

Chapter 07 Effects

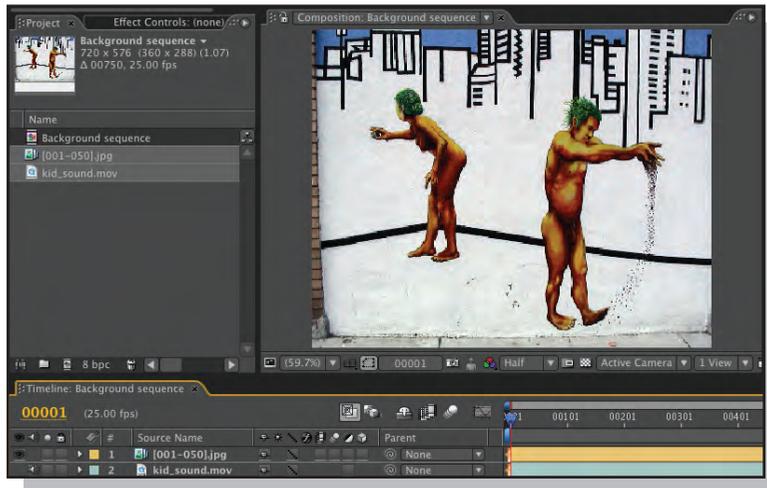


Fig. 7.1

It's taken some time to get to the chapter that I'm sure a lot of you have been itching to get to, the Effects chapter! When I teach my two-day 'basics' course on After Effects I always concentrate on leaving the effects till last because you need to have a good, solid understanding about how the keyframing and software functions before you can make the most of the effects available to you. The other reason is that the Effects menu is naturally what most people head straight for when they open up After Effects so I find that most users tend to get to know this menu pretty well without a lot of persuasion.

Synopsis

Obviously, I am limited to what I can cover in the pages of this book and there is no way on earth that I could hope to cover every effect available in the Standard and Professional versions of After Effects. So, rather than cover all of the effects sketchily, I decided to cover just a selection of them in a bit more detail. The Adobe After Effects user manual and Online Help system cover what I haven't been able to do here. We'll look at how to break down and understand the way that effects work in this chapter and will then continue to use effects throughout the remaining of the book.

We'll also take a look at Animation Presets and how they can be used to save frequently used effect settings.

Color effects

Without filters

1 Open `01_ColorFX_start.aep` from **Training > Projects > 07_Effects** (Fig. 7.1).

This was created using the Professional version of After Effects but can be opened with either of the versions because no Professional version effects have been used on it.

2 RAM Preview the Composition to remind yourself what you have already done in this project. So far, all we have here is a fast-moving background consisting of various graffiti images.

This is going to be a movie that can be used as an interesting background for an opening titles piece. The imagery and movement are exciting and lively, just as we want, but it is currently too multi-colored and distracting to use for a background.

The images change from one frame to another, there is no common thread such as a color theme to pull them together. We need to introduce an element of design which remains constant throughout, the most obvious and effective element is color. By putting a color treatment over the footage we can bring it all together, making it less visually jarring yet still retaining the same excitement.

Sometimes the best way to achieve an effect such as a color treatment is not by using the effects in the Effects menu, but by using other layers to colorize your footage. Remember that the more filters you use, the slower your comp will become to work with. I always like to encourage my students to first think of ways of achieving certain results without the use of effects; it's good exercise for the brain and it encourages them to find new ways of working.

The easiest way to bring some structure into the composition and to colorize the image underneath is to superimpose a single layer with some simple, colored, and geometric shapes over the animation, this will pull the whole thing together.

- 3** Import the file named **Thick-stripes.psd** from the **Training > Source Images > Angie Images** folder.
- 4** Drag the file into the Timeline of the **Background Sequence** Comp as the top layer (Fig. 7.2).
- 5** Click on **Expand/Collapse Transfer Controls** button at the bottom of the Timeline to bring up the **Modes** column (Fig. 7.3).

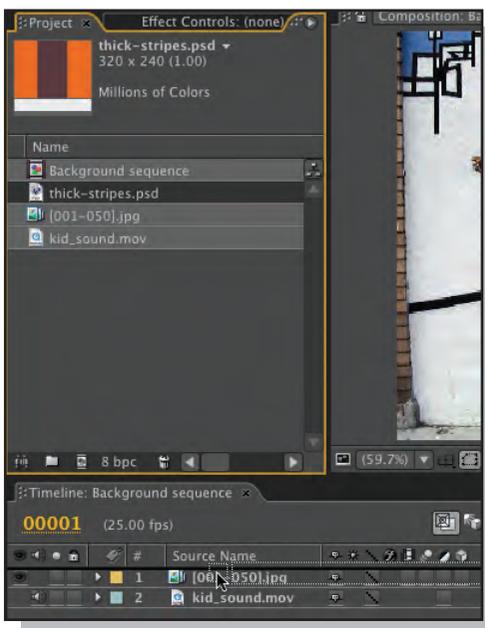


Fig. 7.2

- 6** Choose **Hard Light** from the **Thick-stripes.psd** layer's **Mode** menu.

The images will now be composited together, the colors and shapes help to make the background less obtrusive. Dividing the screen into three parts like this will make it appear bigger and take away some of the emphasis from the animated imagery. Using the layer and Layer Modes to colorize the background saves us from having to apply effects to the layer to get a similar result.

