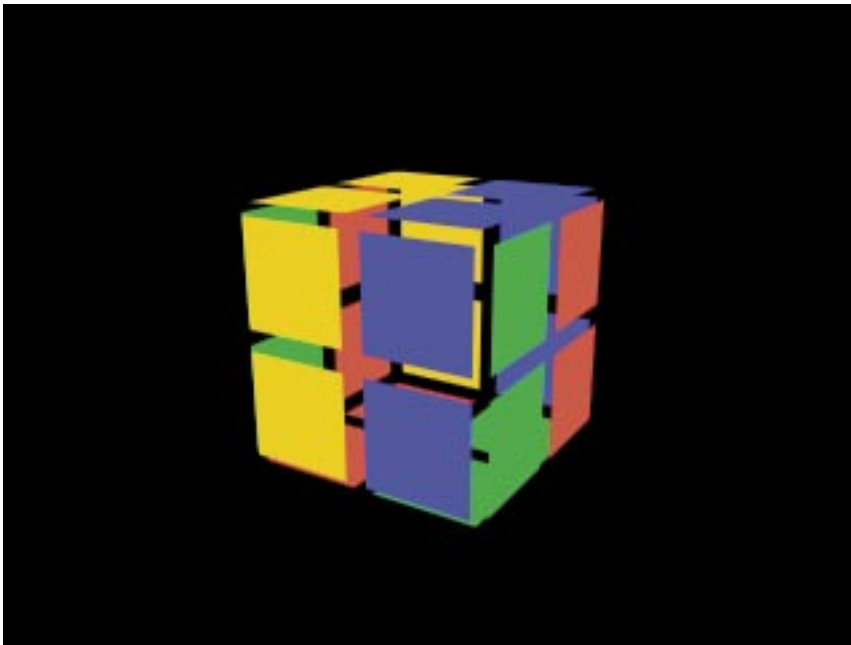


shape to shape

In this tutorial, we arrange and animate 3D layers to change from a cube to a sphere.



a tutorial for : [box & spheriod creators](#) : from 3d assistants



[arrange and animate your 3D layers.](#)

[from Digital Anarchy]

f/x tools for revolutionaries.



The 3D Assistants are a very powerful animation tool. They have the ability to set keyframes for your selected layers, making it easy to animate your layers from one arrangement to another.

In this tutorial we will start with layers arranged in a cube shape and animate them into a sphere shape. [figure 1]

01- starting up

Open the 'Shape to Shape' comp and preview the animation. This is what we're about to build.

Then make a new 320 x 240 comp with a duration of 2 seconds 10 frames. Create a new solid (command+ Y). Make its dimensions 50 x 50 and its color red. Name this layer 'red'.

Click the 3D check box for this layer to designate it as a 3D layer.



[figure 1]

02- creating layers

Duplicate this layer (command+ D) and change the solid (command+ shift+ Y) to blue. Rename this layer 'blue'.

Repeat step 5 two more times, making a green layer and a yellow layer. You should have 4 layers in all, each with a different color.

03- camera preset

Create a new camera (command+ option+ shift+ C), select the 35mm preset, and click OK.

04- camera position

Select the camera and type 'P' to bring up the camera's position properties. Input the following position values for the camera: 350, 0, -311.

This will give you a better view of the shapes you are about to create.



05- box creator

Now that your file is set up, and fully viewable with a custom camera, let's jump into the fun stuff: the 3D Assistant Box Creator.

In this next section, we'll set up a rubix cube shape as the first half of this shape-to-shape animation.

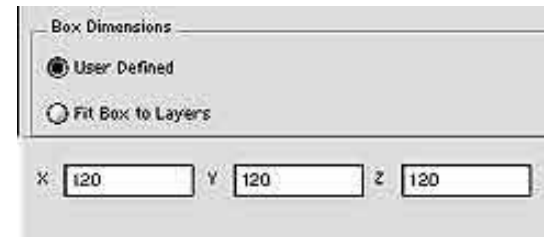


[figure 2]

06- starting values

Select All of your colored solid layers and go to Window>Box Creator. The Box Creator interface will appear.

