

SIMULATING A GRADUATED NEUTRAL DENSITY FILTER

A graduated neutral density filter is a rectangular piece of glass where the top half exhibits a smoked appearance and the bottom half is perfectly clear. Sometimes the area of transition between the dark and clear parts of the glass is abrupt (a hard edged graduated neutral density filter) and other times the transition is gradual (a soft edged graduated neutral density filter). In the field, a graduated neutral density filter is placed in front of the lens to hold back exposure in part of a scene while exposing the other portion normally, thus producing an exposure range that is recordable by film or digital sensors. Graduated neutral density filters are often used when capturing scenes such as a brilliant sunrise shedding warm light on a mountain range (the bright top half) with an alpine pond reflecting the mountains in the foreground (the dark bottom half). The filter can be raised or lowered to match the area of transition from bright to dark. Graduated filters are available in various exposure reducing densities ranging from one to three F-stops.

For those who don't own a graduated neutral density filter, or those who simply prefer the precision of Photoshop, here's a technique that replaces the use of a field filter.

Step 1: Using a Tripod, Capture Two Exposures of the Same Scene

In the field, set your camera on a tripod and capture two exposures of the scene, one exposed for the bright area, and another for the dark area.

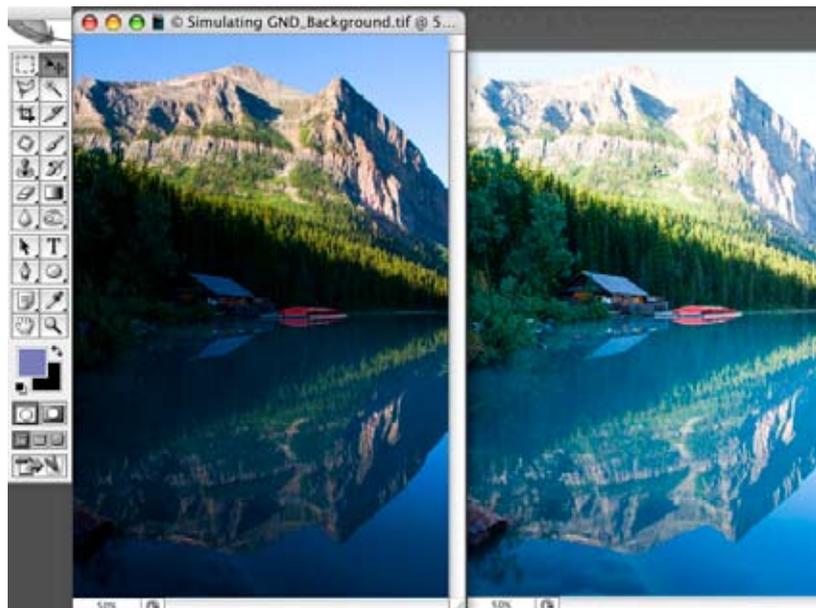
Step 2: Open Both Images

Open the images titled "Simulating GND_Foreground.jpg" and "Simulating GND_Background.jpg" located in the Sample Images folder or select the images you photographed in Step 1.



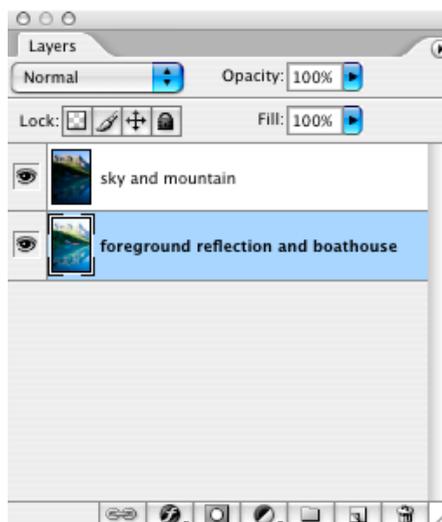
Step 3: Drag the Darker Exposure On Top of the Lighter Exposure

With both the darker and lighter exposures visible, choose the Move tool, press the Shift key and drag the darker image ("Simulating GND_Background.jpg") on top of the lighter image. Let go. The Shift key ensures perfect registration between the two images.



