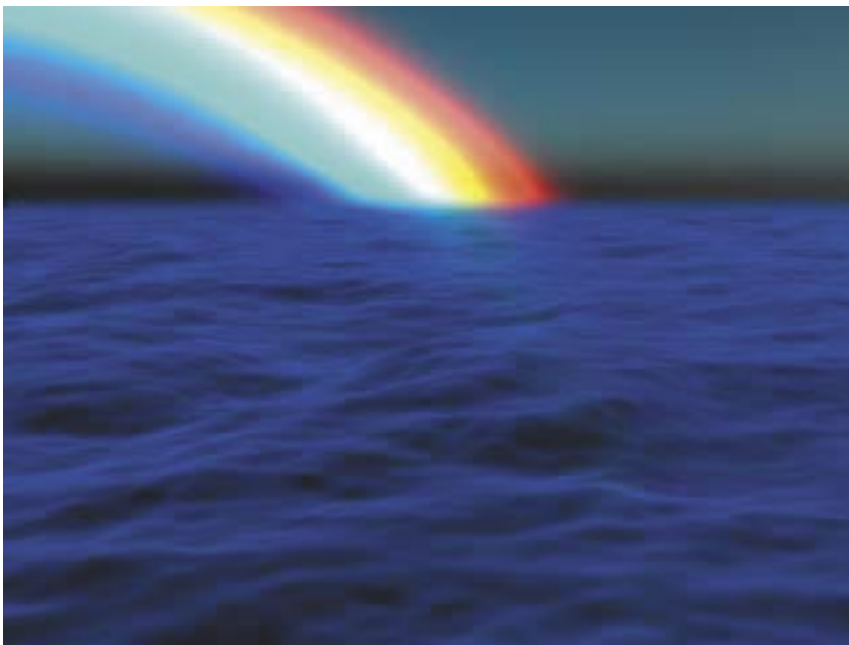


intro to Psunami

Water worlds fit for the gods.

Set up a Psunami scene and add
a rainbow to brighten things up.



a tutorial for : [psunami water](#)

PSUNAMI
PSUNAMI



photoreal 3D water simulation & effects.

[from Digital Anarchy]

f/x tools for revolutionaries.



There were polygons. Artists rejoiced and praised the powers that made them. Strangely named powers: Maya, Sumatra, Kinetix, Newtek. Alas, in time it was found that these creations were unwieldy and generally were not beautiful.

The powers looked upon their creation and brought forth light. Beautiful rays of lights and the power to show the uninitiated how beautiful the polygons could be. They brought forth a wondrous device called Raytracing.

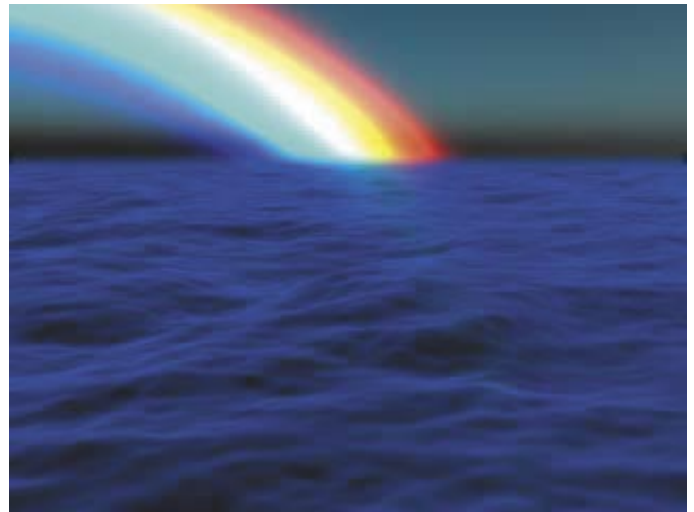
The artists rejoiced yet again, for now their creations would be stunning, and they could be seen by the unwashed masses who would then worship them. Or at least pay them a salary.

Still, there remained problems. The polygons were beautiful, yes, but they did not move naturally. Something else was needed. A new power came into being, Arete. Arete looked upon the polygons and said, "I shall give you the motion of water". And it was done.

The polygons moved smoothly as if they were liquid. When used with the Raytracer, none could tell the polygons from true water.

[figure 1]

Thus, Psunami was born. Arete entrusted this creation unto a divine messenger, Anarchyst (Digital Anarchy in the common tongue), to distribute amongst the artists.



[figure 1]

Our spectacular introduction aside, this is a very basic tutorial that introduces some of the controls in Psunami. We're just going to set up a simple ocean scene with a rainbow. It's very easy to do, so let's get started.



