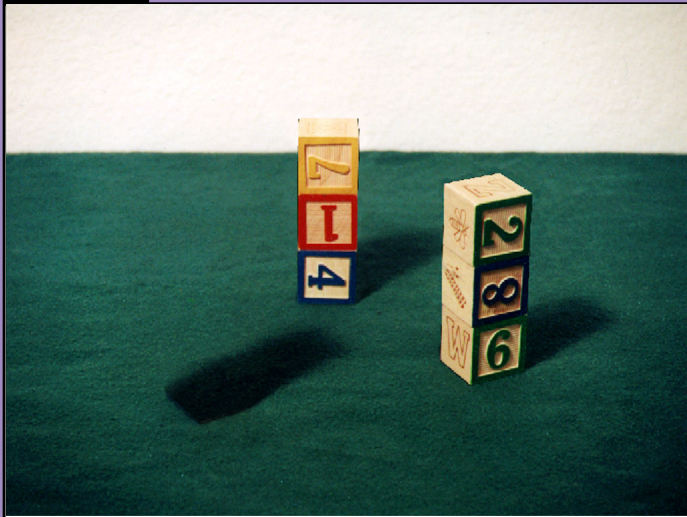


# 1

## Getting Started Overview



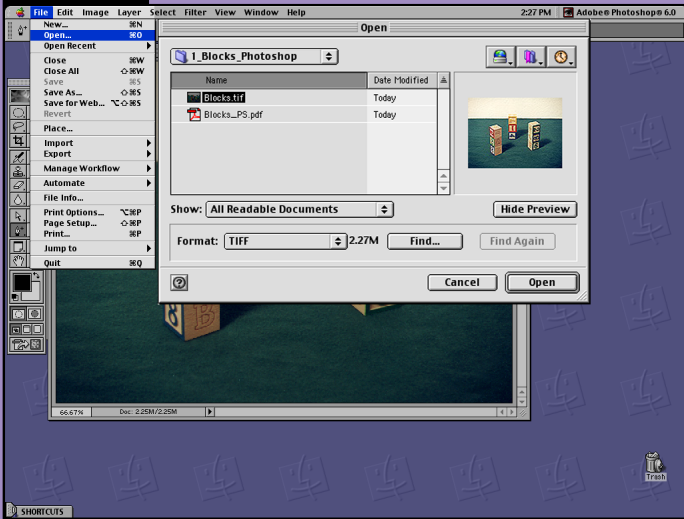
Camera mapping involves the use of a 3D application like the 3D Toolkit to project a photo onto geometry. However, it also relies heavily on 2D image manipulation to achieve the final result. We will be using Photoshop to create additional images from our original image which will be mapped onto different geometry in our 3D scene. The purpose of this is to separate out the elements in the image to achieve the effect of parallax and movement in our 3D application.

Note: This tutorial was developed to be used with Photoshop 6.



**Getting started**





Launch Photoshop. We will need to open the Blocks image.

Go to FILE>OPEN.

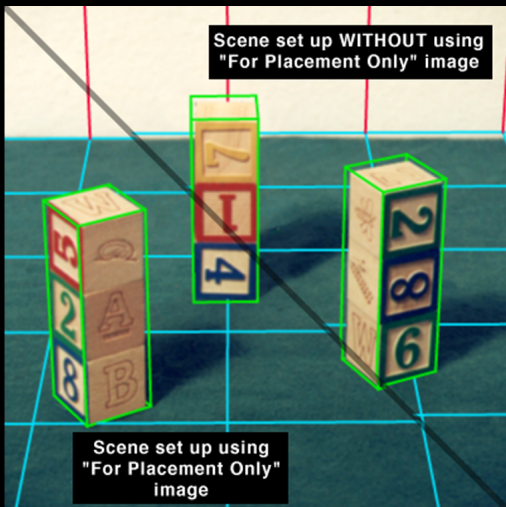
Navigate to the file "Blocks.tif" and **[CLK]** OPEN.

Note: As you progress through this tutorial, note that some steps may take a considerable amount of time. Be patient and save your work often.



