

Multimedia Animation



In this lesson, you'll import Photoshop files as compositions and enhance your project using a number of advanced visual effects.

In this lesson, you will create a music-video-style animation for a multimedia CD-ROM. This project focuses on using Adobe Photoshop documents with layers, and animating those layers in After Effects. The project's source files include type treatments, graphic elements, and background textures.

To complete this lesson, knowledge of and experience with Adobe Photoshop layers, layer masks, and clipping groups are extremely helpful. If you have Adobe Photoshop, you will want to have it available to open the source files.

This lesson covers the following topics:

- Importing Adobe Photoshop files as compositions and as still images
- Animating imported Adobe Photoshop adjustment layers
- Using transfer modes with imported Adobe Photoshop layers
- Using the Brightness/Contrast effect
- Using the Production Bundle Scatter and Glow effects
- Preparing a QuickTime movie for a CD-ROM

At the end of this lesson, you will have a 20-second animation with audio.

It should take approximately 2 to 3 hours to complete this project.

Viewing the final project

Before you begin, take a look at the finished movie that you'll create in this lesson.

- 1 Double-click 04Final.mov in the 04Lesson folder to open the final QuickTime movie, and click the Play button.



The movie consists of four different segments: I Dig, Smiley Face, You Dig?, and Dig It! After creating three of the four segments, and modifying another, you will create a fifth segment that combines the movies from all of your projects and add audio.

- 2 Exit from the MoviePlayer application.

Creating the You Dig? movie segment

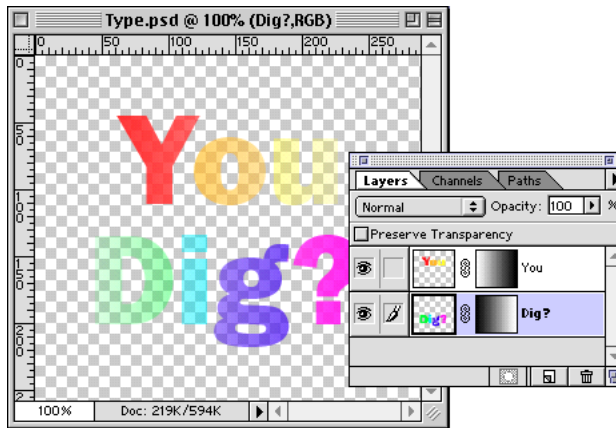
Instead of creating the segments of the final project in the order they appear, you'll start with the third segment, *You Dig?*, because it's the easiest.

Examining the Adobe Photoshop source documents

The first step in creating the animated segments is assembling the source files in Adobe Photoshop. The third element of the sequence is the phrase *You Dig?*, which will dissolve on to the background one letter at a time. It will have a watery-looking animated background. You will find that having a text element revealed one letter at a time is quite easy when you do the proper preparation in your Adobe Photoshop source document. The source files for this project are Type.psd and Bakgrd.psd, located in the YouDig folder.

1 If you have access to Adobe Photoshop, open and examine the following files:

- Type.psd has two layers, one each for the words *You* and *Dig*. These type layers were rendered in Photoshop, in order to place a different color into each letter and to animate each word independently. Both layers have a layer mask, consisting of a horizontal black-to-white gradient; the *You* mask goes from white on the left to black on the right, and the *Dig* layer mask is black on the left and white on the right. These layer masks will serve as the basis for a gradient-style wipe, moving in a different direction for each layer.



- Bakgrd.psd has three layers. Layer 1 was created by filling an empty layer with white, applying a monochromatic Add Noise filter with a setting of 100, and then using the Gaussian Blur filter with a setting of 3.
- A Hue/Saturation adjustment layer was added, with a Hue value of -30; this adjustment layer will be animated in After Effects.
- Layer 2 was also created by duplicating the bottom layer and applying the Find Edges filter to it. After desaturating the layer and increasing its contrast with Levels, we rotated it 180° and set it to the Soft Light blending mode. (After Effects 4.0 directly supports all of Photoshop's blending modes).

2 If you opened Adobe Photoshop, exit from the application.

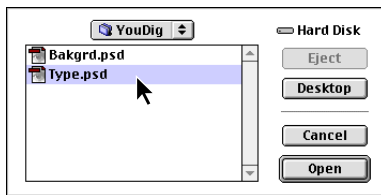
Getting started

- 1 To ensure that the tools and palettes function exactly as described in this lesson, delete or deactivate (by renaming) the After Effects preferences file. See “Restoring default preferences” on page 6.
- 2 Start the After Effects application. An untitled Project window appears.
- 3 Choose File > Save As, name the file **04Work.aep**, and save it in the Projects folder.
- 4 To set up the project composition, choose Composition > New Composition. Name it **YouDig Comp**, set the Frame Rate to **15** frames per second, and set the Duration to **02:16** (2 seconds, 16 frames). Leave the Frame Size set to the default of **320 x 240** pixels. Click OK.

Importing the source documents into After Effects

You can import Adobe Photoshop files complete with image layers, adjustment layers, layer masks, and layer effects into your After Effects projects. This makes it possible to prearrange the composition in Adobe Photoshop; the files in this example have been set up with this in mind. In this section, you will import two Adobe Photoshop files as compositions, and then animate the layers.

- 1 Since you will use the You Dig composition later in the lesson, close both the Time Layout and Composition windows.
- 2 Choose File > Import > Photoshop as Comp, select the Type.psd file in the YouDig folder, in the 04Lesson folder, and click Open.



- 3 In the Project window, click the triangle next to the Type folder to expand the outline.

Notice that importing an Adobe Photoshop document as a composition creates a number of files in your Project window, a composition (Type.psd), and a folder of the image layers (one for each word in the phrase *You Dig?*).



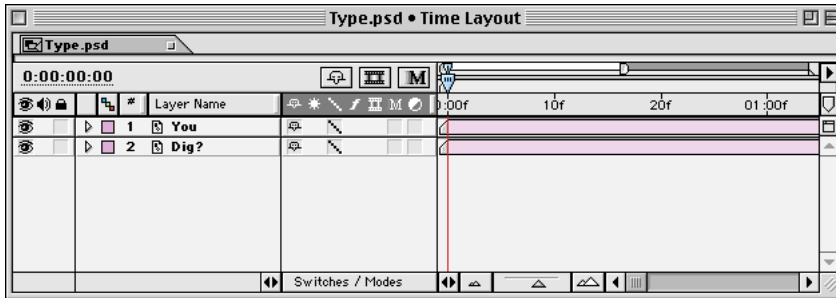
- 4 Choose File > Import > Photoshop as Comp, select the Bakgrd.psd file, and click Open.
- 5 Click the triangle next to the Bakgrd.psd folder in the Project window to expand the outline.

The Bakgrd.psd composition contains three layers: the Hue/Saturation adjustment layer, Layer 1, and Layer 2. The Adobe Photoshop file was created with bigger dimensions than the final composition, to allow for the image to be vertically animated.

Animating the Type

Having imported the necessary files, you can now begin the process of animating the elements and their layers. The basic process is to edit and animate each element as a composition, allowing you to access each independent layer in each document and then assemble them in the final composition.

1 Double-click the composition named Type.psd, opening its Composition and Time Layout windows. Examine the layers in the Time Layout window. There are two layers, one for each layer in the Adobe Photoshop source file.



Your first step is to create the animation of the type coming onto the screen, one word at a time. You will use a combination of zooming and rotating words, decreasing blurring, and interpolating layer masks to achieve this effect.

2 In the Time Layout window, make sure the blue current-time marker is set to 00:00:00. Then click the triangle to the left of the You layer to display the layer outline. Click the triangle next to Transform to display the transform properties.

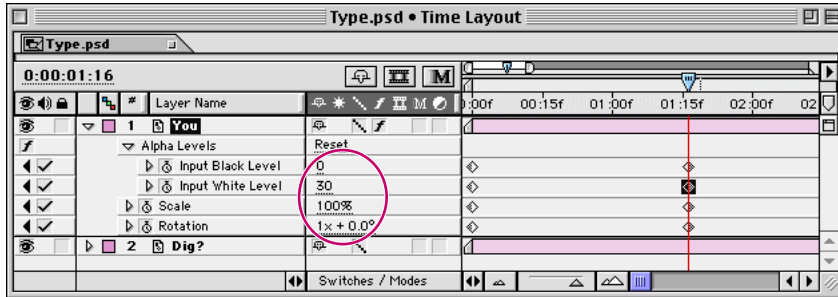
3 Set initial keyframes for Scale and Rotation by clicking their stopwatch icons. Click the underlined value next to Scale, type **0**, and click OK. This will enable the character to zoom to full view. Leave the Rotation keyframe at its default value of 0.0%.

