

Demo Tour



ELECTRIC IMAGE

WORK HARD, RENDER FAST, RETIRE YOUNG

copyright © 2001, all rights reserved

Printed in USA

Demo Doc: Amorphium Pro Tour

1.1 Tour Introduction

Now that you've installed Amorphium Pro, you're probably wondering what you can do with it. We suggest you take it for a test drive. But don't just drive around the block, take it off road. Dent the fenders, scratch the paint, kick the tires, and change the radio station. We don't care how banged up it gets. The next time, and every time you put the key in the ignition, Amorphium Pro will be back in one piece, washed, waxed and ready to go on another adventure. We'll skip around the available menus on this tour until we've covered them all.

1.2 Startup-Composer

Amorphium Pro first starts up in the **Composer** mode with a **New Project**.

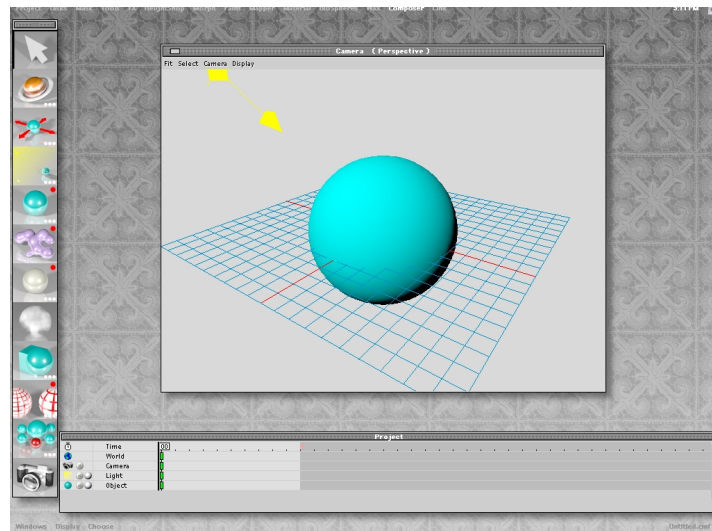


figure 1.1: Amorphium Pro's Initial Startup in Composer Mode

Amorphium Pro is also able to begin a project as a **Blank Project** or **Open Project**, but we'll get to that later. For now, let's just create a new project. Amorphium Pro starts a new project with the Composer tools. There are three floating windows initially: Camera (perspective view) Window, Project Window and a Floating Object palette that we can use to add objects to our scene.



At the top of the screen you will find 13 buttons giving you access to eleven different sets of tools and the project menu (figure 1.2:).



figure 1.2: Buttons for Amorphium Pro's Thirteen Sets of Tools

- But before you hit the road, click the **Project** button to bring up the **Project** menu (figure 1.3:).

| Project Tasks Mask Tools | |
|--------------------------|-------------|
| About... | |
| Save Project | Cmd-S |
| Close Project | Cmd-C |
| Import... | Cmd-I |
| Export... | Cmd-E |
| Undo | Cmd-Z |
| Redo | Cmd-Shift-Z |
| Preferences... | Cmd-P |
| Display... | Cmd-D |
| Quit | Cmd-Q |

figure 1.3: The Project Menu

Amorphium Pro is a program that gives you an incredible amount of freedom to experiment—there is no one right way to do things. So experiment.

Undo As you use Amorphium Pro, you may decide that something you tried is a mistake. That may or may not be the case—mistakes often lead to new and amazing creations—but you can always **Undo** a series of operations by pressing **Ctrl-z** (**Command Key-z** on the **Mac**). This is called **Multiple Undo**; Amorphium Pro also has **Multiple Redo** by pressing **Shift-Ctrl-z** (**Shift-Command Key-z** on the **Mac**). We've highlighted these important features so you need never hold back while you learn and experiment with Amorphium Pro.

Multiple Views New to Amorphium Pro is the ability to have multiple viewing options. Take a look at the lower left corner of your screen, and you'll see a few menus, one being 'Window'.



figure 1.4: Window Display Options

Here you can choose between a Single, Double, Quad, or just a New window. Since we only have one object in our scene currently, a sphere, the other two options aren't available to us. We'll get to those later.

Creating an Object

One of the first things you'll want to do is to open a new object. Amorphium Pro makes this easy—to the left is a special palette designed to add objects to your scene, and help compose your scene.

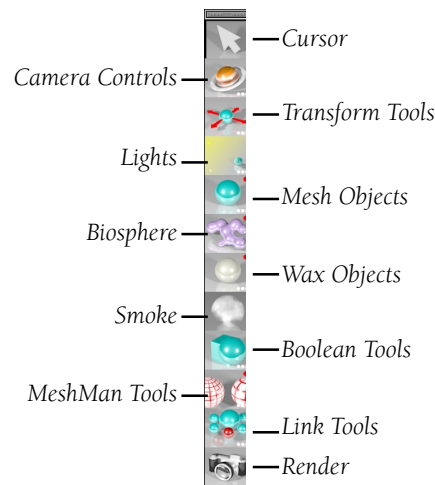


figure 1.5: Composer Palette

For now, let's just add another object to the scene. The first one is already there, a mesh sphere. Go ahead and click the Mesh Sphere button, and hold. Many more icons appear: Mesh Cylinder, Mesh Cube, Mesh Cone, Mesh Doughnut, Mesh Plane, Mesh FontMan, and a Conversion Tool.

- Click on Cube, and then go to the view window where the sphere is, and click and drag. First the horizontal dimensions are made, the drag up for the vertical. The cube is created. Other Objects will be discussed later.

Moving Objects

You can change the position and orientation of objects using the Transform palette. This is the third set of tools in the tool palette in the Composer window.

Note

You can pull off sets of tools by clicking and dragging on the selected tool. The pulled off set of transforms is shown in (figure 1.6:).



figure 1.6: Transform Tools Palette

Use the Move tool, which is highlighted in (figure 1.6:), to adjust the position of the cube until you are comfortable with moving objects in the view window. There are a number of other transform tools including constraining movement to an axis, rotation, rotation around a particular axis and scaling of the object.

Lights

3D objects are very boring without any light to see them. Amorphium Pro provides extensive lighting controls for you to light your scenes. In the view window, there is a yellow object with an arrow pointing from it; this is a light.