00- download & install

Before you start this tutorial, you will want to download the [psu_rainbow-tute.zip](#) file from our website. This ZIP file contains an After Effects .aep file and QuickTime example movies.

You also need to install our Psunami Water plugin into your After Effects/Plugins folder. The plugin will appear in the 'Effect' dropdown menu, in a 'Digital Anarchy' submenu. [figure 2]

If you are working with the demo version of Psunami, a red 'X' will watermark your footage.



[figure 2]

01- project setup

From your download folder, open up the [psu_rainbow.aep](#) project file in After Effects. The 'Final' comp shows your finished piece.

You can also play the QuickTime movie called [psu_rainbow-final.mov](#) to see the final composition that you will create.

The 'Start' comp is simply a 320x240 project with a new Solid layer. Alternately, you can just create a 320x240 comp and add a Solid layer. [figure 3]



[figure 3]

02- apply psunami

Create a new project, add a layer, and apply Psunami.

After Effects Users: Create a new comp that is 320x240 and apply a new Solid. Apply Psunami to the solid from the menu 'Effects> Digital Anarchy'.

Final Cut Pro Users: Create a new project. Create a slug on your Timeline by dragging one from the viewer. With the slug selected apply Psunami from the menu 'Effects> Video Filters> Digital Anarchy'.

In either application, by default we get a nice sunset scene. [figure 4]



[figure 4]



03- render options

Twirl down the arrow for the 'Render Options' section. [figure 5]

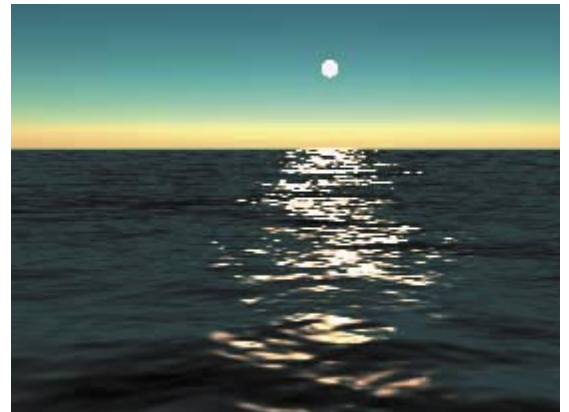
Final Cut Pro Users: The parameter list for Final Cut Pro does not use collapsible menus, but they are identical to the parameters for the After Effects version. All settings for this tutorial will work in Final Cut Pro.



[figure 5]

Notice the Render Mode is set to 'Texture'. This is a very useful mode for seeing the colors in your scene, how the sky looks, and where the sun is. Texture mode doesn't render the polygons in the ocean, so the wave surface tends not to look very realistic or representative of how the water will render.

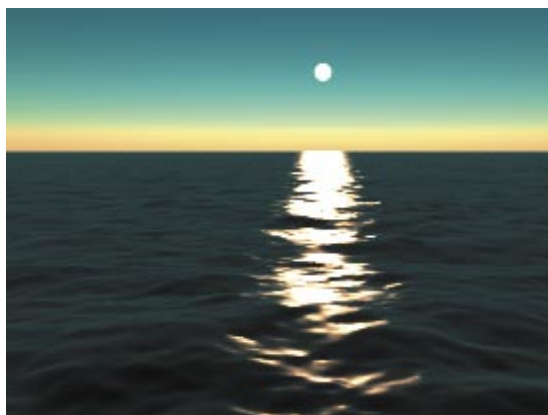
Switch the Render Mode to 'Realistic'. [figure 6a] This will render out the polygons, but Psunami will run much slower. In our default scene, actually, there is not much difference between 'Texture' and 'Realistic'. [figure 6b]



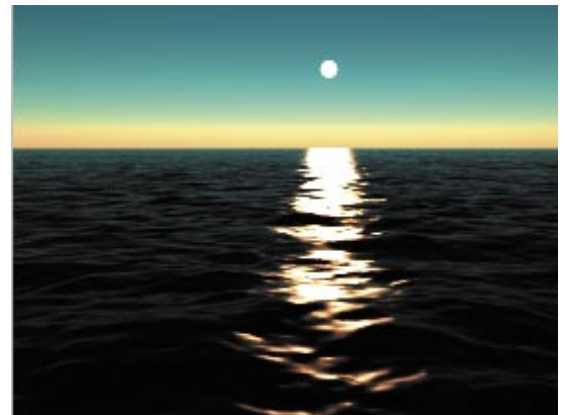
Texture render mode [figure 6a]

NOTE

You can also check out 'Too Realistic Mode'. You won't use this render type for our project because its level of detail is not necessary or time-effective. [figure 6c]



Realistic render mode [figure 6b]



Too Realistic render mode [figure 6c]



04- wind speed

Go to the 'Primary Waves' section and twirl it down. Since Psunami creates true-to-life waves, and real waves are created by wind, Psunami uses wind as well. If you want to make bigger waves, just increase the Wind Speed.