***Note:** The next step requires the Production Bundle; however, you can achieve a similar effect in the standard version of After Effects by choosing Effect > Adjust > Levels. In the Levels effect, set the channel popup to Alpha, and then set keyframes for the values stated in the following step.*

4 Choose Effect > Channel > Alpha Levels. The Effect Controls window appears. In the Time Layout window, click the triangle to display the Effects properties and then display the Alpha Levels properties. Set two initial keyframes: one for the Input Black Level at a value of **225**, and another for the Input White Level at its default value of **255**. This will allow this layer's layer mask to change over time, revealing the layer like a wipe effect.

5 Move the current-time marker to 00:01:16, and then set Scale to **100** and Rotation to **1** revolution, **0** degrees.

6 For the Alpha Levels Effects, create two new keyframes at this same frame (00:01:16) by setting the Input Black Level to **0** and setting the Input White Level to **30**.



7 Preview your work so far by pressing the spacebar or by using RAM Preview.

8 Go to 00:00:00. In the Dig layer, display the Transform properties and set initial keyframes for both Scale and Rotation; don't worry about values for now.

Next, you'll make the Scale keyframes in the Dig layer match those you set earlier in the You layer.

9 In the You layer, click Scale to select all scale keyframes, and then copy them by choosing Edit > Copy. In the Dig layer, select the initial Scale keyframe and choose Edit > Paste to paste the keyframes you just copied.

10 Go to 00:01:16 and set the Dig layer's Rotation property to **-1** revolution, **0** degrees. This will cause the layer to rotate in the opposite direction of the You layer.

11 With the Dig layer still selected, choose Effect > Channel > Alpha Levels. Display the Effects properties and then the Alpha Levels properties.

Now you'll copy the Alpha Level keyframes that you set earlier in the You layer and paste them into the Dig layer.

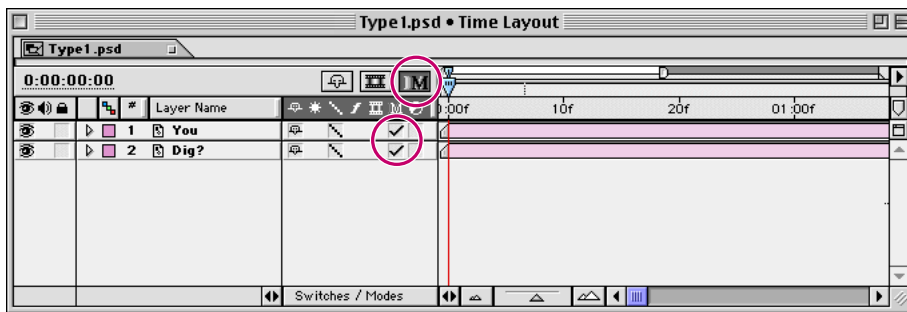
12 In the You layer, select all four keyframes for the Input Black Level and the Input White Level properties by drawing a selection marquee around them. Copy the selected keyframes.

13 Return to 00:00:00. Select the Dig layer and paste the keyframes you just copied. The You layer and the Dig layer now have identical keyframes for the Alpha Levels effect.

14 Expand all the tracks that possess keyframes; draw a marquee around all of them to select all of them. Choose Layer > Keyframe Assistant > Easy Ease. The Easy Ease function smooths out the rate of change through the keyframes, creating a smoother-looking animation.

15 Preview your motion keyframes. Return to frame 00:00:00 by pressing the Home key. Press the spacebar (or use RAM Preview) to preview the motion. When you're finished previewing, collapse the layer outlines.

16 To make the motion in this composition look smooth, select the Motion Blur option for both layers and select the Enable Motion Blur button at the top of the Switches/Modes panel. Now preview the composition again and notice the difference.



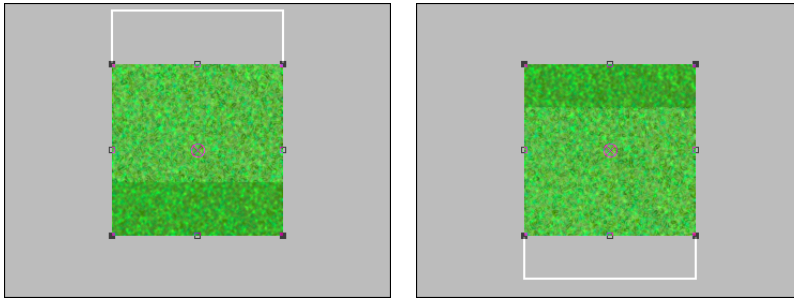
17 Close the Type.psd Composition window and the corresponding Time Layout window.

Animating the background

We also want the background to be animated, but more subtle than the foreground, and consistent with the look of the other backgrounds in the final sequence. You will simply make the two background layers crawl up the screen at different speeds and have the bottom layer do a slight color shift over time.

1 Double-click the Bakgrd.psd composition, opening its Composition and Time Layout windows.

- 2 In the Composition window, set the magnification to 25% so you can see the changes as you animate the background layers.
- 3 In the Time Layout window, display the Layer 1 outline, and display its Transform properties.
- 4 Make sure the current-time marker is at 00:00:00, set an initial Position keyframe, and leave X-axis set to **320** pixels and set Y-axis to **120** pixels.
- 5 Press the End key to go to the last frame in the composition, and leave X-axis set to **320** and set Y-axis to **480**. Collapse the Layer 1 layer outline.



Layer 1 at first frame and last frame

- 6 In the Time Layout window, display the Layer 2 Transform properties, and then press the Home key to move the current-time marker to 00:00:00.
- 7 Set an initial Position keyframe, and leave X-axis set to **320** and set Y-axis to **360**.
- 8 Press the End key to go to the last frame in the composition, leave X-axis set to **320** and set Y-axis to **240**.

This layer will move at a slower rate of speed than the first layer.

- 9 Select both Position keyframes from Layer 2 by clicking Position in the Time Layout window. Then choose Edit > Copy. Collapse the Layer 2 layer outline.
- 10 Return to frame 00:00:00 by pressing the Home key, and select the Hue/Saturation adjustment layer. Press the P key to display the Position property and then paste the keyframes you copied from Layer 2.

Animating the Adjustment Layer

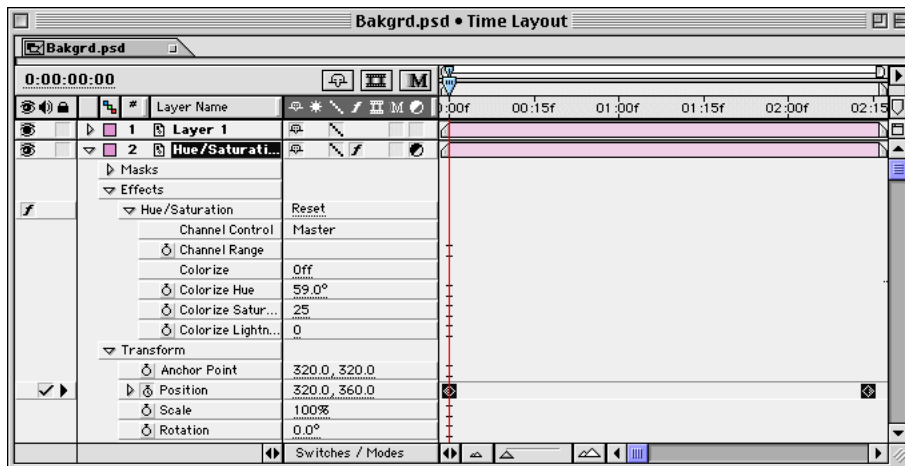
To create the color shift you see in the final movie, you will animate the Hue/Saturation adjustment layer that was imported from Photoshop. This effect lets you change the individual Hue, Lightness, and Saturation components of a selected layer.