Step 4: Name Both of the Layers

Since the top layer contains the best detail in the sky and mountain, double-click the top layer name and title it "sky and mountain." Double-click the bottom layer name and when the New Layer dialogue pops up don't be startled. Simply change the name to "foreground reflection and boathouse," and press OK.



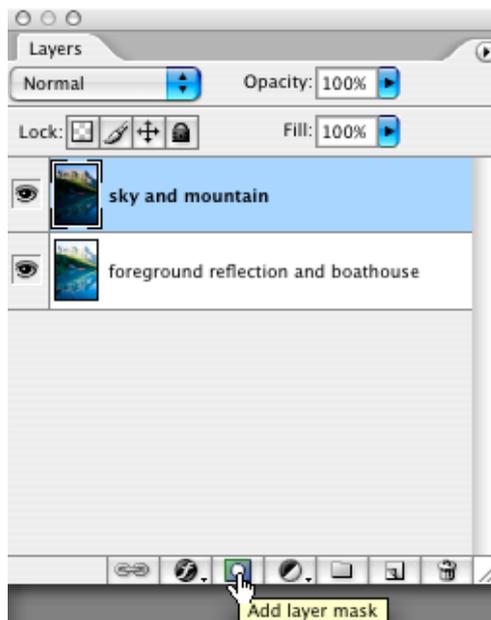
Step 5: Close the "Simulating GND_Background.jpg" File

Return to the "Simulating GND_Background.jpg" file and choose File>Close.

Step 6: Apply a Layer Mask to the Sky and Mountain Layer

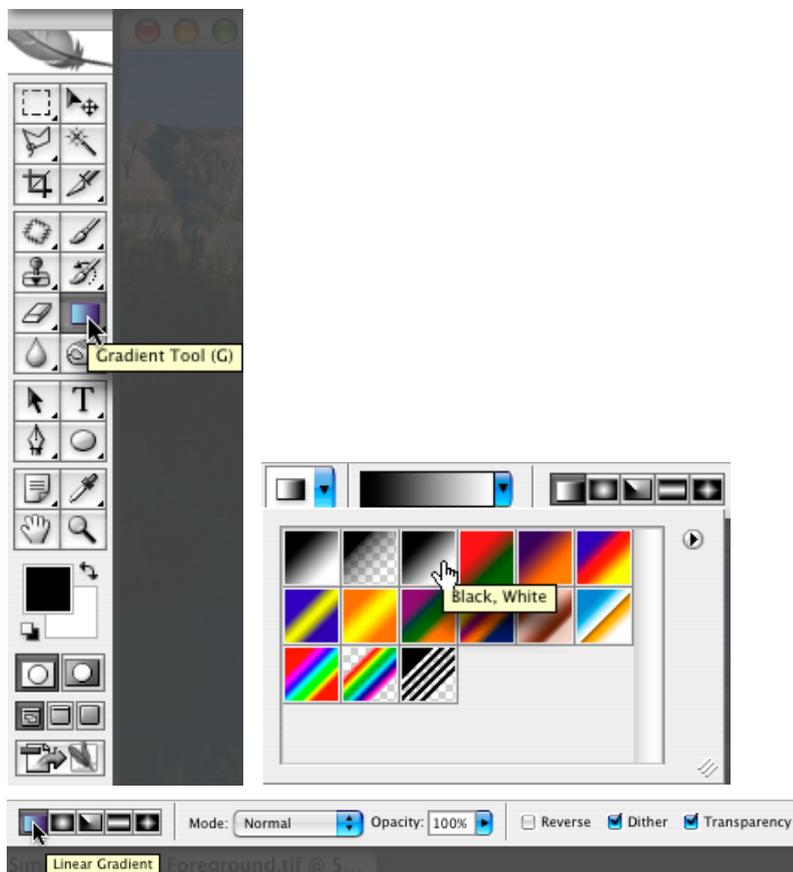
Make the "sky and mountain" layer active and click on the Add layer mask icon at the base of the Layers palette.