Leave the 'Starting Value' set to 0,0,0. [figure 2]



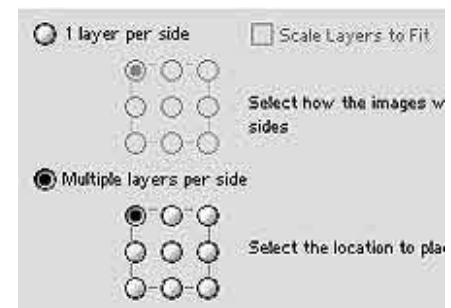
[figure 3]

07- box size

Select User Defined for the box size, and input 120 for the X, Y, and Z values. [figure 3] This will create a cube big enough to put 4 of the 50x50 layers on each side with a little space in between them.

08- cube sides

Select 'Multiple Layers Per Side' and click the upper left button in the 9-button grid below. [figure 4] This will place the first layer in the upper left corner of the first side of the cube.



[figure 4]

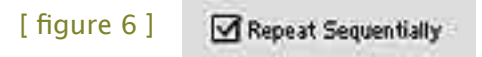
09- repeat layers

Select 'Repeat Layers' and set the number to 5. [figure 5] This will repeat your selected layers 5 times, giving you a total of 24. Convenient, as we need 4 on each side of our cube.



[figure 5]

Select the 'Repeat Sequentially' box. [figure 6] This will repeat your layers in the same order as in the Time Layout window.



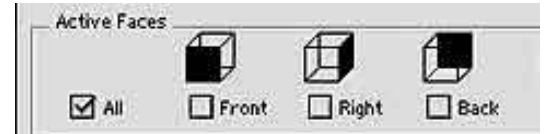
[figure 6]



10- faces

Set 'Active Faces' to All. [figure 7]

'Orientation' should be set to Outward. [figure 8]



[figure 7]

11- add keyframes

Select 'Use Comp Center' to center the cube in the comp. [figure 9]

In the 'Insert Keys' section, select Position and Orientation. [figure 10] This will automatically add keyframes for those properties to your layers.

Once you've input all these values, click Apply.



[figure 8]

[figure 9]



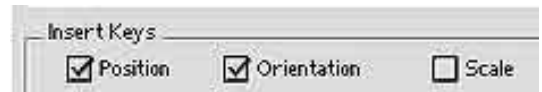
12- turning off repeat layers

You should be looking at something that resembles a mini Rubik's Cube, [figure 11] and your time layout window should now contain 24 colored layers. If not, go back and double-check your settings.

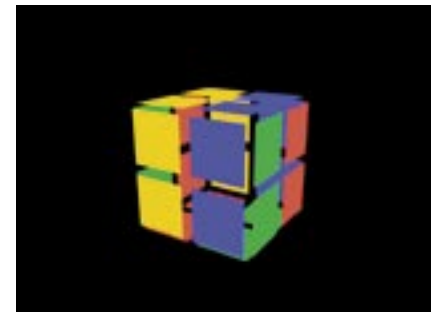
The 3D Assistant remembers your last settings, so with all of your layers still selected you can change a value and click Apply again.

However, be careful to turn off 'Repeat Layers' if you're doing a correction like this. [figure 12]

Otherwise you will be repeating 24 layers instead of 4, which will give you way more layers than you will need. It can also crash your machine if the number gets high enough.



[figure 10]



[figure 11]



[figure 12]

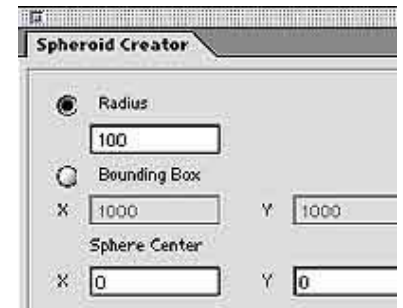


13- rubik's cube

Now that you've made your cube shape, move the time marker to 2 seconds. Select all of the colored solid layers again.