Using adjustment layers from Adobe Photoshop

Adjustment layers in Adobe Photoshop versions 4.0 and later change the color and tonal qualities of an image without permanently modifying the original image. Photoshop adjustment layers affect the appearance of all layers below them. When you import an Adobe Photoshop file containing one or more adjustment layers, After Effects directly converts the Photoshop adjustment layers to After Effects adjustment layers, modifying all layers below them in the Time Layout window. You can turn off the Adjustment Layer switch in After Effects to remove the effect and display the layer as a white solid. To remove the effect and the white solid, you can either delete the adjustment layer or turn off the Video switch for the layer.

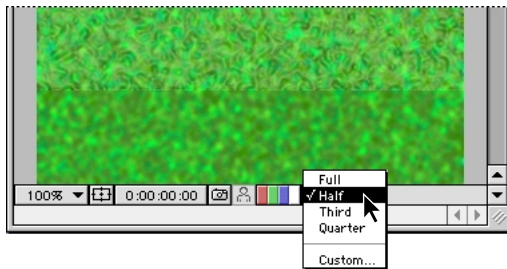
—From the Adobe After Effects User Guide, Chapter 3

- 1 With the Hue/Saturation adjustment layer selected, collapse the Position property. Display the Effects properties and display the Hue/Saturation properties.



- 2 At 00:00:00, create an initial keyframe for the Channel Range property. While the channel range itself won't be animated, this is where the master hue, saturation, and lightness control keyframes are controlled.

- 3 The Effect Controls window for the Hue/Saturation adjustment layer should be open. If it isn't, double-click the effect name in the Time Layout window. The Master Hue control is set at -30° , the same setting that was specified in the original Photoshop document.
- 4 Go to the last frame in the composition (00:02:16) by pressing the End key. Move the Master Hue wheel 60° clockwise, to a new value of 30° . You will notice that a new keyframe is automatically created in the Time Layout window.
- 5 Go to frame 00:00:00 by pressing the Home key.
- 6 In the Composition window, set magnification to 100%. Set the Composition window to half-resolution using the menu at the bottom right of the window; this will greatly improve preview speed. Preview this composition by pressing the spacebar. You should see motion and a smooth cycling of color from yellowish-green to an aqua blue.



In some areas along the top and bottom of this composition, the layers do not overlap. Since the final composition will be 320 pixels wide by 240 pixels high, these areas won't be visible. The current composition is much larger, 640 pixels by 640 pixels, to allow as much movement as possible without areas of visibly empty space.

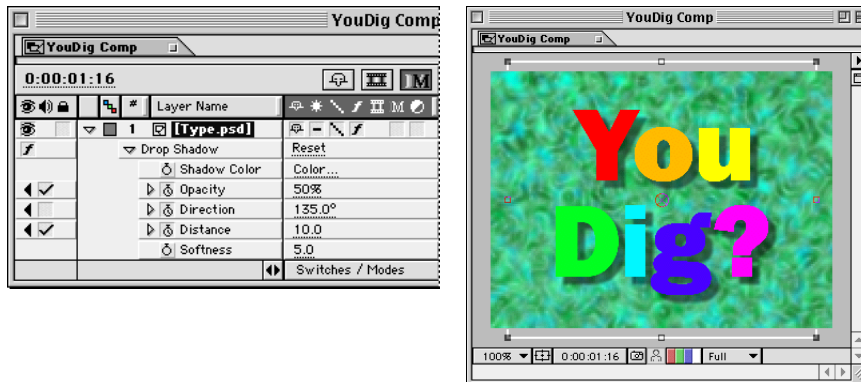
- 7 Close the Bakgrd.psd Composition window and Time Layout window, and the Effect Controls dialog box. Save the project.

Integrating all the elements

Now you'll place your two compositions in the YouDig composition that you created earlier. Then you'll add a drop shadow to the type layers to enhance the illusion of depth.

- 1 Double-click the YouDig composition in the Project window.
- 2 Drag the Bakgrd.psd composition from the Project window into the YouDig Time Layout window. The composition is automatically centered in the Composition window.

- 3 Drag the Type.psd composition from the Project window into the YouDig Time Layout window.
- 4 With the Type.psd layer selected, choose Effect > Perspective > Drop Shadow. Expand the Type.psd outline, display its Effects properties, and then display the Drop Shadow properties.
- 5 At 00:00:00 in the Time Layout window, set an initial Opacity keyframe at **100** percent, set an initial Direction keyframe at **135** degrees, set an initial Distance keyframe at **0** pixels. Set Softness to **5** without setting a keyframe. (Softness remains at this value throughout the composition, so a keyframe is not needed.)
- 6 Move the current-time marker to 00:01:16 and set Opacity to **50** percent, and set Distance to **10** pixels. Keyframes are automatically created for these properties.



You have just created a drop shadow that moves quickly from being very strong and harsh to lighter and softer. This gives the appearance that the words are moving away from the background as they increase in size.

- 7 Save the project.

Rendering the YouDig movie

At the end of this lesson, you will combine four individual movie files into one project, then render the complete sequence. With a complex project such as this, you can break it down into manageable chunks, render separate movies, and then combine the movies.

Here, you'll render the YouDig movie. If your time is limited, you can simply step through the process of rendering the movie without actually starting the rendering process. The movie has already been rendered for you. It's called YouDig.mov, and it is located in the YouDig folder in the 04Lesson folder.

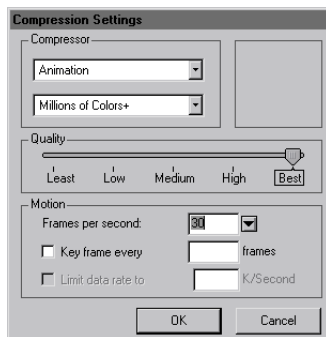
1 Make sure that either the YouDig Composition window or Time Layout window is active. Choose Composition > Make Movie, type **Movie1.mov** for the name, and save the file in your Projects folder.

Since the final sequence will be compressed after being integrated with the three other After Effects projects, you want to use little or no compression the first time you output a QuickTime movie.

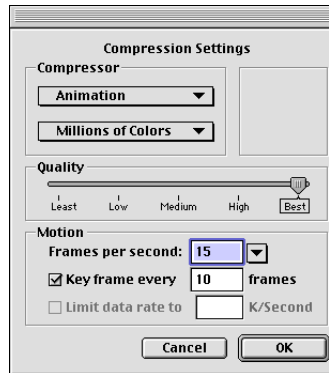
2 For Render Settings, choose Best Settings. (If time is limited, set the Quality to Draft instead.)

3 For Output Module, choose Custom. For Format, choose QuickTime Movie.

4 In Windows, the Compression Settings dialog box appears. Leave the compressor set to Animation and click OK. In Mac OS, leave the Video Output options at their defaults. Make sure Quality is set to Best and Frames Per Second is set to 15 fps. Leave other settings at their defaults, and then click OK.



Windows



Mac OS

Animation is a *lossless* compression scheme that does not cause degradation in image quality.

5 Select Import into Project When Done, and click OK.

6 Click the Render button.

- 7 When you are finished rendering the movie, close the Render Queue window. Open the footage file that appears in your Project window, and play it.
- 8 After viewing the movie, save and close the Work.aep project.

Creating the IDIG movie segment

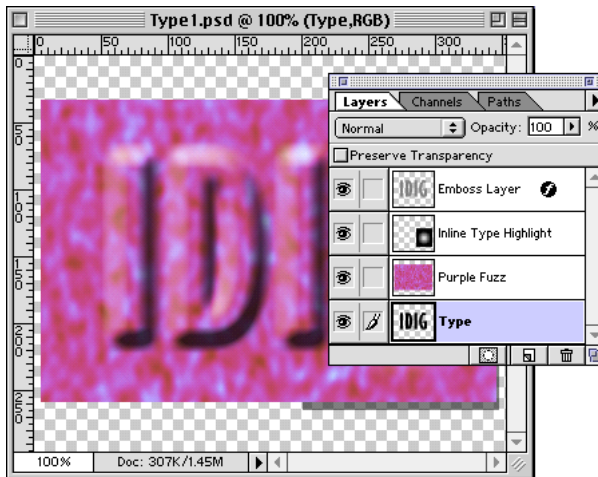
Now you will create the first segment of the sequence. This project will involve importing both Photoshop layer effects and image layers into After Effects and animating them.

Preparing the Adobe Photoshop source documents

The IDIG project is made up of two Adobe Photoshop files: Type1.psd, and Bakgrd.psd.

If you have access to Adobe Photoshop, open and examine these files:

Type1.psd has four layers.



