

Advanced Displacement Mapping: Fractured Images



From the Anarchy Toolbox collection
of eight filters for Adobe After Effects
from Digital Anarchy



The ADM is a powerful way for creating distorted images. It allows you to blend and animate up to 3 different grayscale layers to create the displacement effect. This is great because you no longer have to pre-comp combined displacement layers and continually jump back and forth between the pre-comp, to make adjustments to the displacement map, and the regular comp, to see the results.

You can animate the position and rotation of displacement layers, adjust the brightness and contrast, or add blur to the maps, which can be critical for adjusting displacement layers. You can do all of this within the one filter.

If you don't know how to use displacement maps, now would be a great time to take a look at the Anarchy Toolbox manual. There is a whole section devoted to using grayscale maps for a variety of uses, not just displacement mapping. Please take a look at it before continuing this tutorial.



NOTE: To use this tutorial you'll need to buy the Anarchy Toolbox or download the demo from:

www.digitalanarchy.com

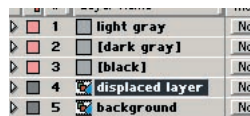
You will also need Acrobat Reader 5.0 or higher to view the links in this document.

With this tutorial, we're going to create a 'fractured' effect that you may have seen on shows like CSI Miami or elsewhere. It's pretty simple to pull off, and really easy to pull off using ADM.

- 1- Open up the adm-maus.aep project and go into the 'Main Comp- Start' comp. Notice that we have a few things here. The 'Maus Motion' comp which is simply a pan of the image we're using and three solid layers with different shades of gray. There is also a copy of the Maus Motion comp that is being used as a background.

In the timeline if you see 'Source Name' above the layers, click on Source Name to change it to 'Layer Name'

We're going to use these shades of gray to manipulate and distort the Displaced Layer image.





- 2- Apply ADM to the Displaced Layer layer. Initially, nothing happens. We still need to assign the layers that will be used to displace the image. So...

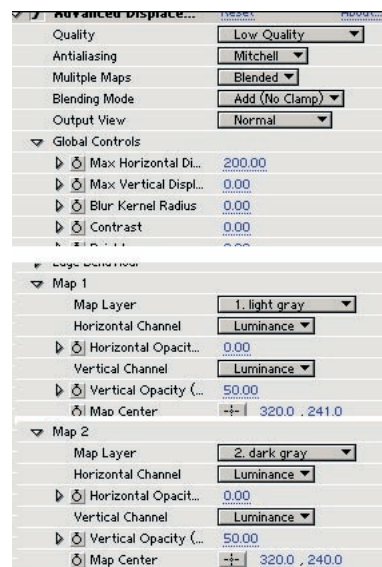
Set the Multiple Maps parameter to 'Blended'. This will blend all the maps together before applying them. If you left it on Normal, the first map would be applied, then the second, then the third. This creates a bit of a different effect. Check the manual for more info on this.

Twirl down the Map 1 section and set the Map Layer parameter to the Light Gray layer.

Twirl down Map 2 and set the Map Layer to the Dark Gray layer.

Twirl down Map 3 and set the Map Layer to the Black layer.

The parameters should look like this (with Map 3 set to Black, but otherwise the same as the other Maps)



- 3- Still, nothing is happening. We need to set the Displacement amount. You can do this with the individual maps, however, if you have multiple maps, it's easier if you use the global controls.

Go up to the Global Controls section, twirl it down, and set Max Horizontal Displacement parameter to 200. Aha! Something has happened! Thank the golden turtle, because up to this point it was about as exciting as watching paint dry. Ok, so it's still not exciting, but we've done something.

- 4- Let's animate the maps. Go back down to the Map sections and animate the Map Center parameters.

For Map 1, at Time 00:00 set Map Center to: 67, 240. At Time 02:00, set it to: 325,240. At Time 03:00, set it to 260,240.



For Map 2, at Time 00:00 set Map Center to: 440,240. At Time 03:00, set it to: 20,240.

For Map 3, at Time 00:00 set Map Center to: 320,240. At Time 01:15, set it to: 160,240. At Time 03:00, set it back to: 320,240.

Also, set the Horizontal Opacity to 50 for each layer. This will be important shortly.

