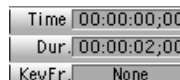


## Creating 3D Text with a Bump Map

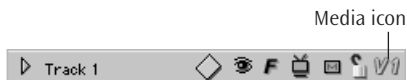
Both Graffiti and Red allow you to apply reflection maps, bump maps and texture maps to 3D objects. In this exercise, you will animate text using the onscreen OpenGL interactors. Three sets of onscreen interactors allow you to position, scale and rotate tracks. After you animate the text, you will apply a bump map. You can complete this exercise in Boris Red 3GL or Boris Graffiti 3.0.

1. Launch the Red Engine or the Graffiti KeyFramer.
2. Create a new composition or setting:
  - If you are using Boris Red, choose File > New Project.
  - If you are using Boris Graffiti, choose File > New Settings.
3. Set the duration of the effect to two seconds by typing **200** into the **Duration field** in the Timeline window and pressing Return (Macintosh) or Enter (Windows).



You can only use the Duration field when you work in the KeyFramer or Red Engine. When you use Boris in a host application, you set the duration in the host application so typing in this field has no affect. To complete this tutorial using the plug-in, apply Boris Red or Graffiti to a two-second clip in your timeline then follow the tutorial beginning at Step Five.

4. Press the **Media icon** on the bottom track and choose *Movie File*. Import the movie file "Water.mov."



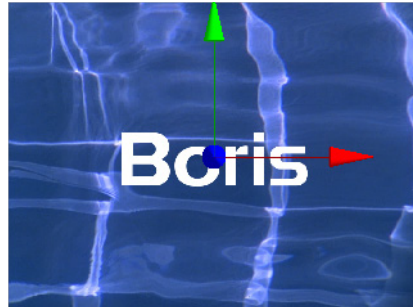
If you didn't download the Water.mov file, simply press the **Media icon** on the bottom track and choose *Color* to create the text over a colored background.

5. Double-click the top track (Graffiti) or press the **Media icon** on the top track and choose *Text* for the source media (Red). The Text window appears.
6. Click in the Text window and type "Boris."  
The illustrations use the word "Boris" with 132 point Denmark font but you can create whatever you want.
7. Select the text that you typed. Make sure that you have not added a shadow or a border to the text.
8. Click **Update** and close the Text window. The track is automatically renamed "Boris."  
You don't need to format the text, since you will convert it to a 3D Extrusion. But first you will animate your logo. Setting up the animation using Text media applied to a 3D Plane shape accelerates your previews.
9. Press the **Quality button** in the Composite window and choose *Draft*. This will allow you to work more quickly.



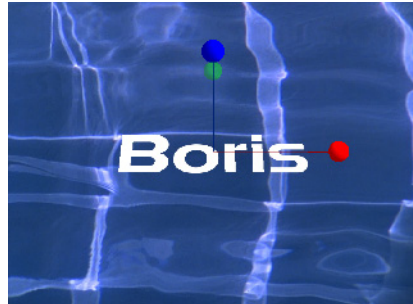
10. You should see red, green and blue OpenGL interactors in your Composite window. If you don't, press the **G** key or choose **Preview > OpenGL Interactors > Show Interactors**.

In the onscreen interactor controls, red represents the X-axis, green represents the Y-axis and blue represents the Z-axis. When you click an interactor's axis, movement, scaling and rotation are constrained to that axis. Clicking the image but not an interactor allows freeform positioning, scaling and rotation.



11. Press the **E** key or choose **Preview > OpenGL Interactors > Rotate Interactor**. The interactors should display spheres at their ends to indicate that you are in Rotate mode.
12. With the first keyframe in the text track selected, drag the red interactor in the Composite window until the **Tumble X** value is approximately **-45 degrees**.

The Tumble X, Spin Y and Rotate Z values update in the Controls window as you drag.



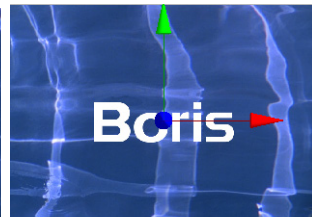
13. Press the **W** key or choose **Preview > OpenGL Interactors > Translation Interactor**. The interactors should display arrows at their ends to indicate that you are in Translation mode.
14. With the first keyframe in the text track still selected, drag the green interactor up in the Composite window until the text is not longer visible onscreen. The Position values update in the Controls window as you drag.
15. Click the **Play button** to preview the effect.



Time 00:00:00:20



Time 00:00:01:10



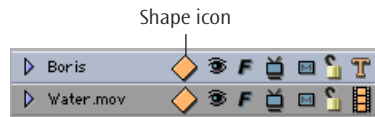
Time 00:00:02:00


## Extruding the Text

Now that the motion is finished, you will extrude the text.