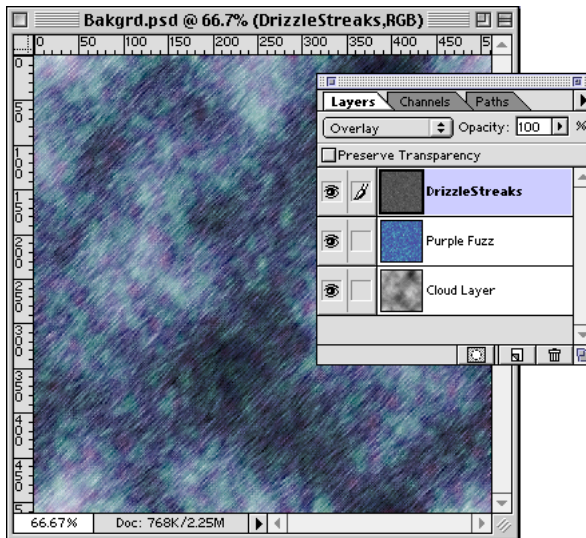
- Emboss Layer was created by loading the Type layer as a selection and filling the selection with 50% gray; this layer is set to the Overlay mode. We applied an Outer Bevel layer effect to it; the layer effect properties are mostly set to their default settings, but the shadow and highlight are both set to Normal mode (you'll see why in a little while). If applied to a 50% gray layer in Overlay mode, only the highlight and shadow are visible.
- Inline Type Highlight is a white-to-black radial gradient within a 196 x 213 pixel selection area. It is screened on top of everything to simulate a highlight from an overhead light source. Its Opacity is also set to 50%.

- Purple Fuzz contains the texture for the type. It is much larger than the type itself, to provide extra area in case it is rotated or scaled within After Effects.
- Type contains the text *IDIG*, filled with black.

This Photoshop file may look a little strange; this is because the layers are not grouped together. Rather than grouping them together in Photoshop, you'll be using After Effects' Preserve Underlying Transparency feature to clip the texture and embossing layers to the bottom *Type* layer.

The Inline Type Highlight layer will move diagonally up and left, and the properties of the Emboss layer's Outer Bevel will animate to simulate changing lighting. There is no background in this document, since we want to *composite*, or combine, it onto a background element.

Bakgrd.psd has three layers.



- DrizzleStreaks was created by filling the layer with black, applying the Noise > Add Noise filter with a setting of 150, and using the Blur > Motion Blur filter set to an angle of 45 with a distance of 10 pixels.
- Purple Fuzz is a duplicate of the Purple Fuzz layer from the Type1.psd file, which has been hue shifted by using the Image > Adjust > Curves command.
- Cloud Layer is a grayscale layer created by using the Filter > Render > Clouds filter.

This file will be used as the background image in After Effects, and will include a number of rotation, scaling, and filtering effects. The Type1.psd layer will be composited and animated on top of the Bakgrd.psd layer and then vaporized off the screen, through the use of filtering, color manipulation, and reduction of opacity over time.

Importing the source documents into After Effects

Now it's time to integrate these Adobe Photoshop files into After Effects.

- 1 In After Effects, choose File > New Project.
- 2 Choose File > Save As, name the file **IDIG.aep**, and save it in the Projects folder.

***Note:** If you want to view a completed version of this movie segment, play the IDIG.mov that is located in the IDIG folder in the 04Lesson folder.*

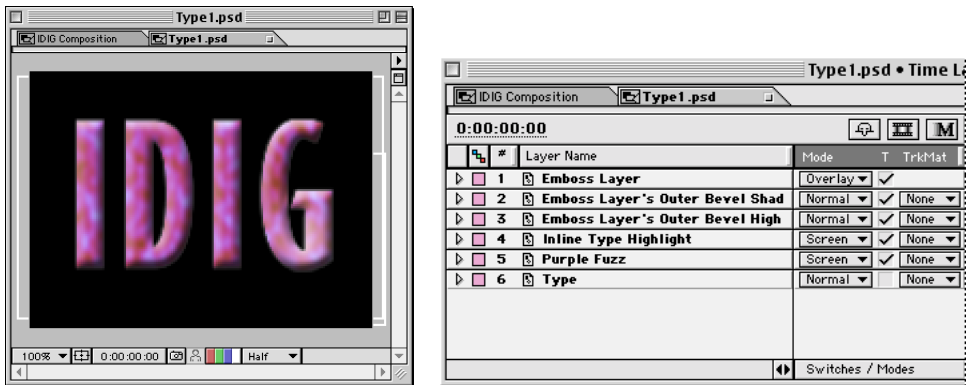
- 3 Choose Composition > New Composition. Type **IDIG Comp** for the name, set the Frame Size to **320 x 240**, the Frame Rate to **15 fps**, and the Duration to **03:00**. Click OK.
- 4 Choose File > Import > Photoshop as Comp, and select the Type1.psd file in the IDIG folder in the 04Lesson folder. Click OK.

Both a composition and a folder (which contains the individual source layers) appear in the Project window.


- 5 In the Project window, double-click the composition named Type1.psd to open it in the Time Layout window.

Notice that the layer effects for each layer appear as separate After Effects layers. In fact, the Outer Bevel has been expanded into two layers: one for the Shadow and one for the Highlight. Even their blending modes—Multiply and Screen, respectively—are set properly as they were in Photoshop. This will make it easy to animate each element separately.

- 6 Choose File > Import > Photoshop as Comp, and select the Bakgrd.psd file in the IDIG folder in the 04Lesson folder. Click OK.
- 7 Select the Bakgrd.psd composition in the Project window. Choose Composition > Composition Settings. Set the Frame Size to **320 x 240** pixels. Click OK.
- Changing the size will crop the image to the size of the frame without actually discarding image data. The original Photoshop file is oversized to accommodate motion. You'll change the size of the Type1.psd composition as well.
- 8 Click the IDIG Comp tab in the Time Layout window.
- 9 Drag the Bakgrd.psd composition from the Project window into the IDIG Time Layout window, which automatically centers it in the IDIG composition.
- 10 In the Project window, select the Type1.psd composition, choose Composition > Composition Settings, and set the Frame Size to **320 x 240**. Click OK.
- 11 Click the Type1.psd tab in the Time Layout window.
- 12 In the Time Layout window, drag the right edge of the Layer Name heading to the right until you can see the full name of each layer.
- 13 Click the Switches/Modes button in the Time Layout window to display the Transfer Modes panel. Select the Preserve Transparency option (in the column marked "T") for every layer *except* the bottom one (named Type). This sets up the bottom layer as a mask for all the layers above it.



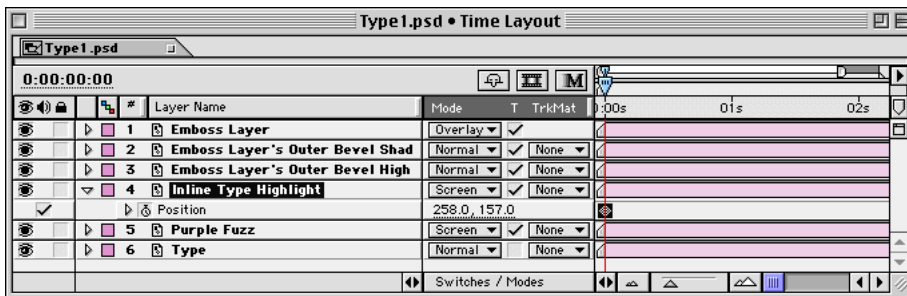
As in the YouDig composition, you will first edit and animate layers within each composition, and then assemble the compositions themselves.

 *If you have enough memory to have Adobe Photoshop and After Effects open at the same time, you can select any Adobe Photoshop layer in the Project window, and then press **Ctrl+E** (Windows) or **Command+E** (Mac OS) to open Adobe Photoshop.*

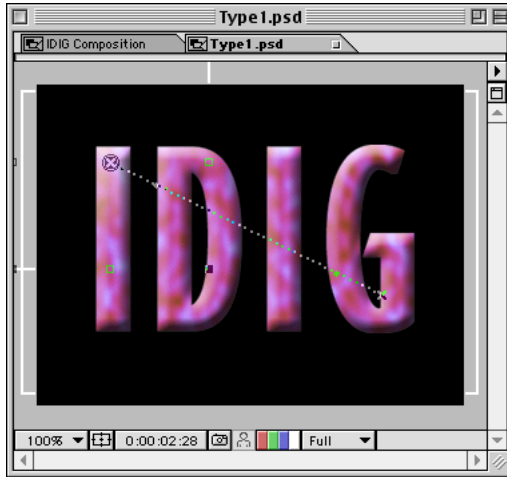
Animating the highlight

The first layer you will animate is the Inline Type Highlight layer. It will move diagonally up and to the left, to simulate a light source moving over the type.