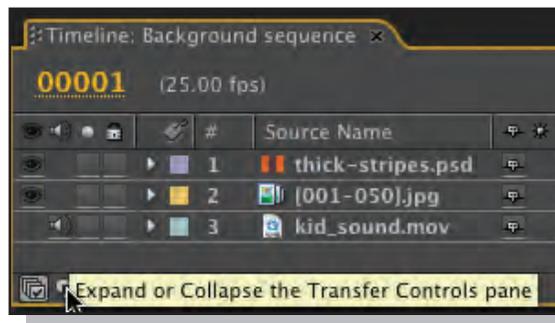


Fig. 7.3

Speeding up workflow

Before moving ahead to the effects I want to show you a couple of ways of speeding up your workflow, very important things to know if you are planning to use a lot of effects in your compositions.

RAM Preview Options

- 1 **RAM Preview** your composition. If you find that you don't have enough RAM to preview the whole project, there are a few things you can do to help.
- 2 Open up the **Time Controls** panel if it is not already open by hitting **Cmd+3** (Fig. 7.4).
- 3 If it is not already showing open up the **Info** panel **Cmd+2**.
- 4 **RAM Preview** your composition again and watch the display in the **Info** panel.

You'll notice that After Effects is attempting to render all 750 frames of your composition. When it plays the frames back to you, it will try it's best to play them back at the same rate as your composition, that is in real time.

In the **Time Controls** panel the **Frame Rate** box tells you how many frames the RAM Preview will attempt to play for every second of your composition.

- 5 In the **Time Controls** panel change the **RAM Preview Frame Rate** to **15** (Fig. 7.5).
- 6 RAM Preview the comp again, you'll notice that After Effects still renders the same amount of frames but will play those frames back at half the speed, taking twice as long to render all of the frames. The images and the audio will play back to you in slow motion.

- 7 Click on the **Frame Rate** drop-down menu and change the **Frame Rate** back to **Auto**. This setting will use the current composition's frame rate.

We will leave our **RAM Preview** at the default setting but will change our **Shift + RAM Preview** settings. The Shift RAM Preview Options allow you to create a new set of preferences for previewing the footage with the **Shift** key held down. At the default setting, holding down the **Shift** key while activating a RAM Preview will render every second frame of your composition.

By being able to customize these options individually, you have two choices for the type of RAM Preview you want to use in a given situation. I prefer to leave the RAM Preview settings at default (rendering every frame in real time) but it's also very handy to use my Shift + RAM Preview for quicker, dirtier previews!

- 8 In the **Time Controls** panel, click on the **RAM Preview Options** menu and select **Show Shift + RAM Preview Options** (Fig. 7.6).

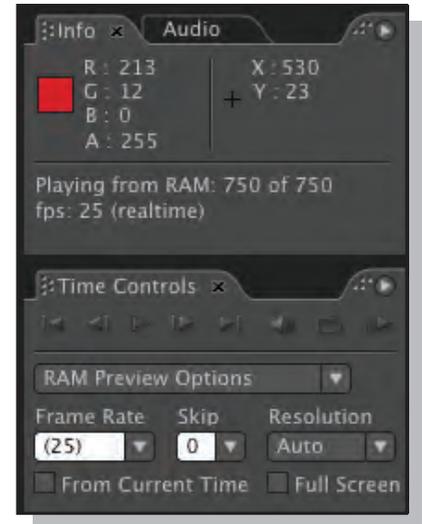


Fig. 7.4

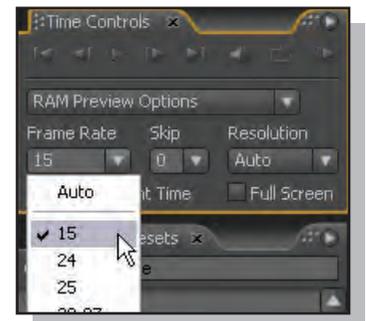


Fig. 7.5



Fig. 7.6

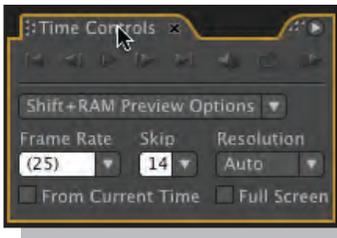


Fig. 7.7

As you can see, we have the same options available as with the RAM Preview Options.

9 Hold down the **Shift** key while simultaneously hitting the **0** key on your number pad to activate a **Shift + RAM Preview**. In the Time Controls panel, notice that After Effects is loading 375 frames into RAM.

With the **Skip Frame** setting at the default value of 1, After Effects will render the first frame and then skip one frame in between all the others, that is it will render every second frame.

10 Change this setting to **14** and then hit **Shift 0** to do another **Shift + RAM Preview** (Fig. 7.7).

11 Look in the **Time Controls** panel while the preview plays back you'll notice that After Effects is now playing a total of **50** frames, that is one frame for every second of the composition. It plays the footage at the correct speed, it is simply missing out 14 frames out of every 15 frames of your comp.