In order to simulate a graduated neutral density filter, we'll drag a black to white gradient through the mask. Black on a mask hides the active layer thus revealing the layer below, and white indicates that the active layer is visible. For those who are accustomed to working with a graduated neutral density filter and not with Photoshop, you may need to reverse your thinking. In this case, the dark area of the mask does not represent reduced exposure. Rather, darkness on the mask represents an area of invisibility on the active layer.



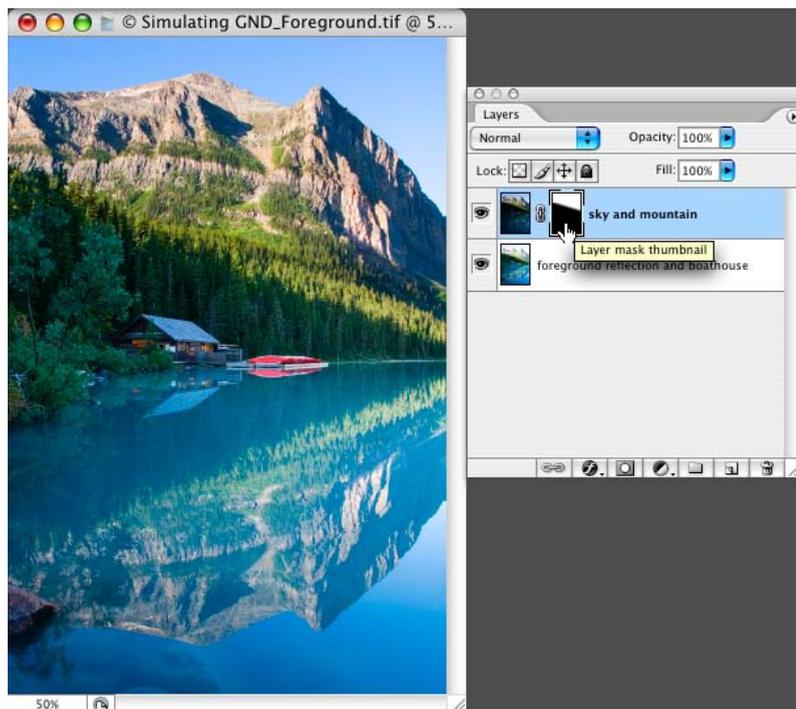
Step 7: Choose the Gradient Tool and Change a Few Options

Select the Gradient tool. Beginning near the left of the Options Bar, open the Gradient Picker by clicking on the upside down triangle. Click on the third gradient from the upper left, Black to White, and close the Gradient Picker by pressing the upside down triangle again. To the right of the Gradient Picker, click on the Linear Gradient option (the left hand choice). Mode should be Normal, Opacity 100%, and Dither and Transparency should be checked.



Step 8: Drag a Gradient over the Image

The angle and distance over which you need to pull a gradient usually requires some experimentation. Since this scene has a rather abrupt transition from dark to light, and because the transition is at an angle, position the mouse over the dark trees above the boathouse, click-and-drag a short distance, moving gradually to the right. When you let go, take a look at the result. While you're at it, take a peek in the Layers palette at the Layer mask thumbnail. The black to white transition on the mask displays the angle and distance of the gradient. Feel free to experiment freely (with this technique you don't even need to choose Edit>Undo between gradient changes). If the edge is too hard, pull the gradient a longer distance. If the edge is too soft, pull the gradient a shorter distance. If the edge is misplaced, make sure that both ends of the gradient line are equidistant from the edge of the brightness transition. If the gradient is at the wrong angle, drag the gradient line a little more or less to the right. Play until you have the perfect balance between top and bottom.



Step 9: (Optional) Further Refine the Mask

Once the transition meets with your approval, you can further refine the mask by painting with a black or white brush. Remember, black hides the active layer and white restores the active layer. Also, if more than one gradient is necessary (like having multiple grad filters in front of the lens), return to the Options Bar and change the Mode to Darken. Now try pulling a second gradient through the image.