## 3

## Creating the "FPO" Image Overview

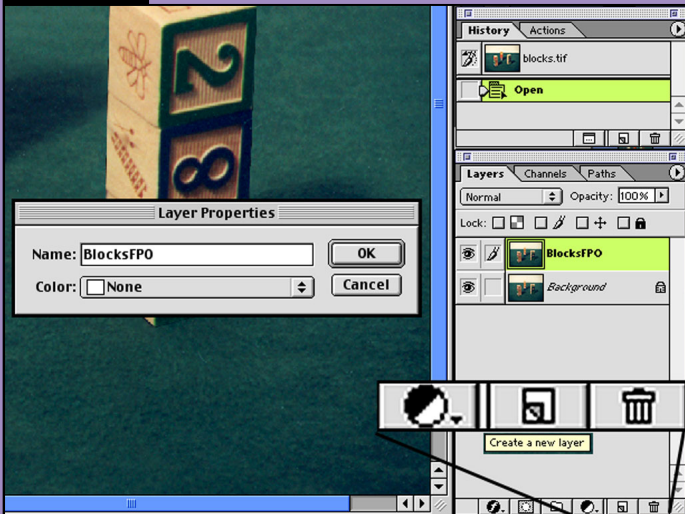


We will now create a "For Placement Only" image. The purpose of this image is to correct a rendering error in the 3D Toolkit which will offset the camera map by 2 pixels in the X direction and 3 pixels in the Y direction. The discrepancy occurs between what is seen in the Camera View window and the final render. We'll use the FPO image to align our geometry, then swap it out with our actual Camera Maps to get a correct render. This will become clearer during the 3D portion of the Blocks tutorial.



## 4

## Duplicating the Background Layer



Duplicate your background image by dragging the background layer to the “Create a New Layer” button at the bottom of the Layers Palette.

Rename this layer “BlocksFPO”

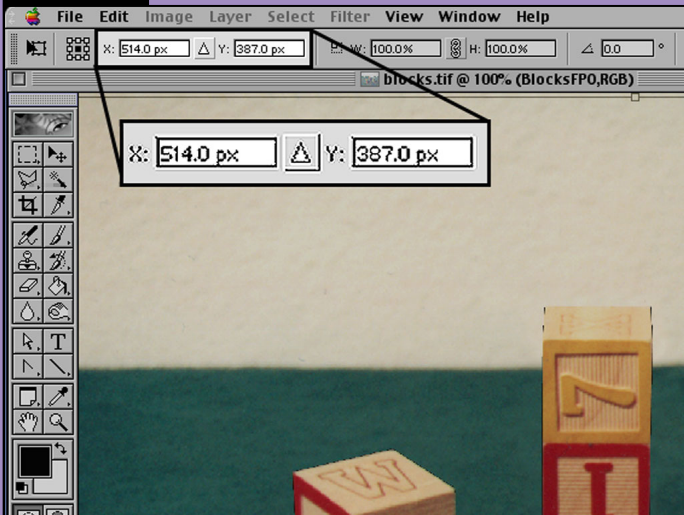
Note: To rename a layer, [**OPT/ALT+DBL-CLK**] the Layer in the Layer Palette. In the resulting pop-up window, type in the new name and [**CLK**] OK. (Macintosh keyboard commands are indicated in **red**. PC keyboard commands are indicated in **blue**.)



Creating the FPO Image







In the Layers Palette, select "BlocksFPO".

Select EDIT>FREE TRANSFORM from the Main Menu or press  
[CMD/CTRL+T].