- 1 Make sure the current-time marker in the Time Layout window is set to the beginning of the Type1.psd composition (00:00:00).
- 2 Select the Inline Type Highlight layer, and press the P key to display the Position property. As seen in the Composition window, the layer is positioned near the lower right corner of the type.
- 3 Set an initial Position keyframe. Do not move the layer at this time; this is the beginning point of its move.



4 Move the current-time marker to the end of the composition. In the Composition window, move the Inline Type Highlight layer to the upper left corner of the composition, so that it illuminates the upper left corner of the first letter “I.”



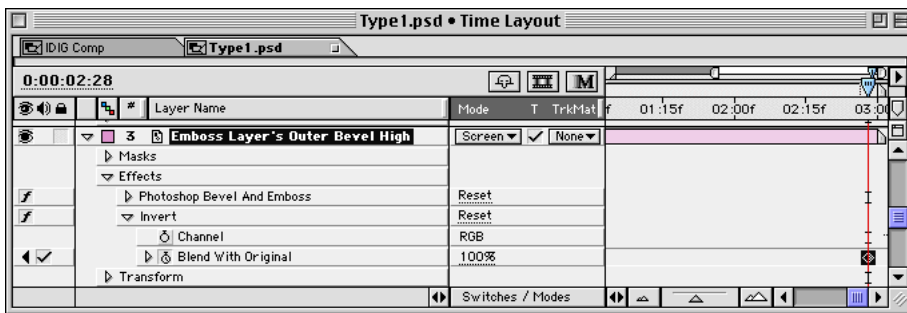
Animating the shadow

Next, you will animate the layers that make up the Outer Bevel effect applied in Photoshop. With the layer outline expanded in the Time Layout window, you can see that this layer effect has been broken into three different layers, in order to recreate this fairly complex layer effect:

- The Emboss Layer, in Overlay mode, is the original image layer to which the layer effect was applied.
- The Emboss Layer's Outer Bevel Shadow layer provides the outer soft shadow, in Normal mode.
- The Emboss Layer's Outer Bevel Highlight layer provides the outer soft highlight, in Normal mode.

These last two layers will be inverted as the highlight moves across the image. Thus, the highlight and shadow will seem to exchange places to simulate interactive lighting. The layer effect's shadow and highlight were both set to Normal mode to ensure that they would appear properly even when inverted.

- 1 Return the current-time marker to the beginning of the composition and select the Emboss Layer's Outer Bevel Shadow layer. Shift-click the Emboss Layer's Outer Bevel Highlight layer to select it as well.
- 2 Choose Effect > Channel > Invert.
- 3 In the Time Layout window, display the Effects properties for the Outer Bevel Shadow layer and display the Invert effect's properties.
- 4 Create an initial keyframe for Blend With Original at frame 00:00:00, keeping the default value of 0.
- 5 Go to the last frame in the composition. Change the Blend With Original value to **100 %**.
- 6 Shift-click the two keyframes you just created to select them, and then choose Edit > Copy.
- 7 Move to the beginning of the composition (00:00:00), select the Outer Bevel Highlight layer, and paste the keyframes you just copied.



Now each embossing layer will interpolate in brightness; the shadow will become the highlight, and vice-versa.

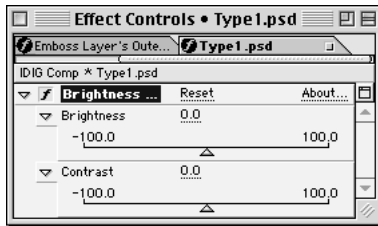
- 8 Preview the composition.
- 9 Close the Effect Controls window, and then close the Type1.psd composition's Time Layout and Composition windows by clicking the button in the Type1.psd tab. Save the project.

Animating the Type Transition

The type will vaporize, blowing off the screen as if it were dissolving at the same time. Since the whole Type1.psd layer will be affected by this visual effect, you are going to edit the Type1.psd composition. You don't need to address each layer separately as you did with the Type1.psd composition in the previous steps.

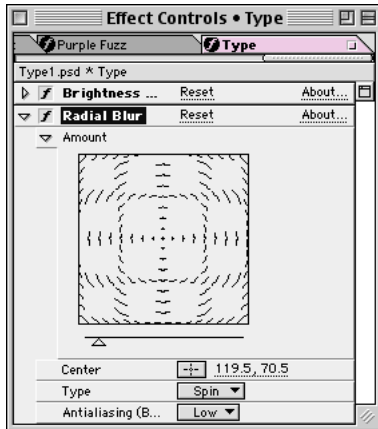
First you will alter the type's Opacity so it fades off the screen. Then you will make the type turn white to improve visibility of the effect. Finally, you will apply a Radial Blur effect to make the type streak and blur as it fades.

- 1 Drag the Type1.psd composition from the Project window into the IDIG Composition's Time Layout window in order to automatically center it in the composition.
- 2 Display the Type1.psd layer's Transform properties.
- 3 Move the current time to 00:02:10 and create an initial keyframe for Opacity; this is where the vaporize effect will start. Make sure the Opacity value is set to **100%**.
- 4 Move the current-time marker to 00:02:28 and set the Opacity value to **0**.
- 5 Set the current time to 00:02:10, and then choose Effect > Adjust > Brightness & Contrast.



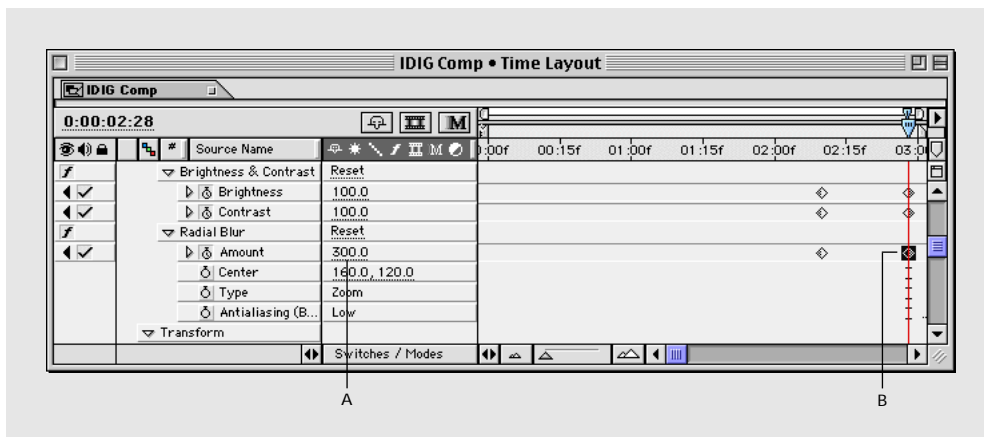
- 6 In the Time Layout window, display the Effect properties and display the properties for the Brightness & Contrast effect. With the current time still at 00:02:10, set two initial keyframes, one for Brightness and one for Contrast, at their default values of 0.
- 7 Set the current time to 00:02:28, and set both Brightness and Contrast to **100**.

8 Choose Effect > Blur & Sharpen > Radial Blur. In the Effect Controls window, choose Zoom from the Type pop-up menu. All other settings remain at their defaults. Make sure to keep the anti-aliasing option set to low; we actually want a grainy effect here. Close the Effect Controls window.



9 In the Time Layout window, go to 00:02:10, display the Radial Blur properties, and then set an initial Amount keyframe. Set the Amount value to 0.

10 Move the current time to 00:02:28, and then set the Amount value to 300.



A. Blur value B. Keyframe

- 11 Go to 01:20, set the Resolution to Quarter in the Composition window, and preview your composition.
- 12 Set the resolution back to Full and save the project.

Animating the background

To make the background of the project more dynamic, you'll animate each of its layers to create a shifting, moving backdrop for the type.

- 1 Double-click the Bakgrd.psd composition in the Project window, opening its Composition and Time Layout windows.

The top layer, DrizzleStreaks, will be animated in a diagonal move down and to the left, at the same angle as the layer's motion-blurred noise, to generate a falling-rain effect.

