity of your shadow. Shadows are very rarely pure black, so giving it a good amount of blur and lowering the opacity makes it fit into the scene better. You can do this by clicking on the Opacity slider at the top of the Layer palette. Set the Opacity to between 40–50%. [figures 11a, 11b]
step 09—eraser the edges (optional)

Ok, actually, there’s one more step that you can take to smooth out the shadow. It’s optional—you don’t have to do this—and is only necessary for images in which you see the shadow going back into the distance.

With a soft, large, semi-opaque Eraser tool, simply erase out the farthest point of the shadow. You can see in our Before [figure 12b] and After [figure 12a] pictures that the shadow is more convincing once more of the background shows through its more distant portion.

in conclusion

We’re finished creating our shadow! As you can see, Primatte Chromakey and Backdrop Designer do a great job of putting your subject into a new environment.

Doing some simple hand edits in Photoshop afterwards makes this composite even more believable and interesting. You can get more tips about how to integrate your subject and background from the other tutorials on our website. Go to: http://www.digitalanarchy.com/primatte_backdrop.html.

If you have any questions about this tutorial, or requests for a different tutorial, please feel free to contact Debbie at info@digitalanarchy.com.