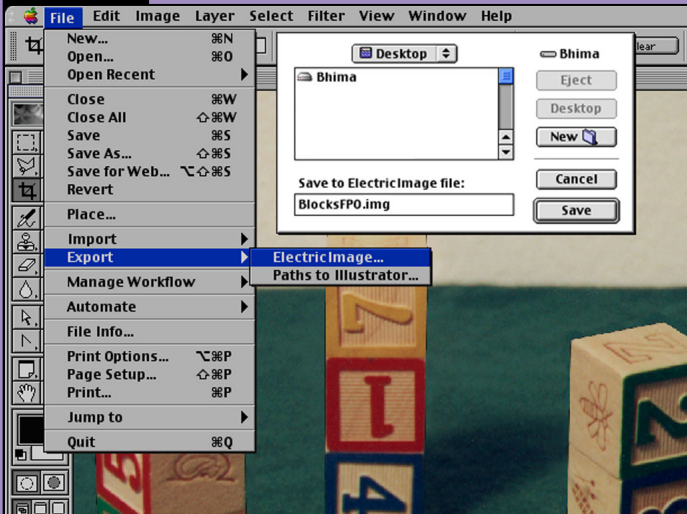
In the Tool Options Palette at the top of the screen, add 2 pixels to the X value of the reference point (final value=514). Add 3 pixels to the Y value of the reference point (final value=387). This will move your layer 2 pixels to the right and 3 pixels down.

Hit [RETURN] when you are done.



## 6

## Exporting the “BlocksFPO” Image



With the “BlocksFPO” layer visible and at the top of your layers stack, go to **FILE>EXPORT>ELECTRIC IMAGE**.

Name the file “BlocksFPO.img” and **[CLK]** **SAVE**.

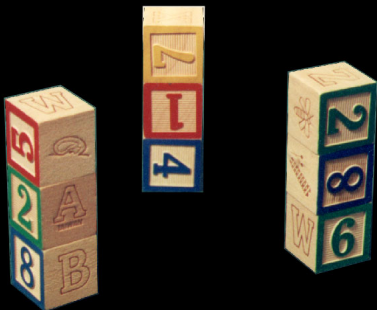
Turn off the visibility of the “BlocksFPO” layer when saving is complete by **[CLK]**ing on the Visibility toggle (the eye icon) to the left of the layer.

**Note:** If you don’t have Electric Image as an option to export, you will need to load in the Photoshop import/export plug-ins. The plug-ins are included with the disc and should be placed in the Photoshop>Plug-Ins directory.



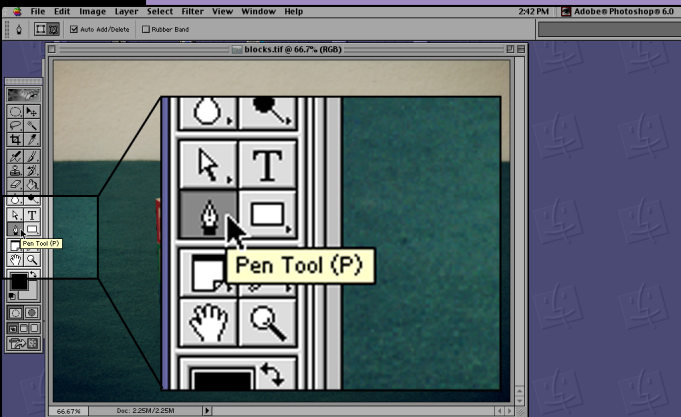
## Creating the FPO Image





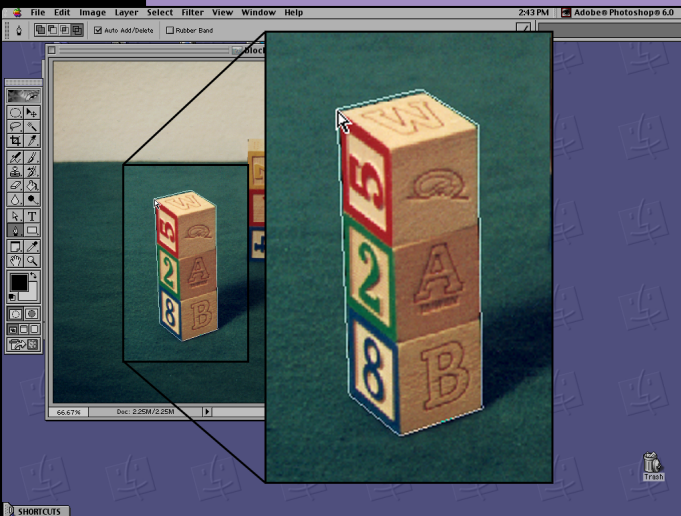
Next, we will create an alpha channel which will be used in the 3D Toolkit to refine the camera mapping effect. Our alpha channel will matte out the background and leave only the blocks. In more complex images, this allows us to use relatively simple geometry even if the image has more complexity. There are several ways to create an alpha channel, depending on the image. The most efficient process in this case is to use the Pen Tool.