12 Change the **Skip Frames** setting back to 1.

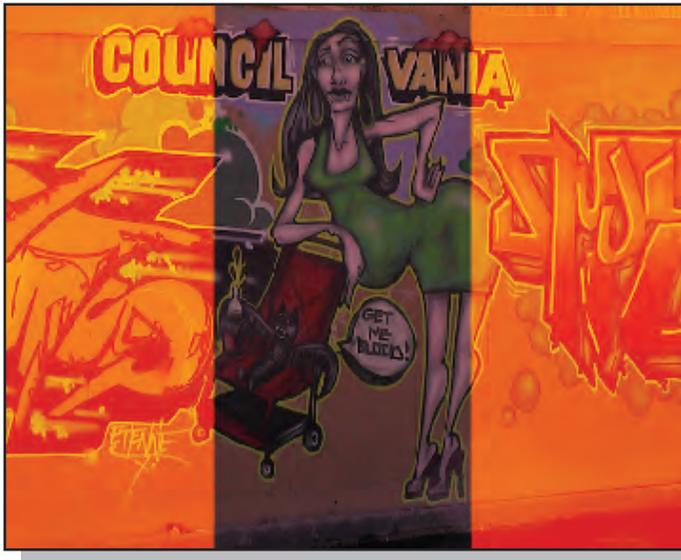


Fig. 7.8

13 Change the **Resolution** menu to **Half**, this will drop the pixel resolution making it quicker to process the frames, and After Effects will be able to load twice as many frames into RAM at half resolution. To see the difference how this works, hold the S key and hit 0 on the number pad to do a **Shift + RAM Preview**.

14 Click on the **Shift + RAM Preview Options** again and select **RAM Preview Options** from the menu.

15 Change the **Skip Frames** value to **14** so that we only preview 1 frame per second of our comp.

16 Click on the **Full Screen** checkbox and then hit **0** on your number pad **RAM Preview** your composition against a plain gray background (Fig. 7.8).

For now, we have finished working on our background. We don't need After Effects to re-render it every time we make a change. At this point in a project, it's a good idea to render the elements that you know are unlikely to change. There are several options for doing this, each can be useful depending on the given situation.

Pre-rendering

One solution is to Pre-render your comp as a finished movie. This can be done by making the comp active in the Timeline and going to **Composition > Pre-render**. This will automatically add the comp to the Render Queue, with **Best Settings** selected for the render settings and **Lossless with Alpha** for the output module. The rendered movie will be automatically imported into your Project panel ready to use in your comps.

This technique is perfect if you know that the movie will not have to be altered again but if you are likely to change anything in the original composition it is quicker to use low-resolution proxies.

Using proxies

Proxies are temporary files that can be used to substitute any layer or composition in your project. These can be smaller, have lower frame rates, or have lower resolution than your original footage; you can even use still images to temporarily replacing complicated compositions. The purpose of using a proxy is to reduce the amount of processing time needed to preview or render your image.

We will use the RAM Preview that we have already built as a proxy for the composition. Later I will show you easy ways to automate the process of proxy creation, for now we will do it manually.

17 Go to **Composition > Save RAM Preview** (Fig. 7.9).

18 The **Output Movie To** dialog box will appear, save the file to the **Desktop** folder as **Background Sequence RAM.mov** (or .avi for Windows users) and then click **Save** (Fig. 7.10).

The Render Queue panel will now appear in the same frame as the Timeline panel. After Effects will automatically render the RAM Preview directly onto your hard disk. Remember that this movie will be rendered using the same settings as you have in your RAM Preview Options. Once the RAM movie has rendered it is imported into the Project window.

19 In the Project panel, select the **Background Sequence** Composition.

20 Go to **File > Set Proxy > File** or hit **⌘ P** **ctrl A P**.

21 Choose the **Background Sequence RAM.mov/.avi** from the **Desktop** and double-click it to select it as the proxy file for your composition. Notice the red highlight at the bottom of the Comp