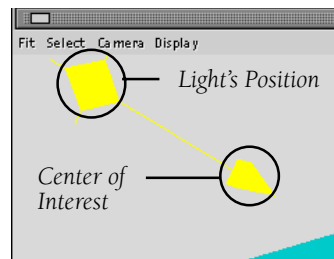


figure 1.7: Parts of a light

The center of interest and the light's position can both be moved. For more information about lights refer to "Light Tools" on page 163 in the Full Amorphium Pro Manual.

Go ahead and move the light, to get a feel for how it affects the objects.

- Place the pointer over the light's Center of Interest with the move tool, and click and drag the mouse.

Wherever the Center of Interest is moved is where the light is pointing. Notice how the shadows and highlights change as you move it. Similarly you can also move the light's position.

Camera Controls

The camera is another object in our scene, and there are some special tools for it. The second set of tools in the composer window is for the camera.



figure 1.8: Camera Controls Palette

These controls are for orbiting, panning (moves the position of the camera), dollying (moves the position of the camera forward and backward along its line of view), dragging (moves the camera and its center of interest together), zooming, banking (sometimes called roll in other packages).

Feel free to experiment with a few of these controls before moving on. See how the view changes in the window? All of these controls can be animated too! Animation will be discussed later.

The camera's position and Center of Interest can be seen also as objects in the scene, just not in this window, since we are looking out through the lens of the camera.

- Go to the Windows Menu (lower left) and choose Quad View.

Now the Camera and its Center of Interest can be seen. They can both be moved like other objects too.

1.3 Brushes and Brush Tools

Now that we've covered opening basic objects and moving them about, it's time to play with some really fun stuff--Amorphium Pro's brushes and brush tools. To access these, click on the tools menu button at the top of the screen.

Amorphium Pro has lots of great tools to help you create 3D sculptures--one set of tools that allow you to do this are the brushes themselves.

First you are probably asking, 'Why do we only see one of our objects? We have two in our scene.' It is only possible to modify one object at time, but it's easy enough to switch to the other object. In the lower left of the screen, just use the choose menu to choose the other object.

- Go ahead and experiment switching between objects, but end with the sphere in order to follow along with this section of the manual.

On the left is a palette of brush types and transform tools

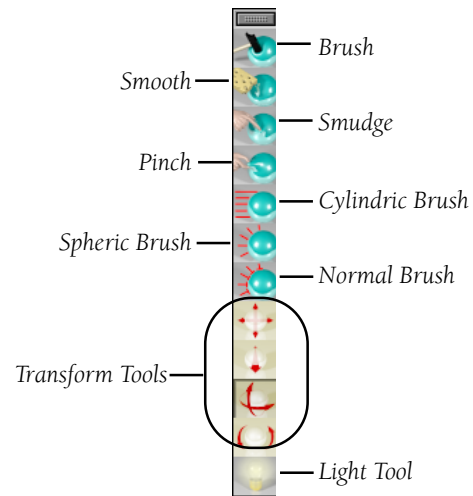


figure 1.9: Brush Types and Transform Tools

These are Brush, Smooth, Smudge, Pinch, Cylindric Brush, Spheric Brush, Normal Brush, and then some transform and light tools.

Click on the Brush tool, then click and drag on your object. Immediately you'll see some carving into the object. This is just the beginning!

On the right side of the screen is a palette of brush Modifiers.

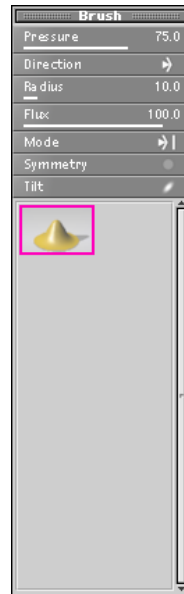


figure 1.10: Brush Modifiers

In this menu the Pressure, Direction, Radius, Flux, Mode Symmetry, and Tilt can be adjusted.

- Go ahead and adjust the Radius of the brush, using the Radius slider. See the interactive brush size on our sphere?.
- You can also change the direction of the brush, so the effect pulls dents outward, by pressing the direction button.

New to Amorphium Pro is the editing of the brush shape.

- Right -Click (Option -Click Mac) on the brush. Then click on Edit.

This pulls up the Edit Brush Window.

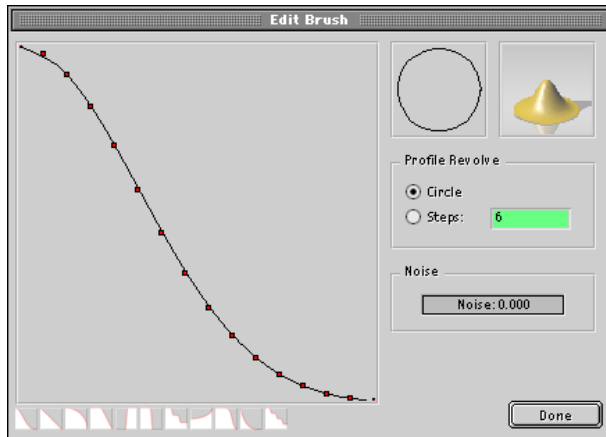


figure 1.11: Edit Brush Window

In this window there are presets at the bottom, but you can also edit the shape directly in the graph. Also on the right, you can add noise to the brush, and make it a more geometric shape by using steps in its revolve.

More will be discussed later about brushes, in “Brushes & Brush Modifiers” on page 89 in the full Amorphium Pro Manual.

1.4 FX (Effects) Tools

One of the very unique aspects of Amorphium Pro is the ability to apply effects in real time.

- Click on the FX tab at the top of the screen.

On the left is a familiar set of transform tools, while on the right is a list of FX that we can apply to our objects.



figure 1.12: Effects Window

Many of these effects have their own editable controls, but for now, we'll only go over a few.

- Choose the Belly effect, then go to the view window with your sphere.
- Click and drag to the left and a slim belly appears. Drag, to the right and a more rotund belly appears.