Select the “Pen Tool” from the Tool Bar, or hit **[P]** for a shortcut.

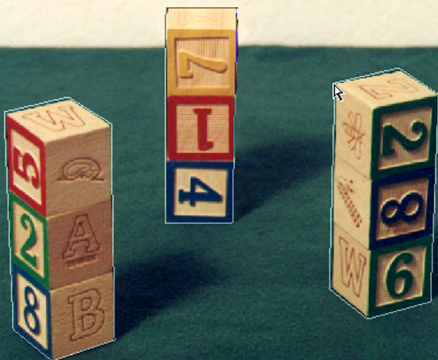




Starting with the block on the far left, **[CLK]** on each corner to create a path around the entire block.

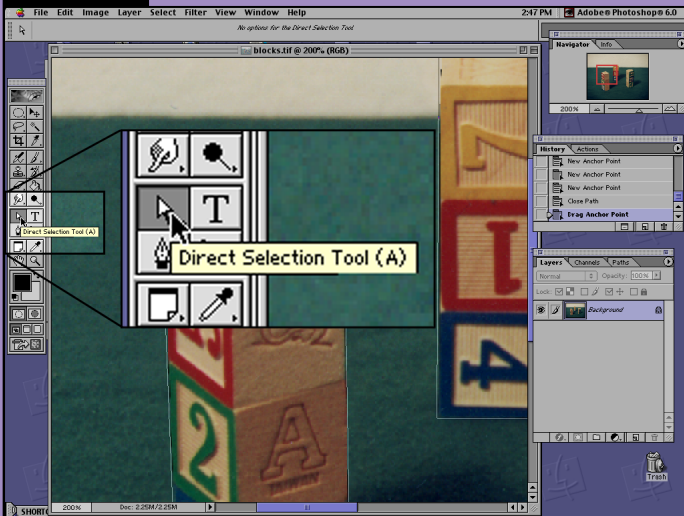
When you arrive back at your first point, **[CLK]** on it to close the path.





Repeat Step 9 for the remaining two stacks of blocks.



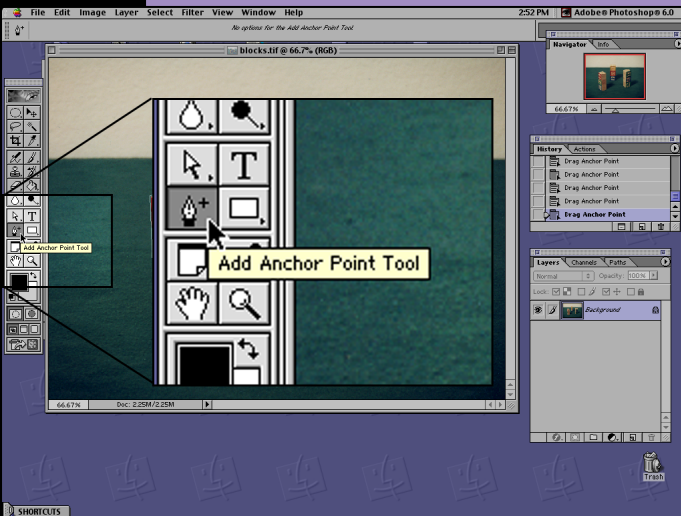


Select the "Direct Selection Tool".

**[CLK]** on individual points to make any adjustments so that the path traces the blocks.

Note: Be careful not to cut into the blocks as that will alter projection when you animate. It is better to be a little wider around the edges than too close. You may want to zoom in for accuracy.