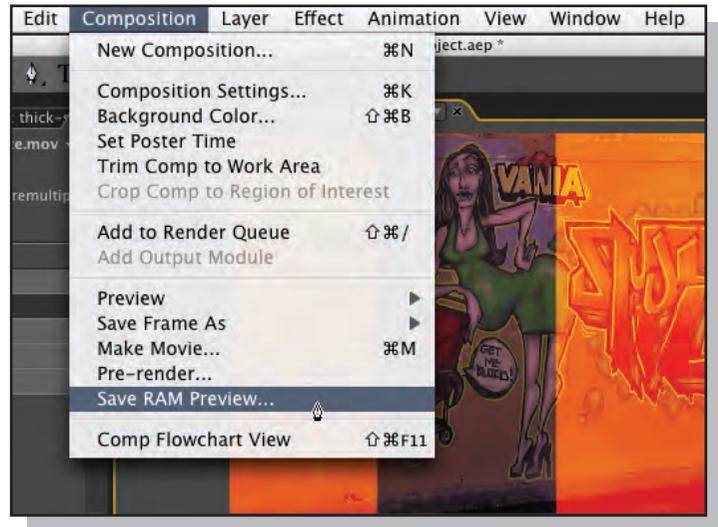


Fig. 7.9

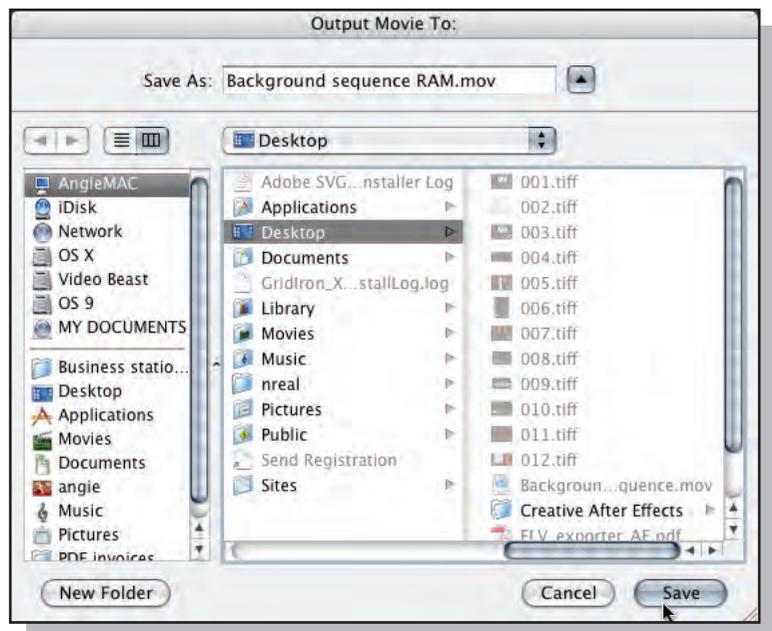


Fig. 7.10



Fig. 7.11

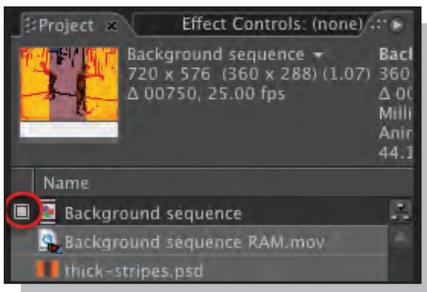


Fig. 7.12

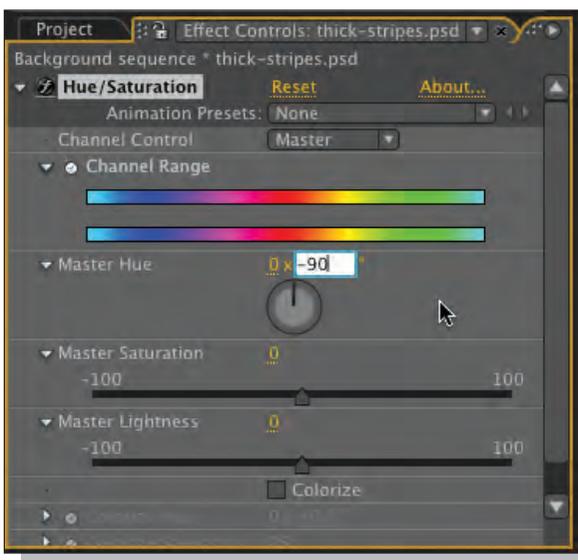


Fig. 7.13

window indicating a proxy file is enabled (Fig. 7.11).

22 Close the **Render Queue** so that you can see your Timeline again by hitting **0** **ctrl alt 0**.

23 Move to frame **210** in the Timeline.

You may have also noticed a little square button appears next to the composition icon in the Project panel, this is the **Toggle Proxy** button. This button indicates that a proxy is attached to the original file, when the button is black the proxy is being used to substitute the original file.

24 Move over to the **Project** panel and toggle the **Proxy Toggle** button on and off to see any changes that may occur. You should see the frame displayed in the Comp viewer change, notice that the red highlight appears only when the proxy is enabled (Fig. 7.12).

25 Switch the proxy **on** when you have finished comparing.

26 In the **Time Controls** panel, change the **Skip Frames** setting back to 0 and then RAM Preview the composition again.

Notice that it is now much faster to load a full RAM Preview of your composition. When it plays back, you'll see that it is showing only one frame for every second of your composition.

Using effects on proxies

Once you have chosen a proxy file for your layer or composition, you can still make changes to the original, but beware – the proxy will remain unchanged – only the original layer will update to reflect the changes.

27 Context-click the **Thick-stripes.psd** layer in the Timeline and go to **Effect > Color Correction > Hue Saturation**.

28 In the **Effect Controls** panel, change the **Master Hue** angle to **-90 degrees** (Fig. 7.13).

Nothing appears to change in the Composition panel; this is because we are looking at a frame from the proxy file, not from the original layers.

29 In the **Project** panel, click on the **Toggle Proxy** button, next to the **Background Sequence** composition to switch off the proxy and see the changes to your original layer.

30 **RAM Preview** the movie with the new effect applied.

31 When you have finished looking at the changes you have made, click on the **Hue/Saturation** name in the **Effect Controls** panel and hit **Backspace** on your keyboard to delete the effect.

32 In the **Project** panel Switch the proxy **on** and then save the project into your **Desktop > Work in Progress > 07_Effects chapter** folder as **01_ColorFX_02.aep**.

In this case the benefits that we get from using a proxy are minimal but just imagine how much time they can save you when working on more complex, multilayered, and effects-laden comps. The fact that they can be turned on and off so easily makes them extremely versatile. The only thing that you must look out for is that you don't forget that your proxy is being used. Many of us have been confused after applying an effect to a layer and not seeing any change, only to realize that a proxy was being used!

Color treatment effects with filters

OK, we'll now return to the project we worked on in the Compositing chapter (Chapter 05). Last time we worked on this we created a new composition to place over our main edit, let's remind ourselves where we left it.