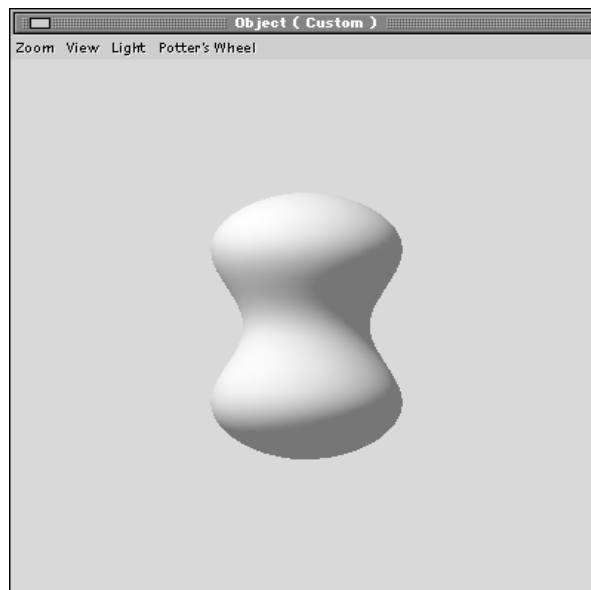


figure 1.13: Sphere with the Belly Effect

Undo the effect, and now select the Spikes effect.

- Click and drag to the right, spikes appear on our sphere.

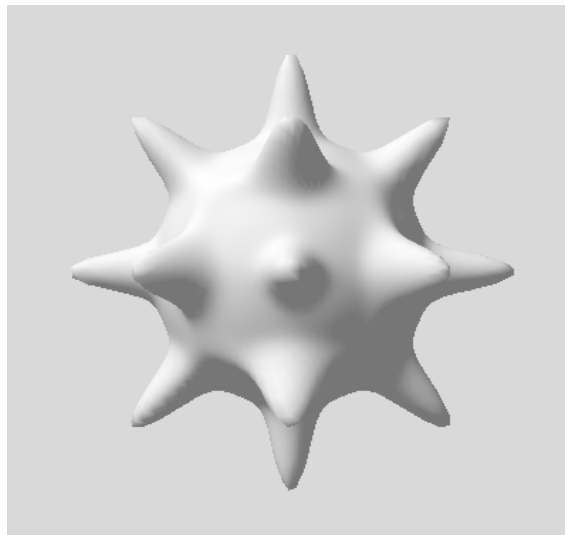


figure 1.14: Sphere with Spikes

More will be discussed about the FX options in “FX” on page 99 in the full Amorphium Pro Manual

1.5 Painting

As much fun as Amorphium Pro’s FX are, there are plenty of other cool features to explore. Let’s take a look at the painting tools now.

- Make sure you have a fresh Sphere in the 3D workspace. (This can be done by undoing the last steps of FX that were applied. Or going to the composer window and creating a sphere with the Mesh Sphere tool.) Then click the Paint tab at the top.

You will now see Amorphium Pro’s Paint tools.

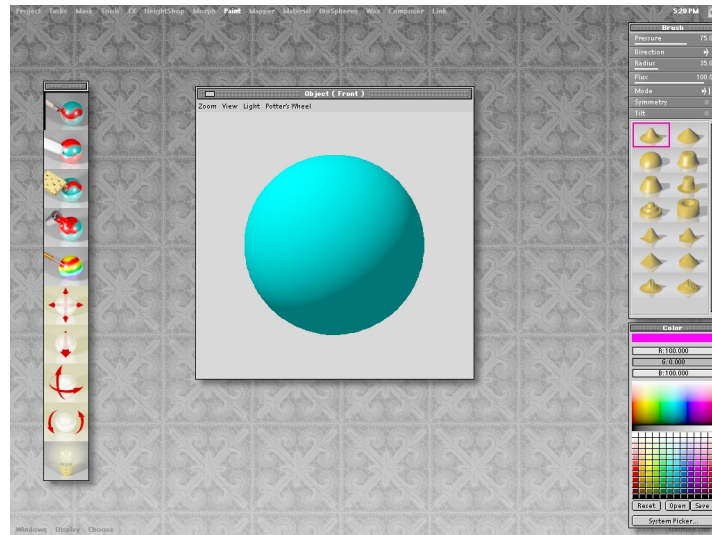


figure 1.15: Amorphium Pro's Paint Tools

These are the tools you will be using when it's time to paint your creations. In this case a sphere will do just as well as a sculpture.

On the right side are the paint brush options. On the left hand side is our different paint brushes as well as some transform and lighting tools.

- Click on the Brush tool (top one in the palette).
- Click and drag a stroke across the sphere.

Notice that instead of changing its shape, the brush deposits red paint on the object's surface.

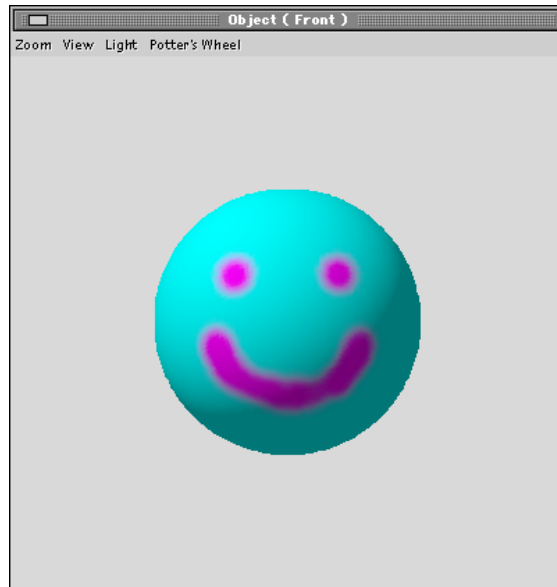


figure 1.16: Painting on the Sphere

Setting the Current Paint Color

Next, let's try painting with a different color.

The Color palette allows you to pick a color 4 different ways. One is to adjust the Red, Green, and Blue percentages at top, another is to choose from the prismatic color area, a third is to choose one of the paint color buttons, and lastly is to pull up the system color picker, which you use for your operating system. Any of these will work fine.

- Go ahead and choose a new color and add another stroke, it's that easy!