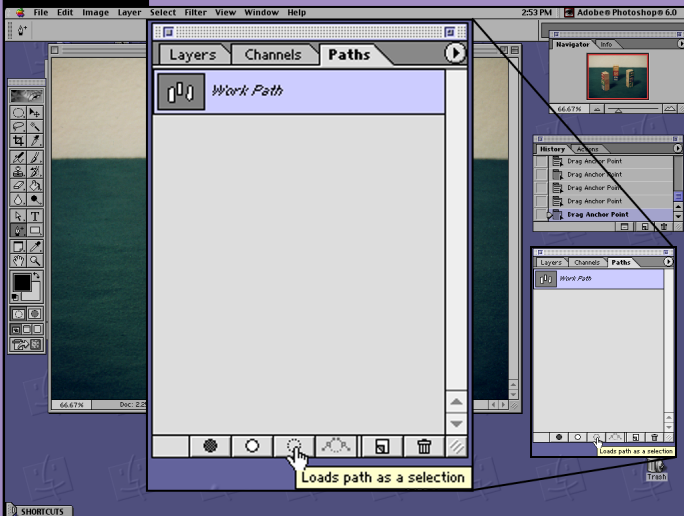


If necessary, you can add additional points by using the “Add Anchor Point Tool” in the Pen Tool dropdown menu. Having additional control points will allow you to make finer adjustments to your path. In addition, you can use the Convert Point Tool in the dropdown menu to add bezier handles to an anchor point for additional control.

**Note:** The path for this image doesn't have to be too refined. However, in general, the closer the camera will get to an image, the more detail you will want to add.





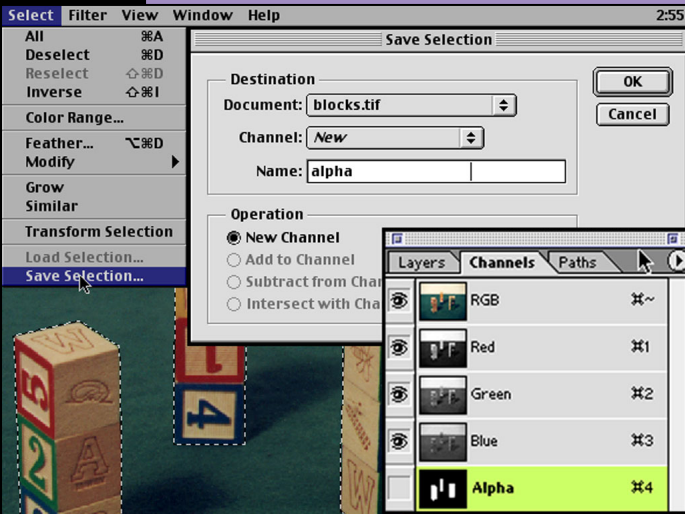


Go to your Paths Palette.

**[CLK]** on the layer "Work Path" to activate it.

Select "Loads Path as Selection" from the menu at the bottom of the Path window.

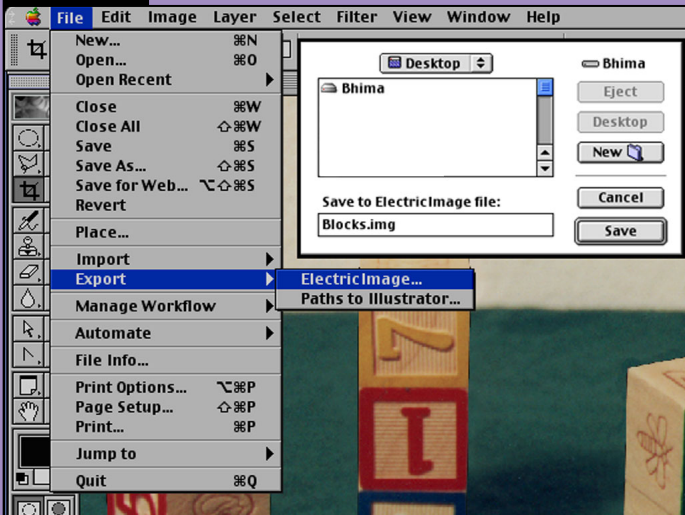




Under "Select", **[CLK]** on "Save Selection". Name the layer "Alpha". Leave the rest of the settings as they are and close the window. Check the Channel Palette - there should be a new channel named "Alpha".