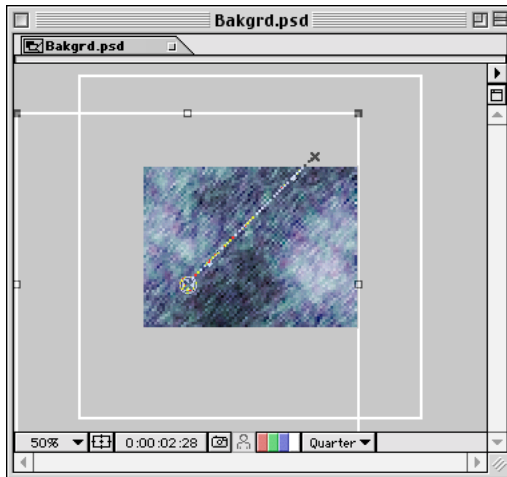
- 2 In the Time Layout window, make sure the current-time marker is set to the beginning of the composition, at 00:00:00.



In a Composition window, press the = (equal symbol) key to zoom in, and press the , (comma) key to zoom out.

- 3 In the Composition window, set the magnification to 50% (press the comma key once).
- 4 Select the DrizzleStreaks layer in the Time Layout window and press the P key to display its Position property.
- 5 Set an initial Position keyframe, and set the Position coordinates to **256** for X-axis and **-16** for Y-axis.

- 6 Go to the end of the composition and change the Position values to **65** for X-axis and **175** for Y-axis.



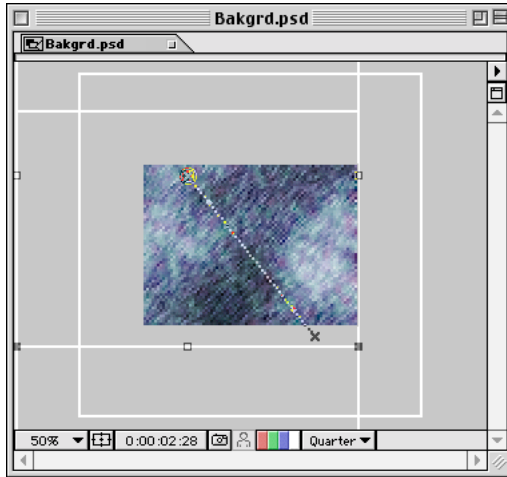
- 7 Collapse the layer outline.

Animating the next layer

The next layer, Purple Fuzz, is going to move in the opposite direction from DrizzleStreaks and will shift its hue over time.

- 1 In the Time Layout window, return the time marker to the first frame of the composition, select the Purple Fuzz layer and press the P key to display the Position property.
- 2 Set an initial Position keyframe and set the value to **256** for X-axis and **256** for Y-axis.

- 3 Go to the end of the composition, and then set the Position value to **65** for X-axis and **-15** for Y-axis.



- 4 Return the current-time marker to the beginning of the composition.
- 5 Choose Effect > Image Control > Color Balance (HLS).
- 6 With the Purple Fuzz layer still selected, press the P key to collapse the Position property, and then press the E key to display the Effects properties and click the triangle next to Color Balance (HLS) to display its properties.
- 7 Set an initial Hue keyframe at the default value of 0.
- 8 Go to the end of the composition, click the underlined Hue value, and change the Hue to **1** revolution, or **360** degrees.

The Purple Fuzz layer will now fully shift through the color spectrum once over the course of the composition.

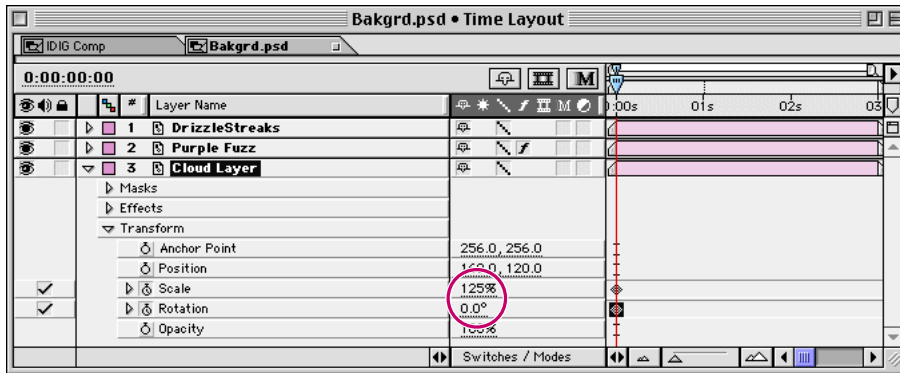
- 9 Preview the composition. When finished previewing, collapse the layer outline.

Animating the Cloud Layer

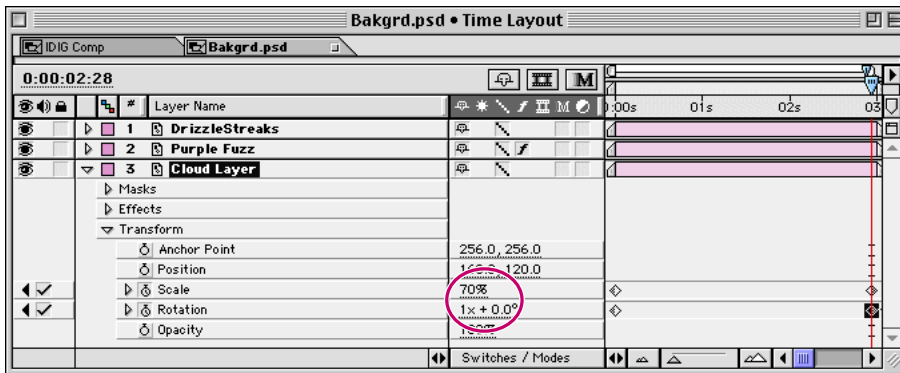
The final layer, Cloud Layer, will rotate and seem to recede in space.

- 1 Return the time marker to the beginning of the composition, and select Cloud Layer in the Time Layout window. Press the S key to display the Scale property and press Shift+R to display the Rotation property.

- 2 Set an initial Scale keyframe, and set a Scale value of **125**.
- 3 Set an initial Rotation keyframe, making sure that the Rotation value is set to **0**.



- 4 Go to the end of the composition, and change the Scale value to **70**%.
- 5 At the last frame in the composition, set the Rotation value to **1** full revolution, or **360** degrees.



- 6 To play the composition, set the Resolution to Quarter, go to the beginning of the composition, and press the spacebar.
- 7 After playing the composition, set the Resolution back to Full and the Magnification back to 100%.
- 8 Save the project, and close the Bakgrd.psd Composition and Time Layout windows by clicking the button in each Bakgrd.psd tab.

9 Since the two compositions have been nested within the IDIG Composition, preview the entire IDIG Composition to see how the two work together. Do not close the IDIG windows when you are done, because you'll need them open to render the movie.

Rendering the IDIG movie

Here, you'll render the IDIG movie. If your time is limited, you can skip the process of rendering the movie, because the movie has already been rendered for you. It's called IDIG.mov, and it is located in the IDig folder in the 04Lesson folder.

1 With either the IDIG Composition window or the Time Layout window active, choose Composition > Make Movie, type **Movie2.mov** for the name, and save the file in your Projects folder.

2 For Render Settings, choose Best Settings. (If time is limited, set the Quality to Draft instead.)

3 For Output Module, choose Custom. For Format, choose QuickTime Movie.

4 In Windows, the Compression Settings dialog box appears. Leave Compressor set to Animation and click OK. In Mac OS, leave the Video Output options at their defaults.

5 Select Import into Project When Done, and click OK.

If your time is limited, you may want to render a draft movie instead.

6 Click Render.

7 When you are finished rendering the movie, close the Render Queue window, and then open the footage file that appears in your Project window, and play it.

8 After viewing the movie, save and close the project.

Creating the Dig It! movie segment

The fourth element of the IDIG sequence is an animation of the phrase *Dig It!* The text zooms forward from a distance while the background has a swirling effect. This element features heavy layering of filters to generate the final effect.

Since this segment was created by using many features that you have already tried, you will start with a partially completed project. You'll use some Transition Controls and the Spherize effect to put the finishing touches on the piece. You will also get a chance to use the Scatter and Glow effects, which are available only in the Production Bundle version of After Effects. Both the Scatter and Glow plug-ins have been included on the Classroom in a Book CD-ROM. To use the effects, make sure that you installed both plug-ins. See "Installing Production Bundle plug-ins" on page 4.