Paint Bucket

Another way to paint an object is with the paint bucket.



figure 1.17: Paint Bucket Tool

The paint bucket is used to paint the entire object at once, rather than with one of the brushes. To use it, simply click it once. The object in the 3D space will be painted with the Current Paint Color.

To learn more about the paint tools refer to “Paint” on page 123 in the full Amorphium Pro Manual.

1.6 Mask

Let's have a look at another great Amorphium Pro feature--Mask.

- Make sure you have a fresh Sphere in the 3D workspace, then click the Mask button at the top of the screen.

You will now see Amorphium Pro's Mask tools.



figure 1.18: Mask Tools Palette

The purpose of a mask is to allow you to select a very specific area of an object to work with, and to protect all other areas from any operations you may perform.

When you open the Mask tools, the Sphere will appear white in the 3D workspace. When masking, White indicates areas of the object that have not been masked, while Red indicates areas that have been masked.

The best way to see how a mask works is to paint one on the Sphere, then try to paint over it.

- Select the Rectangle Mask Tool.



figure 1.19: Mask Rectangle Tool

- Drag a big fat rectangle mask on the Sphere.

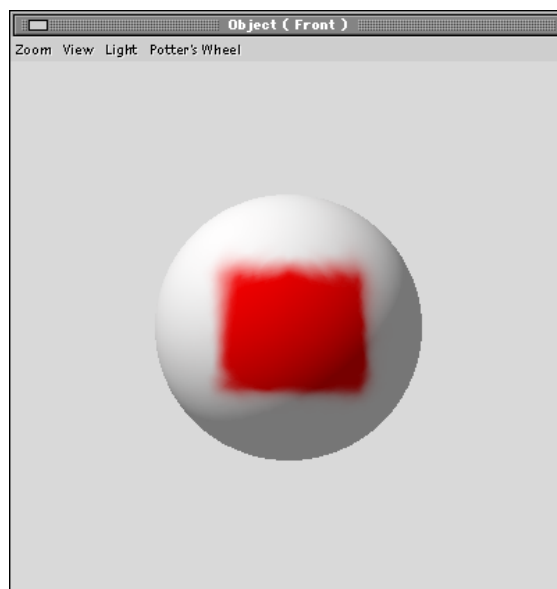


figure 1.20: The sphere with a Rectangle Mask

- If the mask looks jagged, click the Smooth Mask button, and click in the view window a couple times.

Next,

- Click the Paint button at the top of the screen.

You won't be able to see the mask in the workspace, but it's there all right.

- Repeat the exercise by painting a few strokes of different colors.

You'll notice a big difference in the results this time.

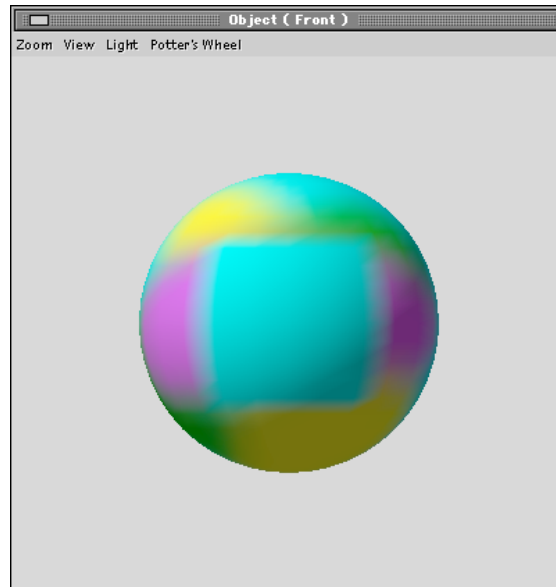


figure 1.21: Painted Sphere with a Mask

We are unable to paint over the area covered by the mask.

- Let's go back to the Mask tools now, and when you get there, click the Invert Mask button. Then click in your view window.



figure 1.22: Invert Mask Button

The mask is now inverted, and the rectangle is white and the rest of the sphere is red.

- Now go back to the paint tools and do the same thing as before.

You'll only be able to paint what's in the rectangle this time.

The Masking features are described in detail in "Masks" on page 85 in the full Amorphium Pro Manual.

1.7 HeightShop

The next stop on our tour is Height Shop.

- As usual, start with a fresh Sphere in the 3D workspace, then click the HeightShop button at the top of our screen.

The HeightShop allows you to change the shape of an object by applying an image to it. The white areas in an image will raise the portion of the object it is applied to, while darker areas, will lower those areas on the object.

The first thing we need to do here is to load an image.

- Click the Open button in the HeightMap Window.

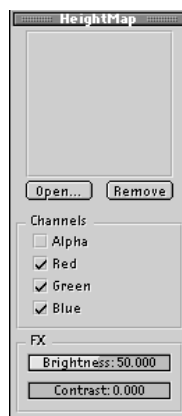


figure 1.23: HeightMap Window

An Open File window will appear.

- Navigate to Amorphium Pro's HeightShop directory, and select the Fractal image.

The Fractal image now appears as the Current HeightMap Image.



figure 1.24: Fractal Image as the Current HeightMap Image

Now that we have an image, we must tell HeightShop how to apply it to the object. This is done with our mapping buttons.

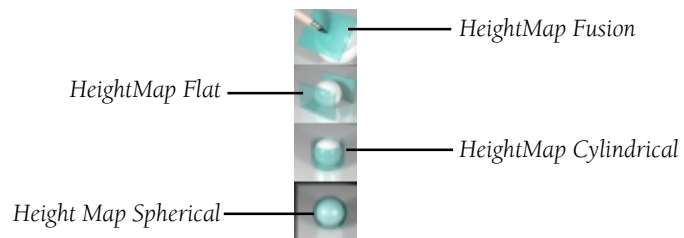


figure 1.25: The Mapping Options with Spherical Mapping Highlighted

- Click the Spherical Mapping button (the bottom choice).

We chose Spherical Mapping, because that is the option which most closely resembles the shape of the object that we will be applying the HeightMap to.

Finally, the last step is to apply the amount that the Map will influence.

- Click and drag in your view window, and you'll instantly see it transformed.