Note: The first channel after the RGB channels will become the alpha channel by default.



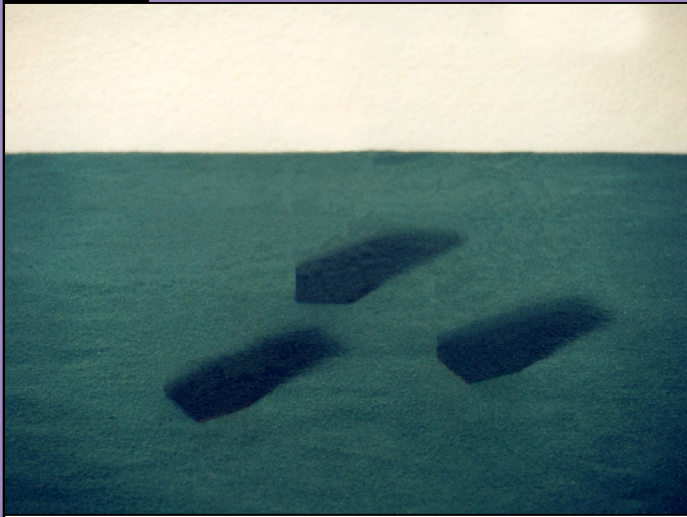


Now that we have saved our alpha channel, we need to export it out.

Go to FILE>EXPORT>ELECTRIC IMAGE.

Name the file "Blocks.img".

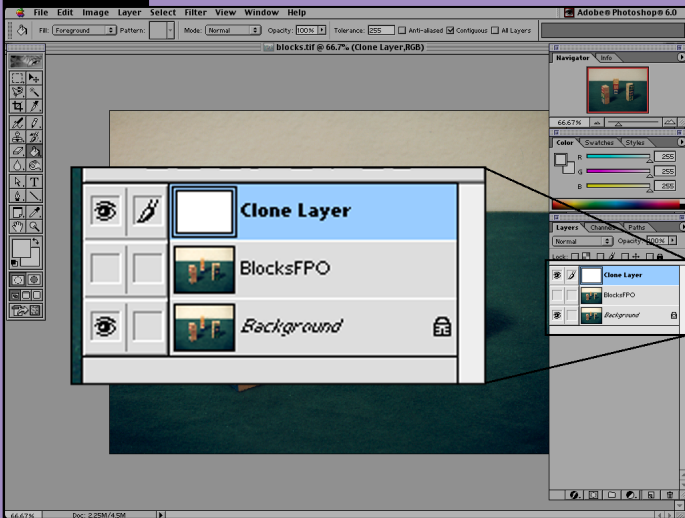




Our next step will be to create an image that shows the wall and carpet behind the blocks, or a “background only” image. To do this, we will make extensive use of the Clone Stamp Tool.

The Clone Stamp Tool allows you to copy pixels from one area of your image to another.

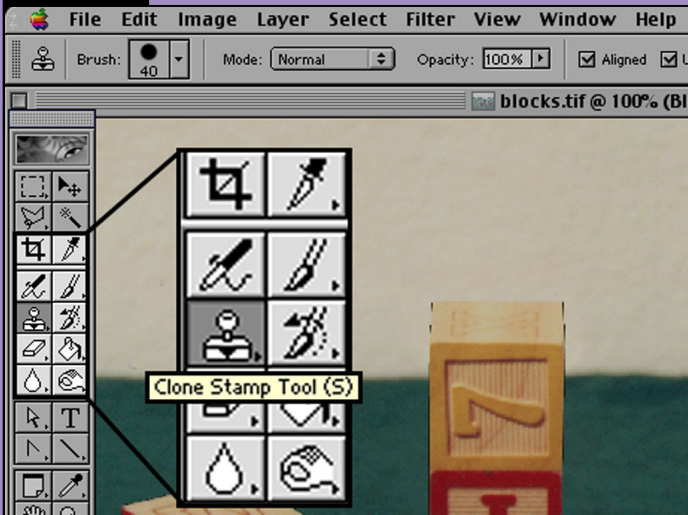




In the Layers Palette, **[CLK]** the “Create a New Layer” button at the bottom of the palette. Move this layer to the top of your stack and rename it “Clone Layer.” We will be doing our cloning on this new layer.