1 Open **SeattleNews04.aep** from the **Training > Projects > 09_Effects** folder (Fig. 7.14).

2 **RAM Preview** the **Edit.ppj** Composition to remind yourself of the contents of this comp.

We have the same problem here as we did with the Graffiti Club project. The edits are in the right place, we have created some nice, animated, and geometric shapes composited over the edit. We now need to use a color



Fig. 7.14

treatment on this to bring it all together. This time we will use another After Effects filter to colorize the footage.

Colorama

We need to give the sequence a uniform color treatment to bring it all together. The easiest way to do this is by using Adjustment Layers. Remember, effects applied to Adjustment layers will affect every layer beneath the Adjustment Layer so not only will our Masks comp layer be affected by the effect but also all the layers underneath it.

- 3** With the Timemarker at the beginning of the Timeline, go to **Layer > New > Adjustment Layer**.
- 4** **Context-click** on the new **Adjustment Layer** and go to **Effect > Color Correction > Colorama** (Fig. 7.15).

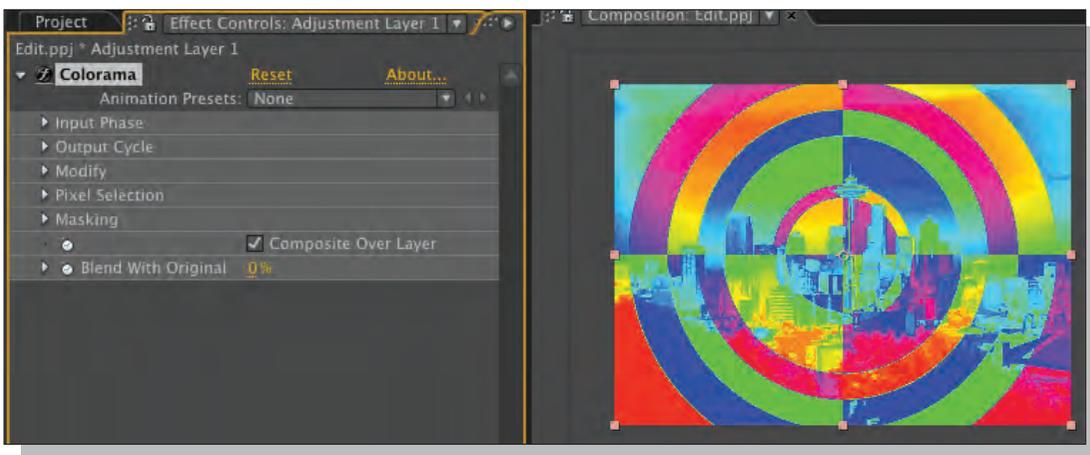


Fig. 7.15

Colorama is a great tool. However, like many other filters, I think it is let down by its default presets. Just look at the following diagram to see what I mean – ouch!

Anyone looking at this for the first time would recoil in horror at the nasty, bright, and gaudy colors that greet you when applying the default setting. Don't let this fool you, it is an extremely powerful and useful image control filter.

Colorama works by mapping the selected colors that you choose for the effect's Output Cycle properties onto a grayscale version of the layer you choose to affect. The default setting will apply the colors to the whole layer but you can also choose to apply the changes to single channels or other image elements such as Hue, Lightness, etc. You can even take these elements from another layer in your comp by using the Input Phase settings.

Brian Maffit and the Atomic Power Corporation designed and developed Colorama as a third-party plug-in for After Effects by. One of its many uses is creating color-cycling animations; you may have seen this type of animation featured heavily in television during the 1970s; for example, episodes of Top of The Pops (UK) or in music videos.

You will also be familiar with color cycling if you were a user of Electronic Arts' 'Deluxe Paint' on Amiga (Ah! Memories!) <http://www.amigahistory.co.uk/>

With Colorama you start by choosing a range of colors to map onto a cycle. You can then animate the cycle so that the colors loop over and over, building as they go. It can be used as a quick and easy way to make animated fire effects.

5 Open up the **Output Cycle** settings and you will see a rainbow-colored wheel, this is your Output Cycle, where you can choose the colors you want to make up your image (Fig. 7.16).

The Output Cycle works similarly to other color wheels, the colors are positioned around the wheel and they interpolate gradually from one to another. Colorama converts your image to a grayscale image and then remaps the Dark areas in your image with the top color selected on the Output Cycle. It then maps all the other shades of gray evenly around the rest of the color wheel, in a clockwise direction, till it reaches pure white, which is back at the top again.

6 Click on the effect's **Use Preset Palette** drop-down menu to display its list of ready-made presets for you to choose from. These will help you to understand how this plug-in works.