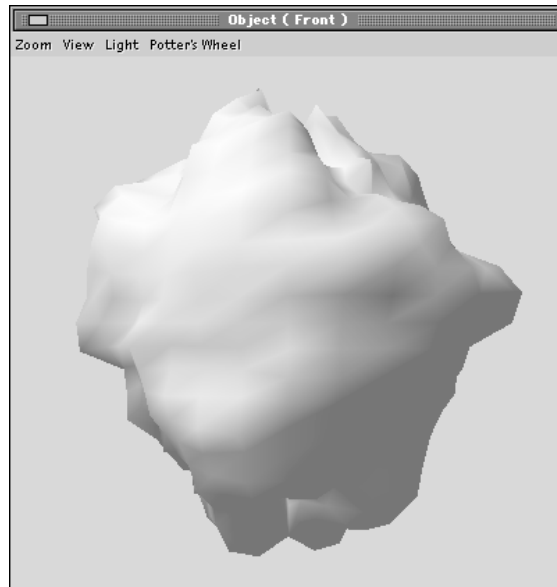


figure 1.26: The Sphere with the “Fractal” Height Map Applied

As you can see, after the Height Map is applied, the object now makes a really crummy Sphere, but a fairly decent asteroid. Clearly, HeightShop gives you a lot of power to create interesting objects with a minimum of effort.

1.8 Materials

Let's move on to a feature that is related to HeightShop: Materials.

Once again, the ever-useful Sphere will be our object of choice.

- Click the Materials button at the top of the screen to display Amorphium Pro's Materials Tools.

New in Amorphium Pro is the ability to apply textures to many different channels.

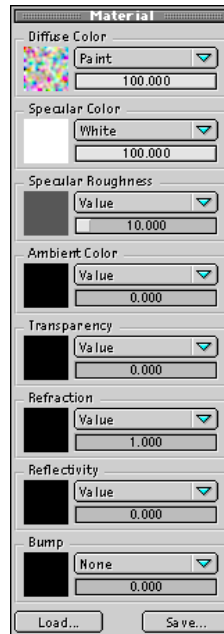


figure 1.27: Material Channels

In this window (figure 1.27:), you can add textures to your objects. Textures are applied in much the same way as a Height Map, but instead of changing the shape of the object, they change its color.

Once again, the best way to understand them is to apply a few to our hapless Sphere.

- In the pull down menu for Diffuse click Texture.

An Open File window will appear.

- Navigate to Amorphium Pro's Textures directory and select the Camo image.

The Camo image now appears as the diffuse color.

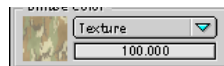


figure 1.28: The Camo Image as the Diffuse Color

You will notice a couple of differences between Textures and HeightShop:

- The image appears in full color.
- As soon as the Camo image is loaded, Amorphium Pro applies it to the Sphere.

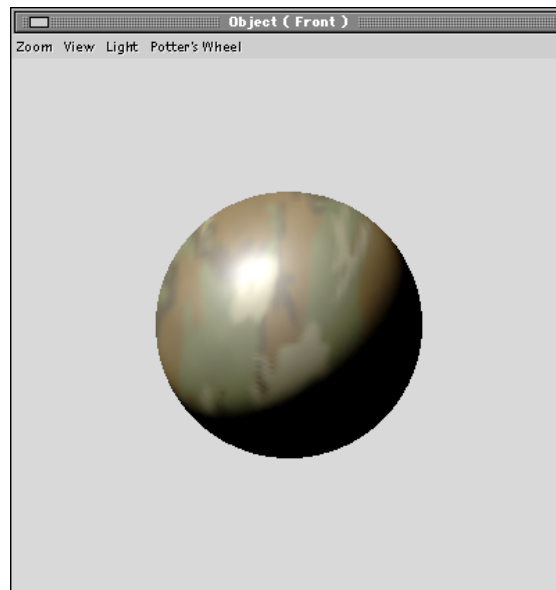


figure 1.29: The Camo Texture Applied to the Sphere

1.9 Mapping

After adding a texture to a specific channel, the texture can be given specific Mapping information.

- Click on the Mapping button at the top of the screen to gain access to the Mapping tools.

Besides the previously mentioned Flat, Cylindrical and Spherical Mapping options, there are plenty of other interesting features here, as well.

- You can change the placement of the texture on the object interactively by clicking on the Current Texture and dragging the mouse using the Drag Tool.



figure 1.30: Mapper Drag Tool

- You can change the size of the texture on the object interactively by clicking on the Scale button and dragging the mouse left or right in the view window.



figure 1.31: Mapper Scale Tool

More will be discussed about Materials and Mapper in “Materials & Mapping” on page 127 in the full Amorphium Pro Manual.

1.10 BioSpheres

Now we’re going to have a look at one of Amorphium Pro’s most cutting-edge features: BioSpheres.

Guess what! This time, we aren’t going to use a Sphere!

- Click the Composer button at the top of the screen.
- Delete all objects.
- Add an initial Biosphere object using the BioSphere tool. Click and Drag a Biosphere in a view window.



figure 1.32: BioSphere Tool

What are BioSphere’s? Biospheres are strange little spheroids with properties that make them perfect for easily creating amazing, organic 3D objects that can’t be made with other modeling methods.

What makes BioSpheres so useful is the way they interact with each other. Each Biosphere has three properties that determine how it behaves.

Energy How strongly the BioSphere attracts or repels other BioSpheres.

Radius The size of the BioSphere

Oblateness This odd word is another way of saying flatness.

Let's stop talking about them, and start playing.

- Click on the BioSpheres button at the top of the screen.

In the BioSphere's window, only BioSphere objects can be chosen. So you see only the first object created in this section will be seen.

Also, when you've finished creating a BioSpheres object, you'll have to turn it into a normal Amorphium Pro object to use the FX tools, Painting, or other tools on it. Don't worry- we'll get to that later.

With the initial BioSphere created from the Composer window, click the BioSphere Menu Button at the top of the screen.

Your initial BioSphere looks very similar to any other Sphere we've used. Until now!

- Using the Add BioSphere tool, click and add another Biosphere in our window.



figure 1.33: Add BioSphere

Now our object should look something like this.