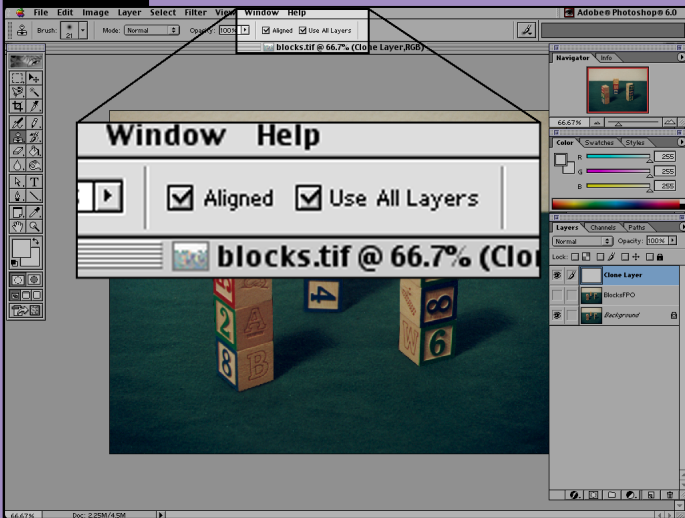
Note: The advantage of cloning onto a new layer is that our original image will always remain untouched. We can easily fix mistakes during the cloning process by erasing or cutting areas of our clone layer.





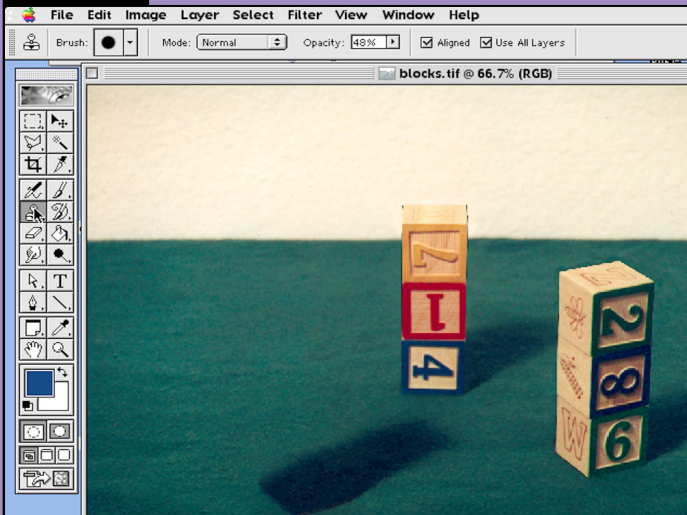
Select the Clone Stamp Tool from your tool bar (Hitting **[S]** is a shortcut).





In the Tool Options Palette, make sure “Use All Layers” is checked. “Use All Layers” will allow you to clone all visible layers. If this is not checked, you will only be able to clone from the layer that you are currently working on. You can also change the brush size by pressing [ ] to decrease the brush size and [ ] to increase the brush size. **[SHIFT+]** will decrease the brush hardness, while **[SHIFT+]** will increase the brush hardness. Use these controls to help you out as you work on the next few steps.