7 Choose **Ramp Green** from the Preset panel drop-down menu (Fig. 7.17).

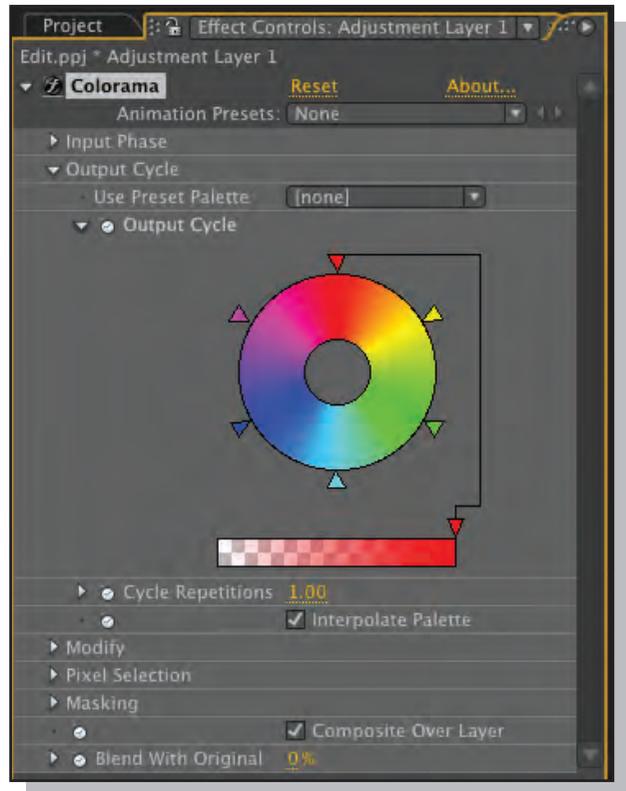


Fig. 7.16

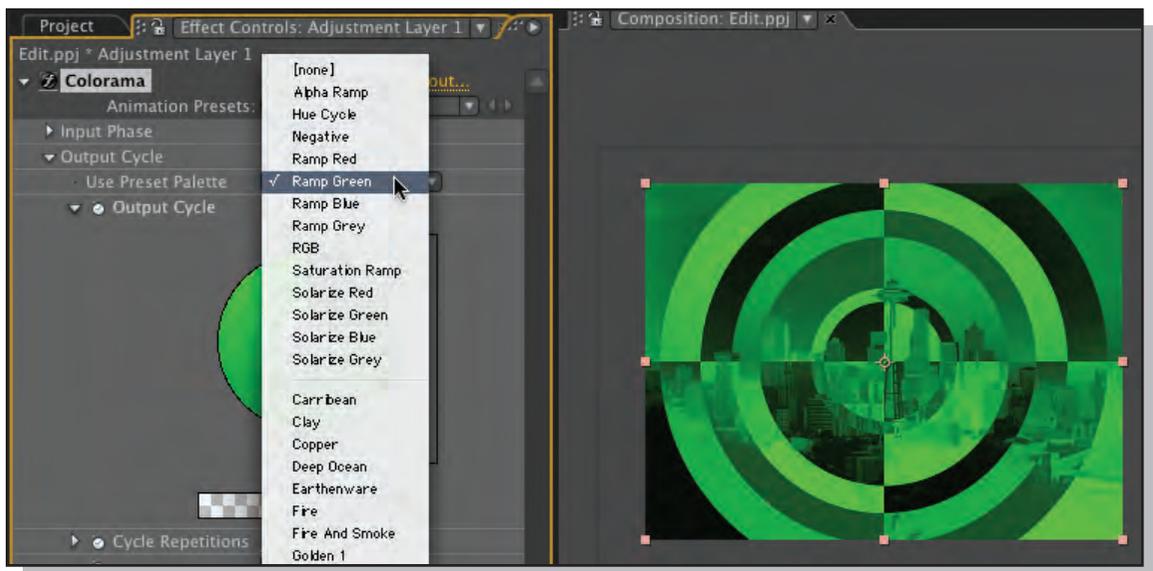


Fig. 7.17

This Colorama Cycle has only two selected colors: black and green. The two Color Triangles are positioned practically in the same place at the top of the wheel so it appears that there is only one. But the black Color Triangle is actually hiding behind the green one.

40 Click to the left of the **green** Color Triangle to bring up the **Color Picker**. The color you choose here will be the color that all the lightest values in your image will be mapped to (Fig. 7.18).

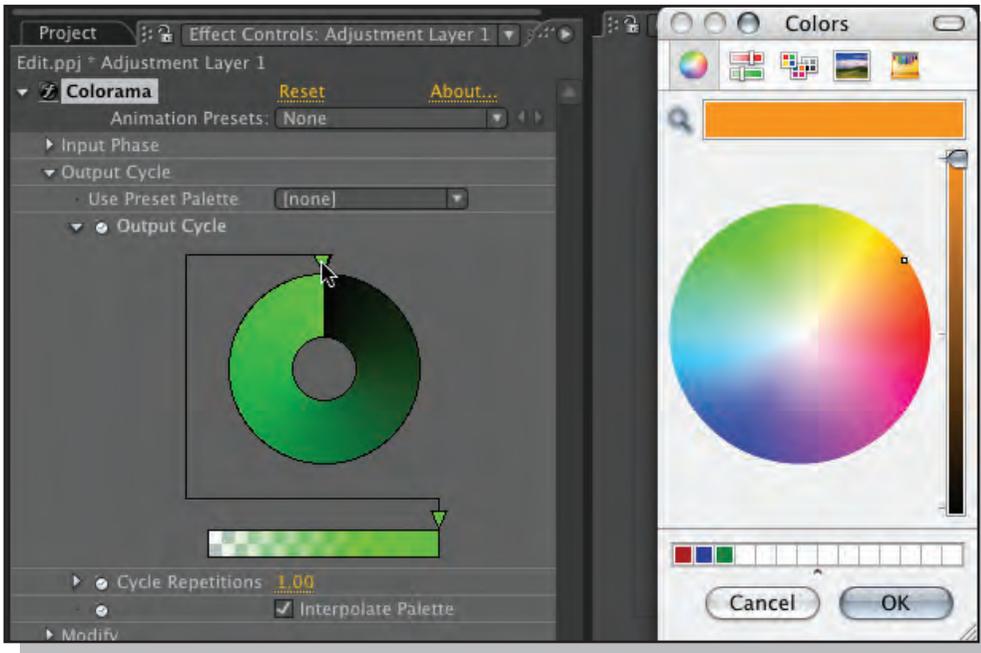


Fig. 7.18



The black triangle is directly under the green one, this makes it easy to accidentally click on it. To make sure that you double-click the green triangle, click slightly to the left of it. To be absolutely sure you have got the right Color Picker open, make sure that the **Color Swatch** in the **Color** dialog is **green** when you first open the dialog; if it's black, then you've opened the wrong one, cancel and try again till you get the green one.