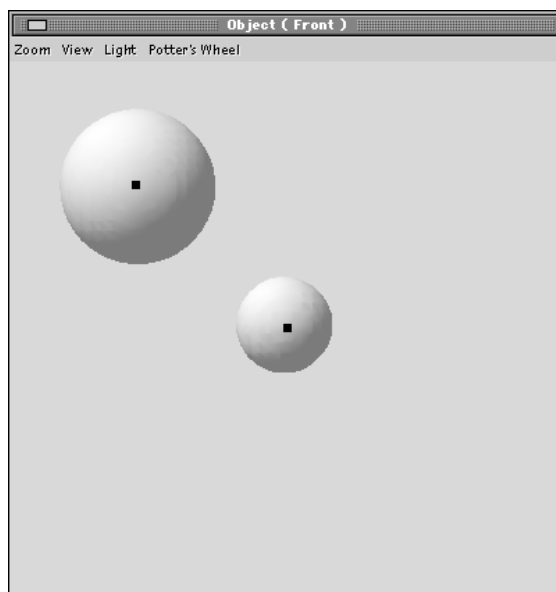


figure 1.34: Two BioSpheres in a window

Now if you move them, watch the results.

- Using the Move Biosphere tool, move one next to the other.



figure 1.35: Move BioSphere Tool

The two Biospheres are now joined, as they have a natural tendency to do so.

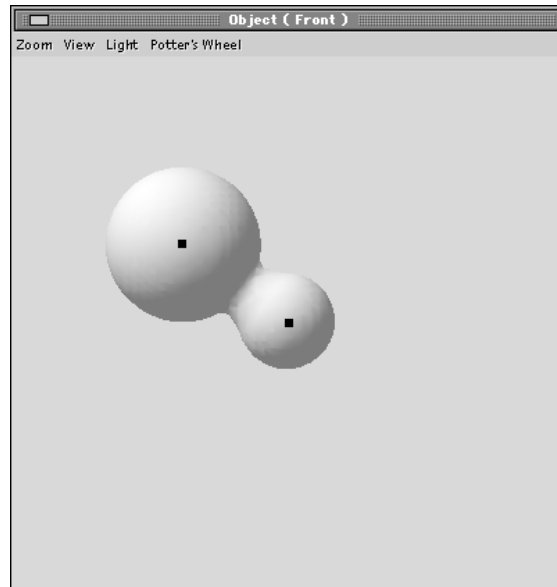


figure 1.36: Two Biospheres Touching

To turn this object into a standard Mesh, Right Click on it (Ctrl + Click on Mac). Here select “Convert to Mesh.”

Now the object is a standard mesh, and you can paint it, add textures, use the FX tools, or any other Toolset.

For more information about BioSpheres, check “BioSpheres” on page 139 in the full Amorphium Pro Manual.

1.11 Wax

Wax objects are a totally new type of modeling that is both fun and intuitive. Like BioSpheres, we must first create a new wax object for us to use.

- In the Composer window Create a wax sphere, using of all things, the Wax Sphere tool!
- Now click on the Wax button at the top of the screen.

This will pull up our Wax Tools to use on our wax sphere. There are three that we use here:

Melt Wax This basically erases areas of the model, you can melt through portions of the model, too.

Add Wax This adds geometry to the model, very good for adding limbs, or other extremities.

Smooth Wax Smooths the wax area so it is not has choppy.

Using the Add Wax tool, click and drag around the right edge of our sphere.



figure 1.37: Add Wax Tool

This will add geometry to that area. Your new addition may look like this.

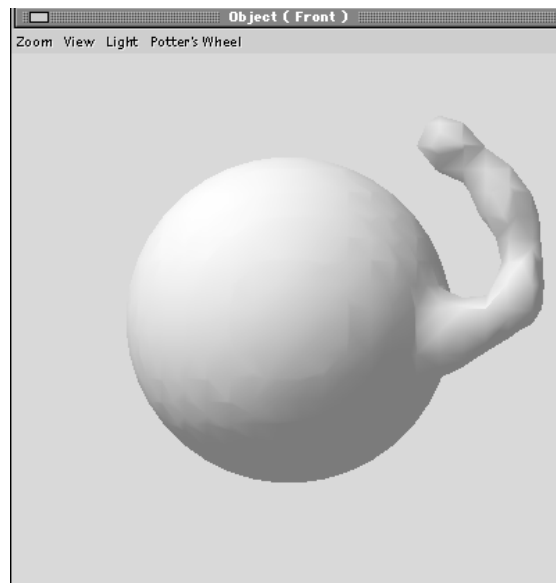


figure 1.38: Wax Object With Some Wax Added to the Right Side

Similarly to BioSpheres, a wax object must be converted to a Mesh to use in the other toolsets. To do this, as with a BioSphere, Ctrl + Click (Right Click on PC) and choose "Convert to Mesh." Then you'll be able to use the other tools on the object.

You can also convert any mesh into a wax object!

To learn more about Wax, please consult that section in the manual.

1.12 Tasks

The next stop on our tour is Tasks.

- With a new Mesh Sphere, click the tasks button at the top of the screen to open the Tasks tools.

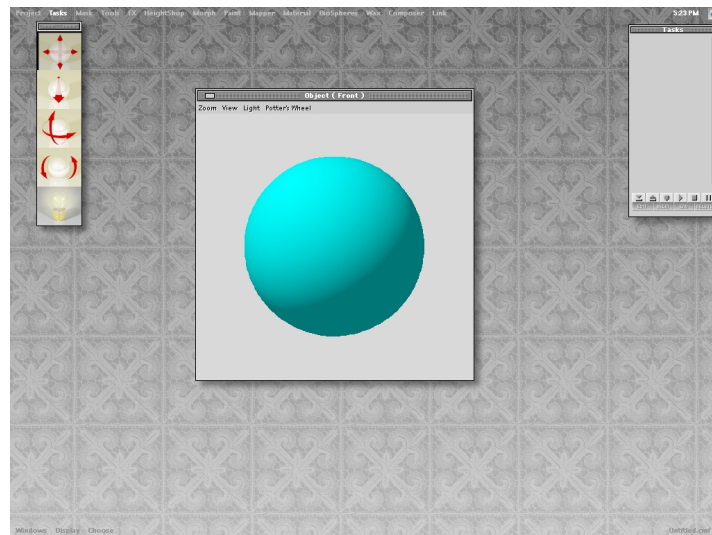


figure 1.39: Amorphium Pro's Task Tools

The task tools provide you with a way to record the actions you take in Amorphium Pro and turn them into a script--which can be saved to disk.