For this project, set the 'Wind Speed' to 16. [figure 7] If you switch to 'Realistic' mode, you'll notice that we now have really big waves. They sometimes get in the way of the horizon. [figure 8]

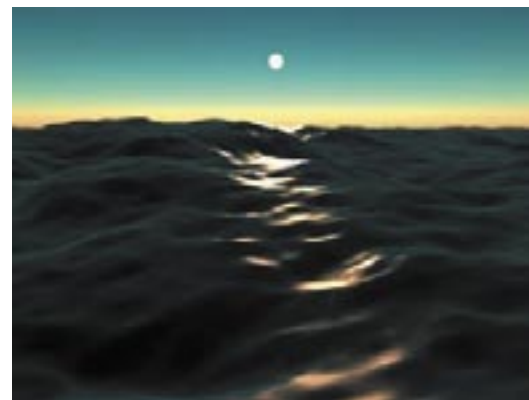


[figure 7]

05- pan to right

Let's also make our composition assymetrical. Twirl down the 'Camera' section, and change 'Pan' to 76. [figure 9]

This moves our sun and its aquatic refraction over to the right side of the composition.



Wind Speed, Realistic mode [figure 8]

06- texture mode

Switch to 'Texture' rendering mode, back in the Render Options section.

The first thing you may notice is that the scene renders much faster than while in 'Realistic' mode. And you quickly notice the second difference, that the waves don't look ANYTHING like what you saw in 'Realistic' mode.

The point here is that you will not use 'Texture' mode to set up your waves. It is a great option for quickly looking at your sky and the color of the water, but don't expect 'Texture' to accurately show the ocean surface.

So, 'Texture' mode doesn't show what the waves really look like, and 'Realistic' takes a while to render. What to do? Well... let me tell ya!



[figure 9]

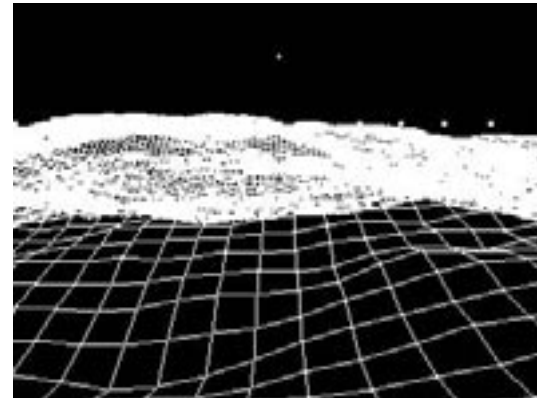


07- wireframe mode

Switch the Render Mode to 'Wireframe'. This will render everything out as a wireframe (surprise!). [figure 10] You can't see any colors, but you can see the shape of the waves and therefore what they'll look like.

Wireframe is an incredibly useful rendering tool. We recommend this mode for setting up waves, loading in displacement maps, and creating animations.

Wireframe mode renders quickly, which is great for previews. Between this and 'Texture' mode, you only have to go into 'Realistic' mode occasionally to see how the visuals will look in your final render.



Wireframe mode [figure 10]

08- make waves

Still in 'Wireframe' mode, go back down to the 'Primary Waves' section. Set 'Wind Speed' to 7. This will make our waves smaller, as right now they're a bit large.

That's all we need to do for the waves. Onwards to creating rainbows! Switch back to 'Texture' mode so the rainbow can set up faster.

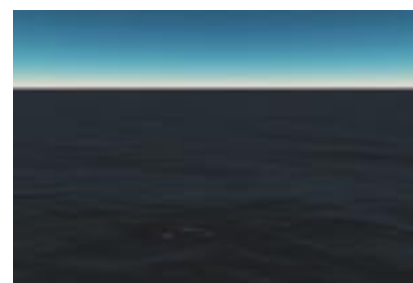


Elevation -60 [figure 11a]

09- light elevation

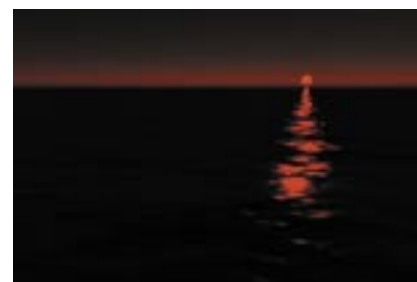
Rainbows are created by refraction, which is really just light reflecting through water. For this to occur, the light source needs to be behind the viewer, so the rainbow is in front of him. Our first step is to put a light source - the sun - behind the camera.