Dig It!—The Adobe Photoshop Source documents

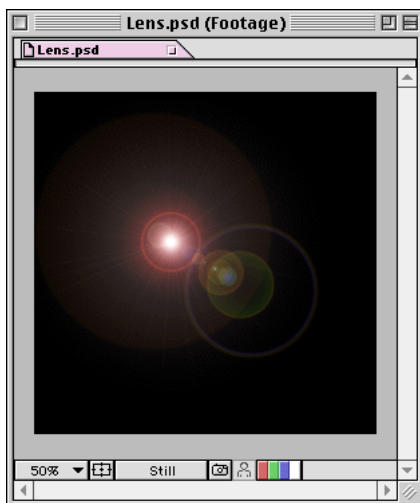
The source files are Bakgrd.psd, Type, and Lens.psd.

Bakgrd.psd has the following layers:

- Layer 1 is a field of blurred monochromatic noise that has been motion-blurred using a distance setting of 10 pixels.
- Violet Vortex also contains blurred monochromatic noise, which has been distorted using the Zigzag filter in Adobe Photoshop.

Type is a single-layer Adobe Photoshop document with the Dig It! text.

Lens.psd is an Adobe Photoshop document in which a lens flare has been laid down on a black background.



Opening the source documents in After Effects

- 1 If you haven't already done so, launch the After Effects application.
- 2 Choose File > Open, and then select and open DigBeg.aep in the DigIt folder in the 04Lesson folder.

The DigBeg.aep project contains a Bakgrd.psd footage folder and composition, which were created when the Bakgrd.psd was imported as an Adobe Photoshop comp. The Merged/Type.psd and Lens.psd items were imported as individual footage files. The project also contains the DigIt Comp, in which some of the animation and visual effects have already been set for you.

- 3 Choose File > Save As, name the file **DigIt.aep**, and save it in your *Projects* folder.

***Note:** If you want to view a completed version of this movie segment, play the DigIt.mov that is located in the DigIt folder in the 04Lesson folder.*

Using transfer modes

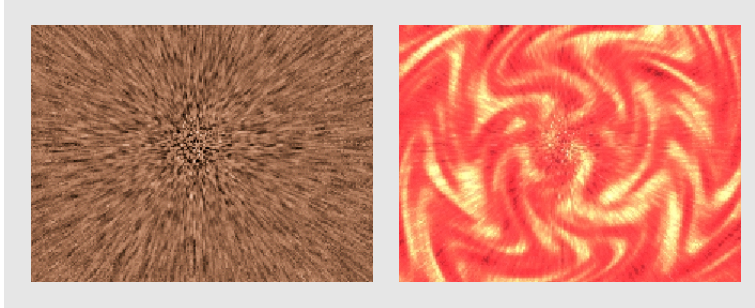
The background item is animated to have a swirling vortex effect, starting with a hot color scheme and fading to black as the foreground type is highlighted. The layers are offset to rotate in different directions. You will apply a transfer mode to the background.

- 1 Double-click the Bakgrd.psd composition in the Project window to open the Composition and Time Layout windows.

Notice that this composition includes a layer named Layer 1 and a copy of that layer, which is identified by an asterisk (*) following the layer name (Layer 1*). Be sure you select the correct layer when working in this composition.

- 2 Make sure the current time is set to 00:00:00.
- 3 At the bottom of the Time Layout window, click the Switches/Modes button.

4 In the Transfer Modes panel, choose Color Dodge from the Mode menu for Layer 1*. The Color Dodge is a new transfer mode in both Photoshop 5.0 and After Effects 4.0; as you can see, the results are quite colorful.



Bakgrd.psd composition before and after choosing the Color Dodge transfer mode for Layer 1.*

5 Make sure the mode of Layer 1 is set to Hard Light. (The mode for this layer was set in the original Adobe Photoshop file.)

The Hard Light mode combines colors in different ways depending on the lightness or darkness of the underlying colors. If the layer color is lighter than 50% gray, the underlying color is lightened. If the layer color is darker than 50% gray, the underlying color is darkened.

Using the Spherize effect

Now you'll apply the Spherize effect to the background image.

- 1 Select the Violet Vortex layer in the Time Layout window.
- 2 At 00:00:00, choose Effect > Distort > Spherize. In the Time Layout window, press the E key to display the Effects properties and click the triangle next to Spherize to display its properties. Set an initial Radius keyframe and change the value to **100**.

- 3 Go to the end of the composition and set the Radius value to **0**.
- 4 Save the project, and close the Effect Controls window. Then close the Composition and Time Layout windows for Bakgrd.psd by clicking the button in each Bakgrd.psd tab.

Integrating the elements

At this stage, you are going to bring the background element into the DigIt composition and apply special effects to the type. The type element swoops out of the background and becomes white-hot upon hitting the foreground, cooling off with a glow effect behind it as well as a continuing color shift. The Lens.psd layer will bolster the effect with a brief highlight.

The basic animation and some of the effects have already been applied for you.

- 1 In the Time Layout window for DigIt Comp, make sure the current time is set to 00:00:00.
- 2 Drag the Bakgrd.psd composition from the Project window into the Time Layout window, and then drag the layer to the bottom of the stack.

Using the Color Balance effect

To create the color cycling effect in the DigIt type, you will apply the Color Balance (HLS) effect and set Hue keyframes.

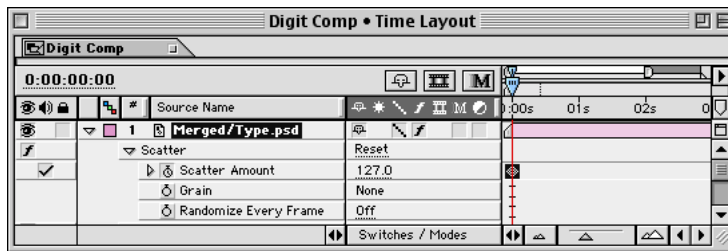
- 1 In the Time Layout window, set the current time to 00:01:22, select the top Merged/Type.psd layer, and then choose Effect > Image Control > Color Balance (HLS).
- 2 Press the E key to display the Effects properties, and then click the triangle next to Color Balance (HLS) to display its properties. Set an initial Hue keyframe, leaving the Hue value at **0**.
- 3 Move the current-time marker to the end of the composition, and then change the Hue value to **180**.

The colors in the DigIt type will cycle from 0 to 180 on the color wheel.

Using the Scatter effect

When the text swoops in, it starts with a Scatter effect, and then becomes sharper as it gets larger. The Scatter effect scatters the pixels in a layer without altering the color of each individual pixel. Scatter redistributes the pixels randomly, but in the same general area as their original positions.

- 1 Set the current time to 00:00:00, make sure the top Merged/Type.psd layer is still selected, and choose Effect > Stylize > Scatter.
- 2 Click the triangle next to Scatter to display its properties. Set an initial Scatter Amount keyframe, and set the value to **127**.

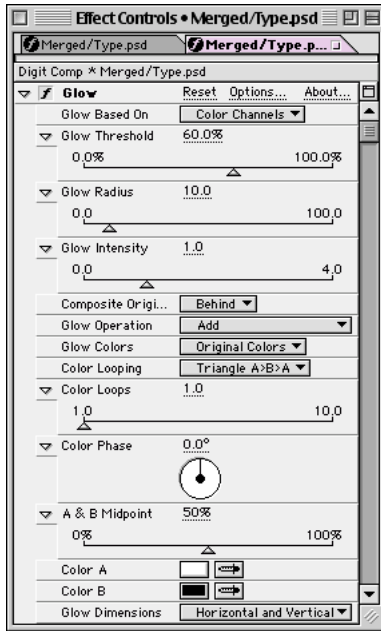


- 3 Move the current-time marker to 00:01:00, and then change the Scatter Amount to **0**. Set the current-time to 00:00:15 to see the Scatter effect in the Composition window.
- 4 Collapse the layer outline for the top Merged/Type.psd layer.

Using the Glow effect

Now you'll use the Glow effect on the second Merged/Type.psd layer to create a glow around the letters. The Glow effect picks out brighter parts of an image and diffuses those pixels to create a soft halo. Feel free to experiment with the Glow settings as you create the Glow effect.

1 In the Time Layout window, set the current time to 00:02:00, select the second Merged/Type.psd layer (layer 3), and then choose Effect > Stylize > Glow.