Woo hoo! One box down, one sphere to go. Then some tips and tricks for good measure. We're now ready to open the Spheroid Creator.

At this point in our tutorial, you should have a Rubix Cube (complete with bright colors) at one keyframe, your time marker already moved two seconds ahead, and the Spheriod Creator opened up.



[figure 13]

14- spheroid creator

If you haven't already, go to Window > Spheroid Creator. The Spheroid Creator Interface will appear.

Set the 'Radius' to 100. [figure 13] This will determine the size of the sphere you are about to create.



[figure 14]

15- spheroid properties

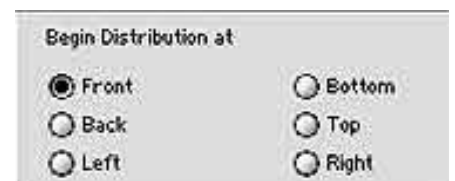
Select the 'Distribute Evenly' check box. [figure 14] This will evenly space your layers around the sphere.

'Orientation' should be set to Outward. [figure 15]



[figure 15]

'Begin Distribution At' can be set to any of the available options. [figure 16]



[figure 16]



16- ahh, the sphere

'Active Surface' should be set to Whole Sphere. [figure 17]

Select 'Use Comp Center' to keep the sphere centered in the comp. [figure 18] Since you've already set position and orientation keyframes for all your layers, Spheroid Creator doesn't need to do it again.

Now your cube has morphed into a sphere. Preview the animation to behold the magic...

Well, it's cool, but a bit dull. To spice this up a bit, we will combine our 3D Assistants with AE's Null Objects. This is a very powerful way to create complex group-based 3D animation in After Effects.



[figure 17]



[figure 18]

17- easy ease

Select all of the colored solid layers. With this many, it's easiest to Select All (command+ A) and then deselect the camera (command+ click on camera).

Type 'U' to bring up all of their keyframes. Select all of the keyframes by drawing a big box around them with the cursor. FYI, you can drag the box past the bottom of the time layout window and it will automatically scroll down to select all of your layers.

With all of the keyframes selected, go to Animation > Keyframe Assistant > Easy Ease. This will give the motion a less rigid look. [figure 19]



[figure 19]

18- null object

Go to Layer > New Null Object. Click the 3D check box to make the Null Object a 3D layer.



19- parent column

Select all of the colored solid layers. In the Parent column, change one their parents from None to the null object you just created.

Because all of the layers are selected, all of the layers' parent settings will change together.

20- rotation properties

Now your null object is controlling all of the solid layers. Go to the beginning of the animation, select the null object and type 'R' to bring up its rotation properties.

Set a keyframe for Y rotation.

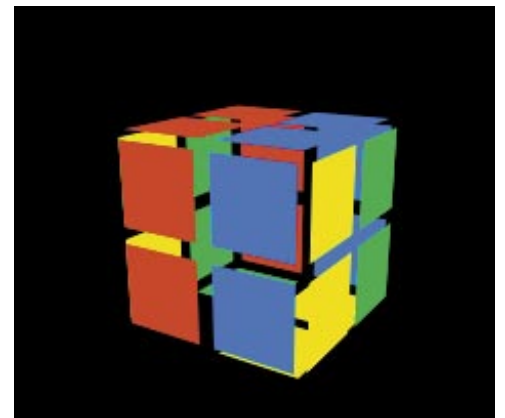
21- easy ease solid layers

Set the time marker to 2 seconds and set the null object's rotation to $3x + 0.0$ (3 revolutions).

Select these rotation keyframes by clicking 'Y Rotation' and go to Animation > Keyframe Assistant > Easy Ease. This will match the Easy on your solid layers.

Preview the animation. Much better, eh? Combining the 3D Assistants with Null Objects is a very powerful way to create complex group based 3D animation in After Effects.

[figure 20]



[figure 20]