There's no better way for you to see how useful this can be than for you to load one of the scripts we have included with Amorphium Pro.

- Click on the Open button.

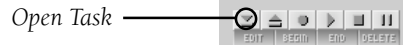


figure 1.40: The Open Task Button

This will open an Open File box on your computer.

- Navigate to Amorphium Pro's Tasks directory and select the **Flower.TSK** file.

You should see several lines of text appear in the Task List.

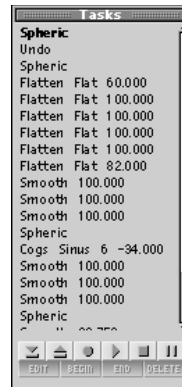


figure 1.41: The Task List

What do all these steps indicate? There's only one way to find out:

- Change to Top View by clicking on the Display menu in the view window.
- Click the Play All Steps button and sit back and watch...



figure 1.42: Play All Steps

Clicking the Play All Steps button tells Amorphium Pro to perform whatever commands are in the Task List from beginning to end. You will see an object created before your very eyes.

When Amorphium Pro is finished with the Flower Task List, you should see a stylized flower in the 3D workspace.

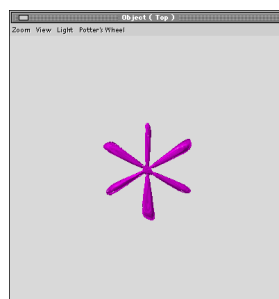


figure 1.43: Task Created Stylized Flower

You might want to look at some of the other Tasks in the Tasks folder. You can experiment with playing certain parts of the script, and even record your own when you create an object you really like.

1.13 Morph

One of the most exciting special effects currently seen in television and movies is Morphing--when one object changes smoothly into another.

Amorphium Pro comes with a complete set of tools for you to create this cool effect for yourself.

Click the Morph button at the top of the screen.

This will open the Morph tools.

Inside this tool there is a Morph Target window where we can choose two targets.

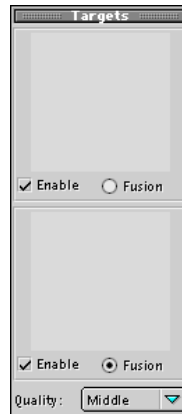


figure 1.44: Morph Target Window

To perform a simple morph, we need to open an object in each of the Morph Windows.

- Return to Composer and add a Sphere and a Cube, then come back to Morph.
- Click on the Top Target Box and choose the Sphere. With the Bottom Target Box, choose the cube.

The Sphere and Cube are now added as morph targets.

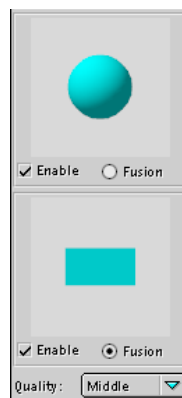


figure 1.45: Target windows with targets

Now you are ready to make a transition between the two targets. To do this, we use the Morph Tool.



figure 1.46: Morph Tool

- Select the Morph Tool, then click and drag from left to right in the view window.

You should see the shape in the 3D workspace morph interactively between a Sphere and Cube as you drag the mouse.

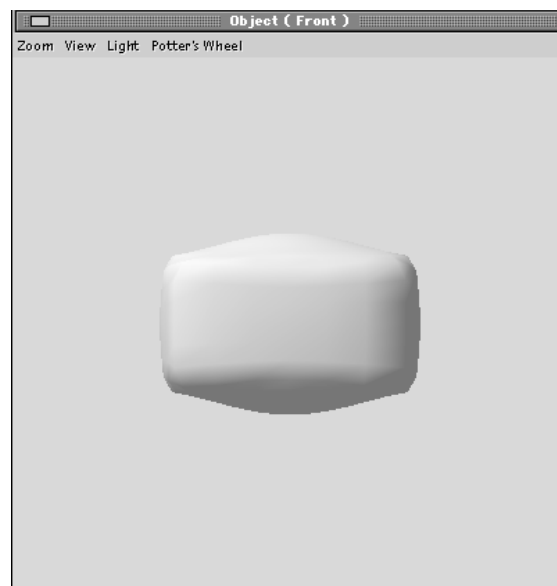


figure 1.47: Morphing Between a Sphere and Cube

More is discussed about Morphing in the Morphing section of the manual.

1.14 Composer

And finally, we reach full circle and our last stop on our tour of Amorphium Pro: Composer.

Composer is where everything comes together, and we create pictures of our creations and animate them as well.

We'll make a simple animation, by using many of the things we've learned so far.

The first thing we'll do is take our good old sphere and spruce it up a bit.

- Go to the FX tools and apply the Spikes FX to the Sphere.
- Next, go to Paint and use the Paint Bucket to paint the spiky Sphere a solid color.

Now we'll return to Composer

- Click the Composer button.

You should see a shaded version of the spiky Sphere in the Composer workspace.

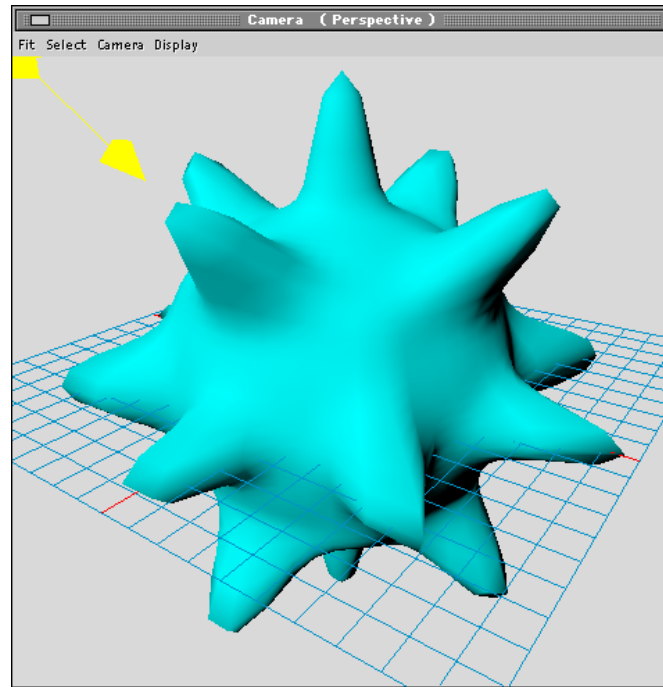


figure 1.48: *The Spiky Sphere in the Composer Workspace*

When making an animation, you need to set the position and condition of the Sphere when the animation starts. This is done in the Project window.