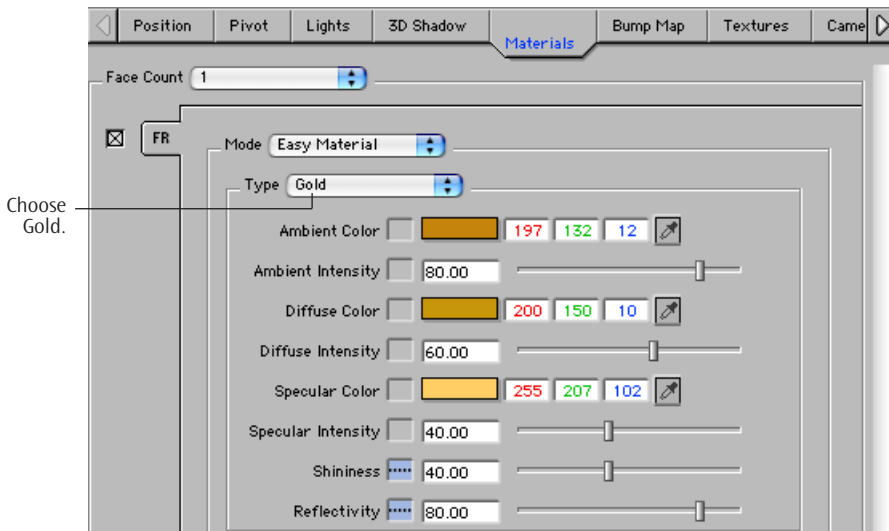
1. Press the Boris track's **Shape icon** and choose **3D Extrusion** from the menu.


By default, a plastic material is assigned to all four sides of the text.

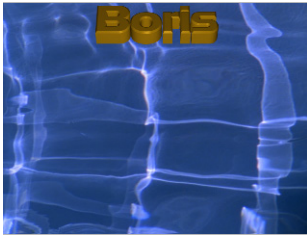


2. Select the first keyframe in the Boris track but move the CTI into the effect so that you can see the text.
3. Click the **Animate button** in the bottom of the Controls window. This button toggles between Constant and the default interpolation. Constant interpolation makes parameters static and does not create keyframes. The top button shows the Animate button in the Default interpolation; the lower button shows the Animate button in Constant interpolation. You want Constant interpolation. 
4. Click the Extrusion tab in the Controls window. Set **Extrusion** to **6** with **Constant** interpolation.
5. Click the Materials tab in the Controls window. Set the **Face Count** menu to **1** and choose **Gold** from the **Type** menu.

Setting the Face Count to 1 applies the same material to all faces of the text. When you choose Gold, the Gold material parameters appear in the tab.



6. In the Materials tab, set **Reflectivity** to **80** with **Constant** interpolation and set **Shininess** to **40** with **Constant** interpolation.
7. Play the sequence by clicking the **Play button** in the Composite window or by pressing the **Space bar**. 



Time 00:00:00:20





Time 00:00:01:10



Time 00:00:02:00

## Creating a Bump Map

Now you will add a bump map to your text. You can create the bump map from a procedural texture or you can use a media file. You will use a procedural texture.

1. Press the **Quality** button in the Composite window and choose *High*. This will allow you to view the bump map. 
2. Select the first keyframe in the Boris track but move the CTI into the effect so that you can see the text. Click the Bump Map tab in the Controls window.
3. Select the checkbox for the *Front Face*.
4. Make sure that the **Source** menu is set to *Procedural*. This is the default setting.
5. Choose *Reptilian* from the **Type** menu. Reptilian creates a texture resembling a scaly or spotted animal skin.
6. In this instance, the animal skin makes the text difficult to read. So deselect the **Color On** checkbox. When this checkbox is deselected, the color values of the underlying material also set the color values of the applied bump map; the bump map only sets the luminance values. 
7. Move the CTI to the beginning of the timeline and choose Preview > Preview to RAM. Now the text uses the Reptilian bump map with the gold material.



Time 00:00:00:20



Time 00:00:01:10



Time 00:00:01:25

## Saving Effects to the Library Browser

If you like this effect, you may want to save it to the Library Browser. In addition to the hundreds of supplied preset effects, you can save your own effects to the Library Browser to reuse.

1. Choose File > Save Settings Copy To Library (Graffiti) or File > Save Project Copy To Library (Red).

A dialog box automatically navigates to the directory of the last Library Browser category you visited. Alternately, you can save the effect in the folder of your choice. You can also create a new folder by clicking the **New Folder button** in the dialog box.

2. If you want to create an animated thumbnail preview of the effect, select the **Save Preview checkbox**.
3. Name your effect and click **OK**. Windows users must add the appropriate suffix to their settings. Boris Red uses the suffix *.red*, Boris FX uses the suffix *.bfx*, and Boris Graffiti uses *.grf*. Macintosh users don't have to add the suffix, but adding the suffix ensures that your settings work cross-platform.