- 5- Now we've got something! Play it back and it should look like this [Click Here](#). Very cool and very easy. That's pretty much the whole base effect. Sure, we'll add a few things, but there you go.

You can even see what all the maps look like. If you got to the Output View pop-up and change it to Blend Horz., you'll see what the displacement map looks like. Something like this:



This is why you had to set the Horizontal Opacity parameters to 50. If you hadn't, they wouldn't have shown up in this few. In the next step, we'll put this mode to good use. Change the Output View back to Normal.

However, before then, let's set the Blur Kernel Radius in the Global Controls to 12. This will soften the edges between the shades of gray creating a smoother distortion that looks a bit more like glass. You can also blur the maps individually, but in this case we'll use the Global Controls.

Being able to make this type of adjustment from within the filter is what makes ADM so powerful.

The blurred version looks like this. Compare and contrast the two movies.

This is also a good time to play around with the animation. Don't like how fast the gray maps are moving? Think there should be more blur? Go ahead and tweak stuff to your liking. It's pretty easy to make changes with all the animation happening right within the one filter.



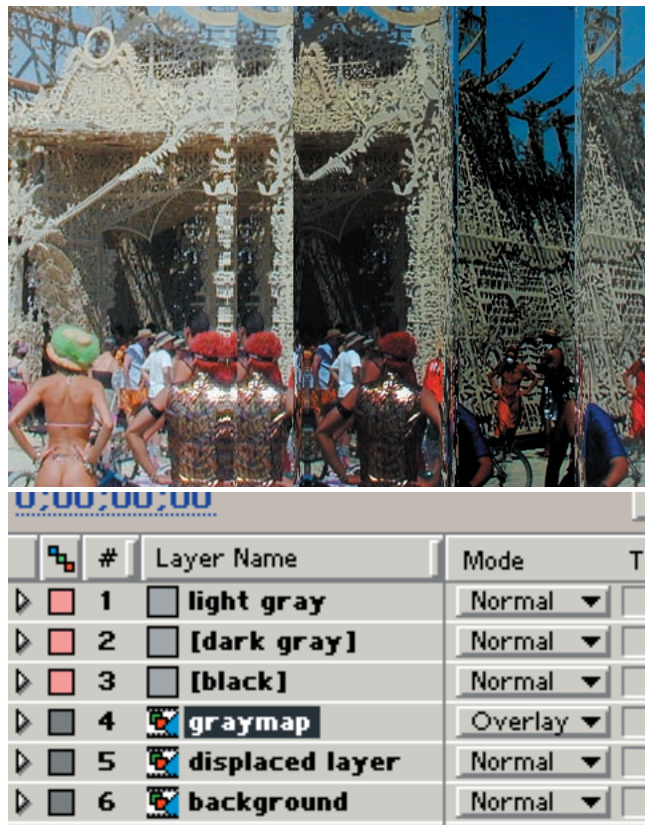
- 6- So that gets us to the halfway point. You can open the Main-Halfway comp to see if you're project matches up with ours.

Now we start adding some other trickery to actually add some punch to the imagery.

Duplicate the Displaced Layer layer, and name it 'Graymap'. Open up the Effects window for this layer, and change the Output View to Blend Horz. This will produce the grayscale map that we just looked at in Step 5.

NOTE: Make sure you have the Graymap layer selected. If you still have the Displaced Layer selected you will definitely not get the same effect. The Displaced Layer should have Output View set to Normal.

Now set the Graymap layer's transfer mode to Overlay. Click on the 'switches/modes' button at the bottom of your timeline to get to your transfer mode section. Which will result in this:





- 7- The final touches I'm going to leave up to you. If you want to tint the image, try applying Hue&Saturation.

To Blur the image, try applying Compound Blur and using the Graymap as a source for it. Remember: If you read the Anarchy Toolbox manual on using grayscale maps, you should know that Displacement Map filters and the Compound Blur filter use shades of grays in different ways. You will need to apply curves to a copy of the Graymap layer and precomp it to produce a usable Compound Blur map.

Try doing it on your own first, but you can take a look at the Main Comp-Final comp to see how I set stuff up.



[Click here for the final movie](#)