8 Choose a bright, orange color (e.g. **R = 100%**, **G = 60%**, **B = 5%**) and then click **OK**.

9 Double-click on the right-hand side of the Color Triangle to bring up the Color Picker for the black Color Triangle. This is where you will choose the color you wish to map the dark areas of your image to. This is currently set to pure black. Try changing it to a deep, dark brown, almost black but not quite (e.g. **R = 16%**, **G = 0%**, **B = 0%**).

You should be able to see what is happening to your image now. All of the dark areas are now dark brown, all the light areas are bright orange, and all the areas in between are interpolated to various shades in between the two colors.

10 Click the **Effect on/off** switch (little filter icon that looks like a letter **F**) to the left of the effect's name in the **Effect Controls** panel to switch off the effect to see the original colors and then switch on again to compare (Fig. 7.19).

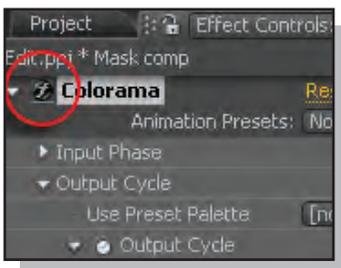


Fig. 7.19

- 11** Give your image a more posterized look by **de-selecting** the **Interpolate Palette** checkbox underneath the **Output Cycle** (Fig. 7.20).

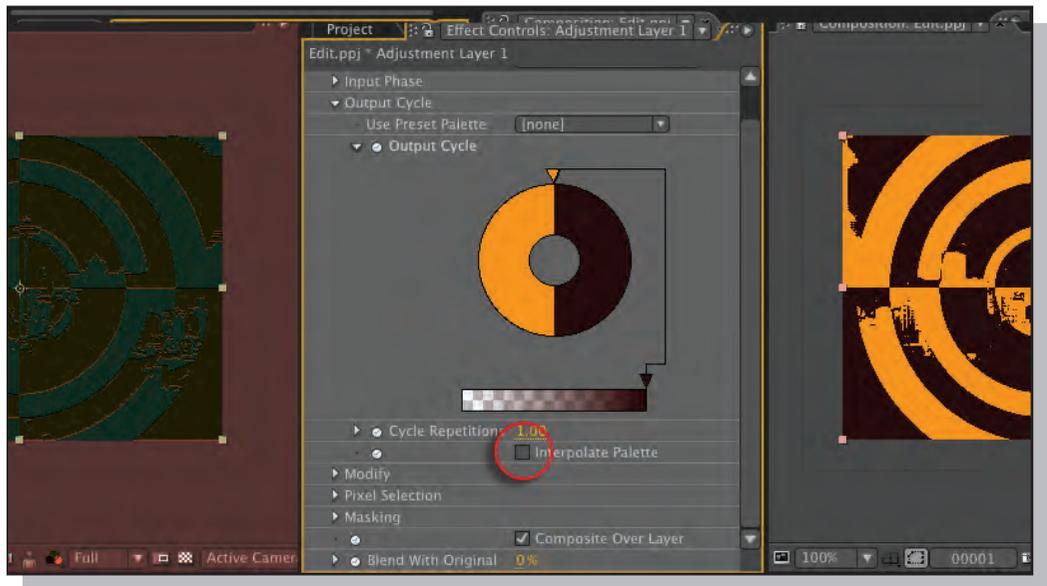


Fig. 7.20

With this option unchecked Colorama jumps from one color to the other rather than changing gradually. This will make it clearer to see what is happening as we go through the next few steps. This posterized effect works really well with bold close-ups of faces. You can experiment with this a bit more at the end of this chapter.

You can add up to 64 new Color Triangles simply by clicking anywhere around the Cycle and choosing a new color.

- 12** Position the cursor at the edge of the cycle at about the 3 o'clock position and click once, doing this will bring up the **Color Picker**. Choose a deep but bright red and then hit **Enter** to leave the Color Picker box (Fig. 7.21).

You can also move the Color Triangles easily by dragging them. As with most of the controls in After Effects, holding down the Shift key while dragging will constrain the movement to pre-defined increments. In this case it will constrain the movements to increments of 45 degrees.

