Creating 3D Holograms

| Author: | greenguy28 | Printable Version | Tools Needed |
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| Step 1: | Set Up the Scene | | * Poser |
| Step 2: | Render Non-Holographic Elements | | * Paint Shop Pro or Photoshop |
| Step 3: | Adding Realism to Non-Holographic Scene | | |
| Step 4: | Render Holographic Elements | | |
| Step 5: | Postworking | | |
| Step 6: | Making the Hologram | | |
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Introduction

Using Poser and a <u>photo-editing</u> program, we can simply turn any element of a 3D scene into a holographic <u>image</u>. This is useful even in animations!

Step 1 - Set Up the Scene

Here I have already set up my scene in Poser. The finished image will be of Mike with a holographic Vicky on his wrist. Let's get to work!



Since Mike and Vicky will be rendered separately for the holographic effect, you can do one of two things: hide Mike's figure while rendering Vicky and vice-versa within the same file or, like I'm doing, save the file twice—in one, delete everything but Vicky, and in the other, delete everything but Mike.

Step 2 - Render Non-Holographic Elements

I will now render Mike alone (in my file that does not have Vicky). I have adjusted the background color to what I wanted. Remember that for the hologram to show up, it is best set against a dark background.



Here is the render as it is now:



Step 3 - Adding Realism to Non-Holographic Scene

Remember now what a hologram is: it is nothing more than light giving the appearance of three dimensions. So usually a hologram will shed light on nearby objects. In Poser 6 or DAZStudio, a Point Light is best, but here in Poser 5, we must create the illusion that the hologram is emitting light in all directions. So I now add two spotlights, one pointing a Mike's wrist and one at Mike's chest and face. I chose a greenish-blue color for these lights since that is the color I will be making the hologram. Choose a color that is appropriate for your final hologram color. I also put the intensity of the lights at about 50% so that it is only a soft glow and not a strong light. We are only giving the suggestion of light.



Here is the render of that scene after the lights are added. Notice the nice glow they give.



Step 4 - Render Holographic Elements

Going to the other file, which has only Vicky, a few things must be set up before we can render. First, ALWAYS render the holographic elements on a black background, as that is the only way for the postworking to be successful. Also, remember to make the hologram well-lit so that it shows up, as only the light parts will show up in the final postworking. In order to achieve this, I chose to have the main light come from the same direction as the camera, so that everything that is visible will be well lit.



Here's the render of Vicky:



Step 5 - Postworking

This is my favorite part! In a photo-editing program (I'm using Paint Shop Pro, but Photoshop is just as good), open the render of both the holographic and non-holographic elements of the scene. Now, paste the image of the holographic elements (in this case, Vicky) as a layer on top of the non-holographic elements (Mike). At first, the image of Vicky is opaque and covers the entire image of Mike. But by going into the layer options, we can change the Blend Mode of the

layer. Change the Blend Mode to "Lighten."

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Now both Mike and Vicky are visible in the scene! The Blend Mode "Lighten" uses the lightness in an image to determine its transparency. So a dark spot, like the black background, goes completely transparent since it is not "lightening" the layer beneath at all. However, the lighter spots are "lightening" the darker layer beneath and are thus visible. When the blended layer is on top of a light layer, it cannot "lighten" it much, and thus does not show up very well.



Step 6 - Making the Hologram

Here is what the image looks like so far:



But now we want to give Vicky that authentic sci-fi hologram look. So I tinted her layer greenish-blue, using Paint Shop Pro's Colorize function. This gives a very nice color to Vicky's hologram.



Step 7 - Finishing Touches

I decided I wanted a little bit of glow in the image, which I put in by hand. Going back to before tinting the layer, I added some slight glow with the Dodge brush. Not a lot is needed; here, less is more. I re-tinted the layer so the glow would be green as well, and got this final image:



This technique can be used on a single image or frame-by-frame for animations, which I have found to be very successful. Just using a batch command, change the upper layer of each image to the Lighten Blend Mode and tint greenish; a very convincing and great-looking effect!

