Broken Mirror Effect with a Bump Map

Will Owen
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Tutorial
What we’re trying to accomplish

- A broken mirror has a skewed reflection of objects
- You can see the cracks

You could just model every individual piece and then angle each one facing a slightly different way, but this could be time consuming and I will show you a technique for a similar effect using a Bump Map

Ron Blumberg "My Broken Mirror"
www.triggison.com/jewelry/jewelry.html

DAILY Photo Illustration by John Godbey
STEP 1 Make your mirror.

You could use a tutorial already done by other students.

Glass Texture - Mirrors & (Simply a piece of glass with Reflection on 100%)

BY: Todd Clark

Or Lindsay Stallman’s tutorial on “Making a Mirror”
STEP 2  Get a photo of a broken mirror or create one yourself. I have two here; using the one on the left. All you really need is the lines for where the mirror is broken.

http://www.brianmicklethwait.com/culture/archives/photography/
STEP 3

Open your photo of the broken mirror in a image editing program that has a Gradient Tool like Photoshop or Mirage. Here I will use Adobe Photoshop CS2.
STEP 4 a Convert the image into Black and White.

On the layers panel go to the bottom and click the button to "create new fill or adjustment layer". The button looks a bit like a Yin Yang, or a half-eaten pie. A window will pop up with these options shown here. Click on Channel Mixer.

Using the Channel Mixer to convert the image to B&W (Black and White) is one of many ways to ‘skin a cat’, and is used here because it is the least damaging to your image and can easily be undone.
STEP 4 b In the Channel Mixer window check the Monochrome box and hit OK.
STEP 5

Get the broken lines which will be your guide for the gradient pieces.

A. Using the Channel Mixer again, this time select Levels.

B. This is the Levels window to the right. We will mess with the little black, grey, and white arrows.

C. Move the grey arrow left.

Then move the others inwards.
Step 5

Result

This is the image you end up with. What we did was make the dark areas more black and the light areas more white.
STEP 6  Get rid of reflected image.

Make sure you are on the layer with the photo on it.

Use the eraser tool and erase the areas in the photo that are a reflection and keep the lines that are part of the broken mirror.

If you are familiar with the magic wand tool that saves time, but this is a tutorial in 3D modeling not Photoshop.

After erasing, you can use the Bruch tool (B) or the Line Tool (U) to fix it up a bit.
You want to end up with a picture like this
STEP 7 a  Select a shard

Edit in Quick Mask Mode (Q) and select a portion of a broken mirror shard.

Use the Brush Tool (B) to paint a shard in

Edit in Standard Mode (Q) and the “marching ants” will have everything but your shard selected.
STEP 7 b  Invert the selection.

Select - Inverse

This is the area selected now.
STEP 8  Gradient

Select the Gradient Tool (G)

Click on an area and drag into the shard

This is a Gradient. The black is slowly dissolving into the white.
STEP 9  Repeat the Gradient on every shard

The idea here is to make sure one black area is not touching the black area of another shard, otherwise the image will not be distorted in the reflection.

Save your image.
Bring your Mirror model into Layout

This is my mirror without being broken
STEP 10 Use the image you just made as a Bump Map.

In Layout go to the Surface Editor. Click on the T to the right of the Bump Category. Under Image load the picture you made. Automatic Sizing will apply the image to fill the model.
STEP 10  Render!!!

Rendering>
Render Options

Make sure you have Ray Trace Reflection checked or else it won’t be a mirror.