2 In the Effect Controls window, choose Alpha Channel from the Glow Based On menu. Using the Alpha Channel limits the type of colors you can use, so click OK if you get a warning dialog box.

The Based On option determines whether the Glow effect will select the bright parts of the color channels or the solid parts of the alpha channel. The Alpha Channel option is the best choice for applying glow to text.

3 For Glow Colors, choose A & B Colors. This option lets you specify any two colors using the Color A and Color B eyedroppers. Leave the eyedroppers (at the bottom of the window) set to the defaults of white and black.

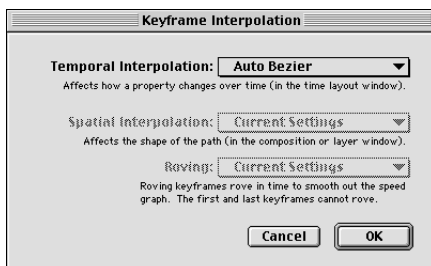
4 Set Glow Threshold to 0%. Pixel values less than this setting will be ignored in the glow operation.

5 Set Glow Radius to **20** pixels. This option specifies the maximum distance over which the glow is distributed. The larger the value, the more diffuse the glow.

- 6 Make sure that Color Loops is set to **1**. This setting determines the number of times the glow will pulsate.
- 7 Make sure the Color Phase is set to **0**. This cycles between the A & B colors that you have selected, in this case, between white and black.



- 8 In the Time Layout window, display the Glow effect properties, and set an initial keyframe for Color Loops at 00:02:00.
- 9 Set an initial Color Phase keyframe.
- 10 Go to 00:03:20. Set the Color Loops value to 5, and set the Color Phase to **90** degrees.
- 11 Select all four of the Glow keyframes, and choose Layer > Keyframe Interpolation, and choose Auto Bezier for Temporal Interpolation. Click OK.



The keyframe icons change from diamonds to circles. The default temporal interpolation for a keyframe is *linear* interpolation, which creates a uniform rate of change between keyframes. Auto Bezier interpolation creates a smooth rate of change through a keyframe. You'll explore this option again in Lessons 6 and 7.

12 Collapse the layer outline, close the Effect Controls window, and save the project.

Rendering a movie

1 With either the DigIt Composition window or Time Layout window active, choose Composition > Make Movie, type **Movie3.mov** for the name, and save the file in your Projects folder.

2 For Render Settings, choose Best Settings. (If time is limited, set the Quality to Draft instead.)

3 For Output Module, choose Custom. For Format, choose QuickTime Movie.

4 In Windows, the Compression Settings dialog box appears. Leave Compressor set to Animation and click OK. In Mac OS, leave the Video Output options at their defaults.

5 Select Import into Project When Done, and click OK.

6 Click Render.

7 When you are finished rendering the movie, close the Render Queue window, and then open the footage file that appears in your Project window, and play it. Save and close the project.

Assembling the final project

The final project with all four segments will yield a QuickTime movie that will play at 15 frames per second smoothly off a double-speed CD-ROM.

You'll start by creating a new project, and then importing the three movies that you made during this lesson. If you were not able to render complete movies, each individual project folder contains a completed movie; you can import those instead.

1 Choose File > New Project, create a new composition named **Compiled Comp** that is **320 x 240** and **15 fps**, with a Duration of **15:02**.

2 Choose File > Import > Footage Files, and do one of the following:

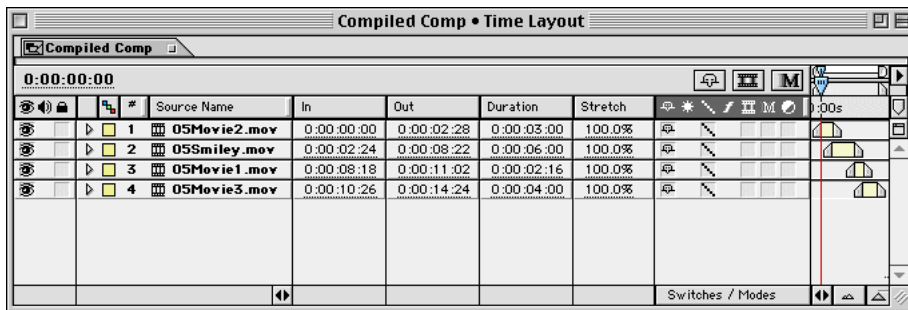
- If you rendered the movies, navigate to the Projects folder, and import the three movies that you created.
- If you didn't render the previous projects, navigate to the IDIG folder and import the IDIG.mov file, open the YouDig folder and import the YouDig.mov file, and then open the DigIt folder and import the DigIt.mov file.

3 Finally, open the Smiley folder, and select Smiley.mov. Click Done to close the dialog box.

4 Drag all four QuickTime movies from the Project window into the center of the Composition window. Stack them in the Time Layout window in the following order from top to bottom: Movie2.mov (or IDIG.mov), Smiley.mov, Movie1.mov (or YouDig.mov), and Movie3.mov (or DigIt.mov).

5 In the Time Layout window, display the In and Out panels by clicking the Optional panel button to the right of the Switches/Modes button.

6 Use the In and Out panels to set the In point for Movie2.mov at 00:00:00, the In point for Smiley.mov at 00:02:24, the In point for Movie1.mov at 00:08:18, and the In point for Movie3.mov at 00:10:26.



7 Close the In and Out panels by clicking the Optional panel button again.

8 Choose File > Import > Footage File, select Audio.mov in your 04Lesson folder, and click Open.

The music for the project was composed by Chris Meyer of CyberMotion.

9 Set the current time to 00:00:00, and drag the audio footage item from the Project window into the Time Layout window.

10 Choose File > Save Project As, type **Compil.aep** for the name, and save it in your Projects folder.

Rendering a movie for CD playback

Now you're ready to render the final movie sequence.

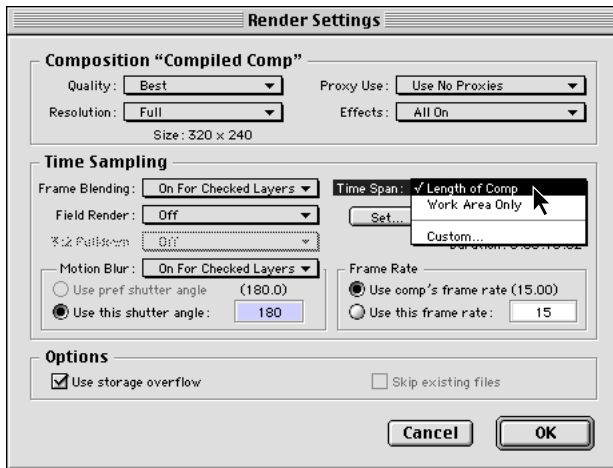
1 Choose Composition > Make Movie.

2 Type **IDIGSeq.mov** for the name, and save the movie in your Projects folder.

3 For Render Settings, choose Custom.

The Render Settings window should be checked for the following settings: Best Quality, Full Resolution (320 pixels by 240 pixels), Use No Proxies, and Effects All On.

4 For Time Span, choose Length of Comp. Under Frame Rate, select Use Comp's Frame Rate (15.00). The remainder of the default settings are acceptable. Click OK.



- 5 For Output Module, choose Custom.
- 6 For Format, choose QuickTime Movie.
- 7 Set the compression to Cinepak in one of the following ways:
 - In Windows, the Compression Settings dialog box appears. Set Compressor to Cinepak.
 - In Mac OS, click the Format Options button, and set Compressor to Cinepak.
- You use the Cinepak compressor when compressing 8-bit and 24-bit video for playback from CD-ROM discs or for desktop presentations. For best results, you should use the Cinepak compressor on raw source data that has not been previously compressed.
- 8 Leave Quality set to Best, select Keyframe Every and enter **15**, and select Limit Data Rate To and enter **300**. Click OK to close the Compression Settings dialog box.
- 9 In the Output Module Settings dialog box, select Audio Output. Choose 22.050 KHz from the left menu. This is the standard sample rate for movies played on computers. 44.100 KHz is the standard sample rate for compact disc audio.
- 10 Choose 8-bit from the center menu. This is the standard sample depth for Windows or Mac OS playback. (16-bit is the standard for compact disc audio.)
- 11 Click OK to close the Output Module Settings dialog box.
- 12 Click Render.

When rendering is complete, get some popcorn and watch your movie.