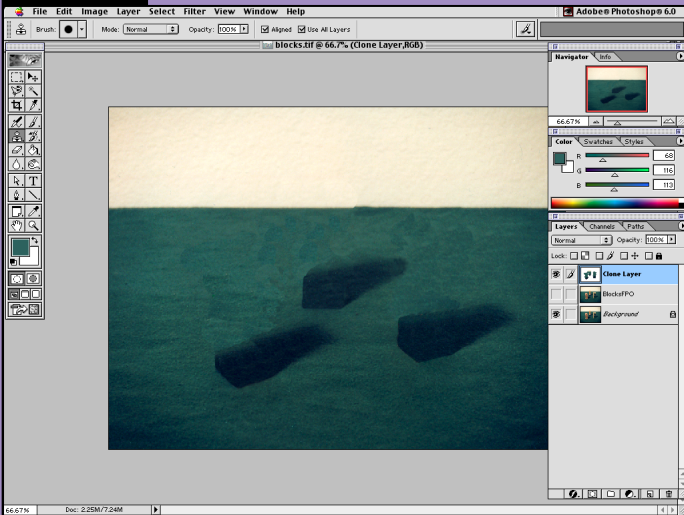
Choose part of the carpet area close to the stack of blocks to the left by **[OPT/ALT+CLK]**ing to select the area.

Once we've selected an area to sample, **[CLK]** on the stack of blocks. You will see that the pixels from your selection are now transferred to the area you are painting.

Sample part of the shadows and clone out the blocks where there should be shadows. Refer to the image above to get an idea of what your image should look when this step is complete.



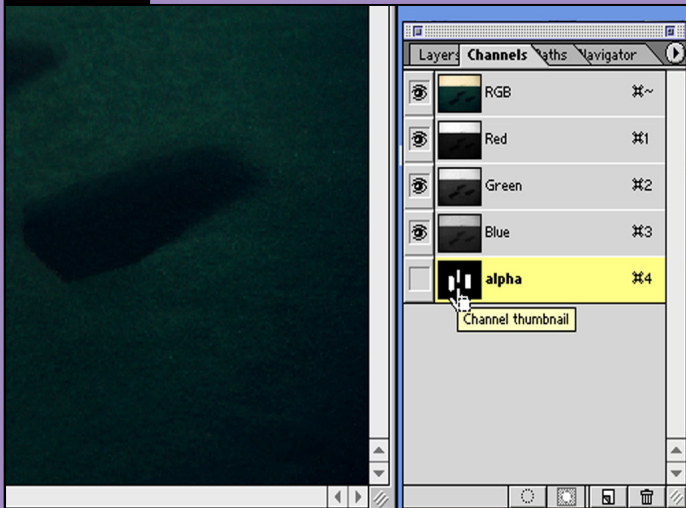




Repeat Step 20 for the remaining blocks.

Your image should look similar to the one above.

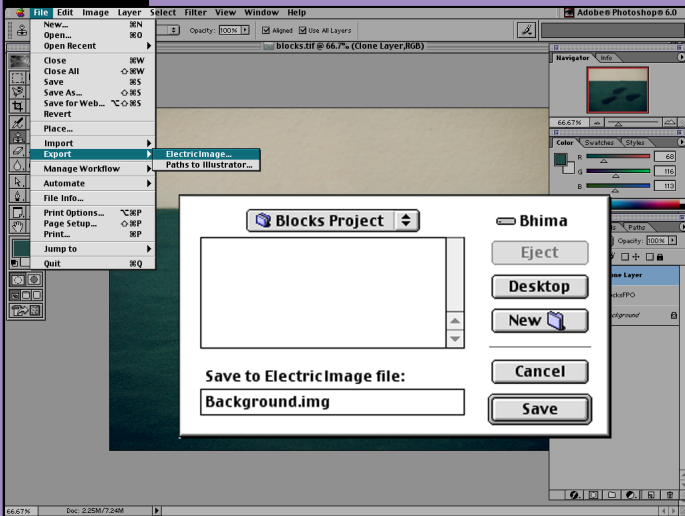




Since we do not need the alpha channel (there is nothing to matte out), we will delete it.

**[CLK]** on the Alpha Channel in the Channels Palette and drag to the trash.





Our final step is to export. Go to **FILE>EXPORT>ELECTRIC IMAGE** and name your file "Background.img".

We have completed the Photoshop portion of the Camera Mapping process. We will use the images we have exported in the next portion of the tutorial, which involves the 3D Toolkit.