Twirl down the 'Light 1' section, and set the 'Light Elevation' to -60. [figure 11a] This negative value puts the sun behind the camera.



Elevation 0 [figure 11b]

As a comparison, if we set Light Elevation to 0, the light would be directly above the camera. [figure 11b] At 89, the light would disappear below the horizon. [figure 11c] Since this is raytraced and not a real scene, there is no real world ambient light, so the scene gets very dark.



Elevation 89 [figure 11c]



10- camera pan

If you experimented with Light Intensity in the previous step, make certain to set that parameter back to -60.

Now go to the 'Air Optics' section and twirl down the arrow. Notice the two sets of controls, one for Haze and the other for Rainbows.

Click on the 'Rainbow Style' pop-up and select 'Haze Rainbow'. This creates a much nicer rainbow at the expense of speed. This is partially because Haze has to be turned on, which slows the renderer down.

[figure 12]

Click on the 'Haze On' checkbox to checkmark and turn it on. [figure 13]

Set the 'Rainbow Radius' to 48. Set the 'Rainbow Intensity' to 8 and set 'Rainbow Thickness' to 4.

[figure 14]

11- camera pan

Now this isn't bad. However, I'm always looking for the pot o' gold at the end of the rainbow, so I'd like to see if we can find that end.

To do this, let's pan our camera. Twirl down the 'Camera' section, and set 'Pan' to 125.



[figure 12]



Rainbow, Texture mode [figure 13]



Rainbow, Texture mode [figure 14]



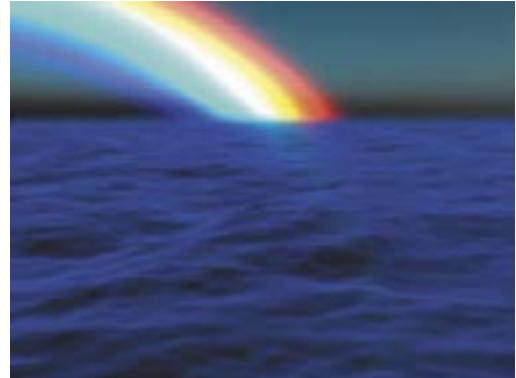
Ah... That's it! Our final is at right. [figure 15] Alternately, you can play the QuickTime movie called [psu_rainbow -final.mov](#) that came in your download folder.

12- add some pizzazz

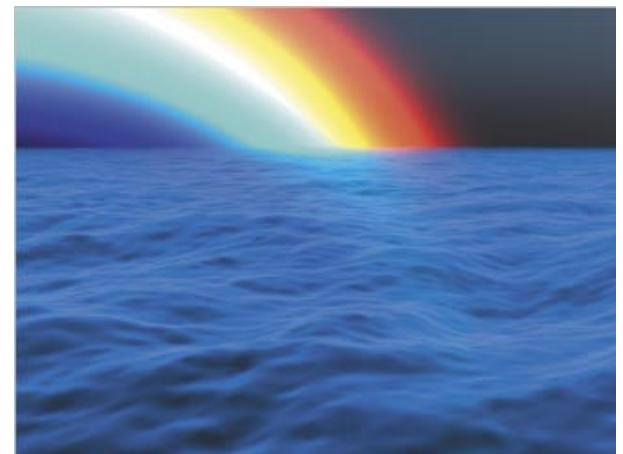
Play around with the Rainbow settings and the haze settings for all sorts of unusual effects. Remember, you'll want to stay in 'Texture' render mode while you're fiddling.

With a few tweaks to the rainbow parameters, you can end up with the image that's REALLY our final. [figure 16] Changes have been made to 'Haze Color', 'Rainbow Thickness', 'Rainbow Intensity', 'Rainbow Radius', 'Haze Diffusivity', 'Haze Height', and 'Haze Visibility'. [figure 17]

You can also check out the 'Final tweak' comp for these settings, and watch our QuickTime movie [psu_rainbow-tweak.mov](#).



Rainbow final, Realistic mode [figure 15]



Rainbow tweaked, Realistic mode [figure 16]

▼ Air Optics	
▶ ○ Scattering Bias	4.000
▶ Haze On	<input checked="" type="checkbox"/>
▶ ○ Haze Visibility (KM)	0.800
▶ ○ Haze Height (M)	346.000
▶ ○ Haze Color	<input type="color"/> <input type="button" value="→"/>
▶ ○ Haze Diffusivity	0.050
▶ Rainbow Style	Haze Rainbow [Best]
▶ ○ Rainbow Radius	50.000
▶ ○ Rainbow Intensity	11.000
▶ ○ Rainbow Thickness	7.000

[figure 17]