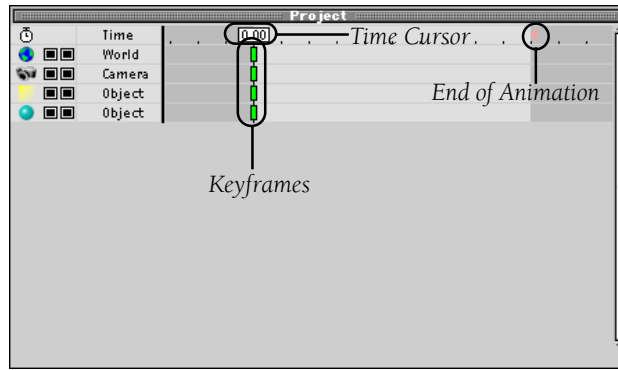


figure 1.49: Project Window

The first keyframes are already created for us. Note that for our spiky Sphere, there is a keyframe set at time 0. To set a new one we must first change the time.

- Set the time cursor to 2 seconds, and make that the end of the animation. (The red arrow is the end, you can move this.)
- Now Right Click (Ctrl + Click on Mac) on the Sphere, and we get an option to Add a KeyFrame. Please do so.

This creates a new keyframe that we can animate to.

- Return to FX and use the Twirl distort to the sphere.
- Go back to Composer and it should look something like this.

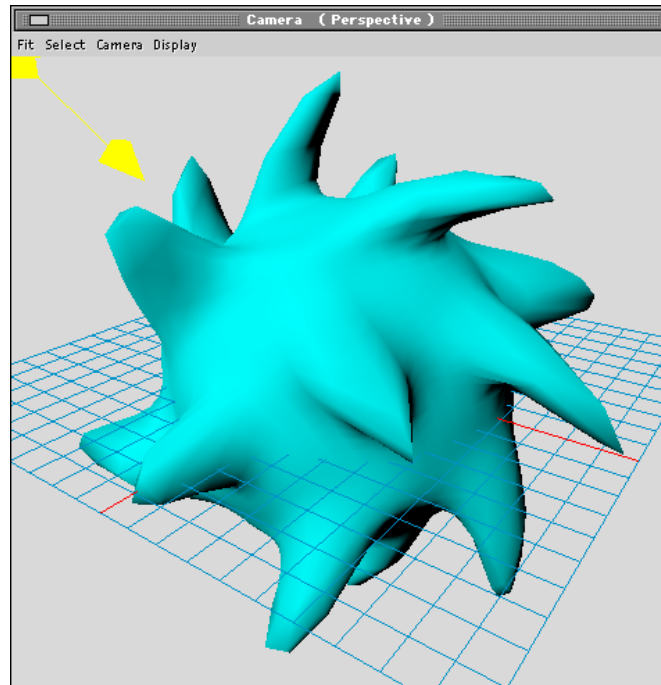


figure 1.50: The Twirled and Spiky Sphere in the Composer Workspace

At this point, we have enough information for our animation. We could continue modifying the object, but we'll save that for after the tour.

To render a quick animation, we first need to click on the RaydioCity button, then choose a window to render from.



figure 1.51: RaydioCity Button

- Click the RaydioCity Button, then click on the perspective view.

This pulls up a Raydiocity Options box. Here we can set some render settings. Since this is just an overview, we aren't going to go heavily into any descriptions. Instead we will just choose a small size and click render.

Click on the Render Tab and set render size to 128 x 128, and the output to Animation.

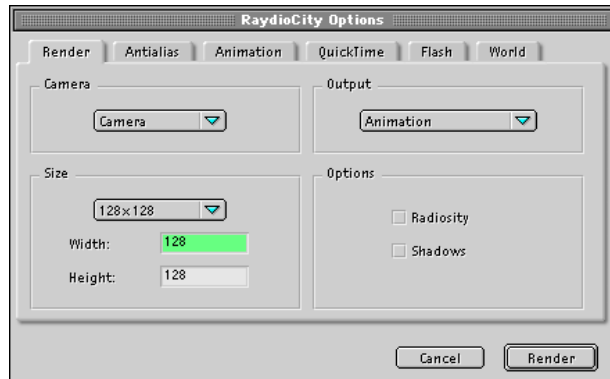


figure 1.52: RaydioCity Options Box

We are setting it to render at a small size and making sure it is rendering an animation, instead of a single frame.

- Click on the QuickTime tab and choose the settings for your movie. Typically for test renders, one that conserves space is best, like the Sorenson codec, and Normal quality.
- Finally, click on the Render button; and a Save File dialog box appears. Save it to your hard drive, and it then creates your movie.

Amorphium Pro will now begin rendering your animation frame by frame. When it is finished, the movie will open in a window and begin playing.

Cool! Your first animation. When you are finished looking at it, click on the close window button.

The Amorphium Pro Composer screen will reappear, ready for your further experimentation.

What Now?

If you've gone through this tour, you have a pretty good idea of some of things Amorphium Pro can do, but you've only gotten a flavor.

If you just want to experiment, go for it! You can use the subsequent chapters to help you out with specific questions.

We hope you'll enjoy using Amorphium Pro as much as we do! Please check the Amorphium Pro web site at www.amorphium.com to find the latest on Amorphium Pro and to download cool new scripts and objects.

Registration

Don't forget to register your copy of Amorphium Pro. You can do that easily by clicking on the Link menu and pulling down to register.

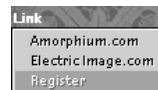


figure 1.53: Link Menu

If your computer is hooked to the internet, it will automatically connect you to the Amorphium website's registration page.