- 13** Click and drag the orange Color Triangle from the 12 o'clock position to the 6 o'clock

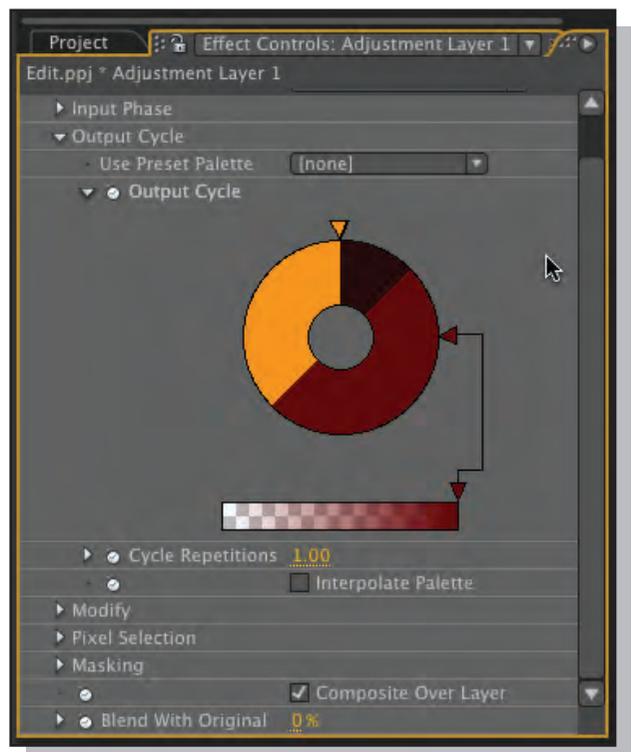


Fig. 7.21

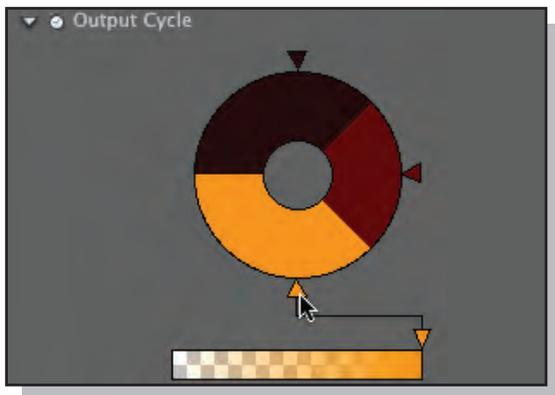


Fig. 7.22

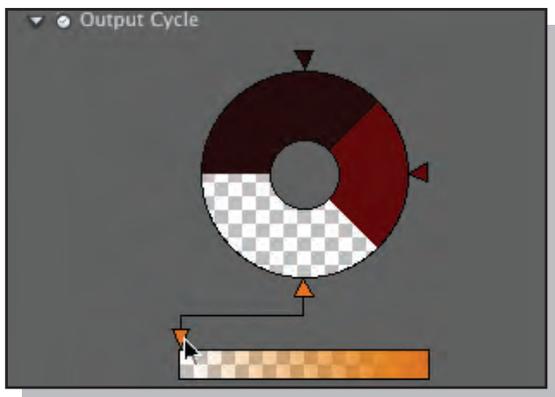


Fig. 7.23

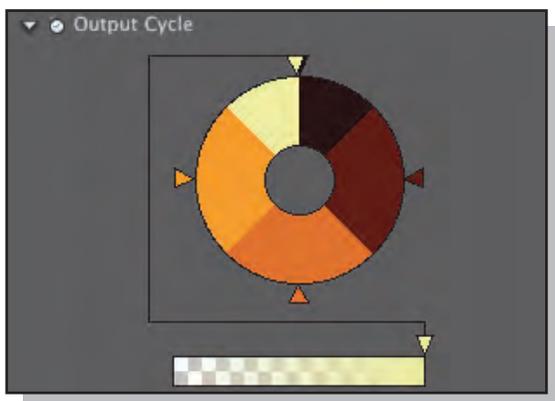


Fig. 7.24

position. Hold down **Shift** as you drag to constrain the movement, allowing it to snap into place at the 180-degree mark (Fig. 7.22).

14 Double-click the **orange Color Triangle** to open up the **Color Picker** again. Change the color to a slightly deeper orange. Click OK to leave the **Color Picker** box.

You will notice underneath the Output Cycle is a strip. This is the Opacity slider for your colors. Notice that this also has a Color Triangle which is connected to the active Output Cycle Color Triangle by a black line.

15 Try dragging the **Opacity** triangle all the way to the left to see how it affects the selected color (Fig. 7.23).

Notice that the color decreases in opacity as it is dragged to the left. This will allow the original pixels to show through. By placing the triangle half-way along the slider you will be blending the original pixels with the new color by 50%. It's nice to be able to adjust the opacity of the colors individually, this feature can even be used for pulling successful keys on footage but we'll leave that for another time!

16 Once you have finished experimenting with this, drag the slider all the way back to the right again to put the **opacity** back to **100%**.

17 Click on the 9 o'clock position of the **Output Cycle** and this time choose a paler orange from the **Color Picker**.

18 Click to the left of the top, **black Color Triangle** (at about 5–12). This time, choose a pale cream color. Click **OK** to leave the **Color Picker** (Fig. 7.24).

19 Hold down the S key and drag the new Color Triangle to the right till it snaps against the Black one.

It is clear to see what is happening now. Each color has an equal slice of the pie. Because the lightest and darkest colors are overlapping, they share a segment of pie. This means that there will be half the amount of these colors in the final image, compared to the other three colors which will have an equal distribution in the final image.

I find that it helps to set up the color cycle with interpolation switched off so that you can see the distribution of the colors more clearly.

20 Select the **Interpolate** checkbox again to blend the colors together gradually (Fig. 7.25).

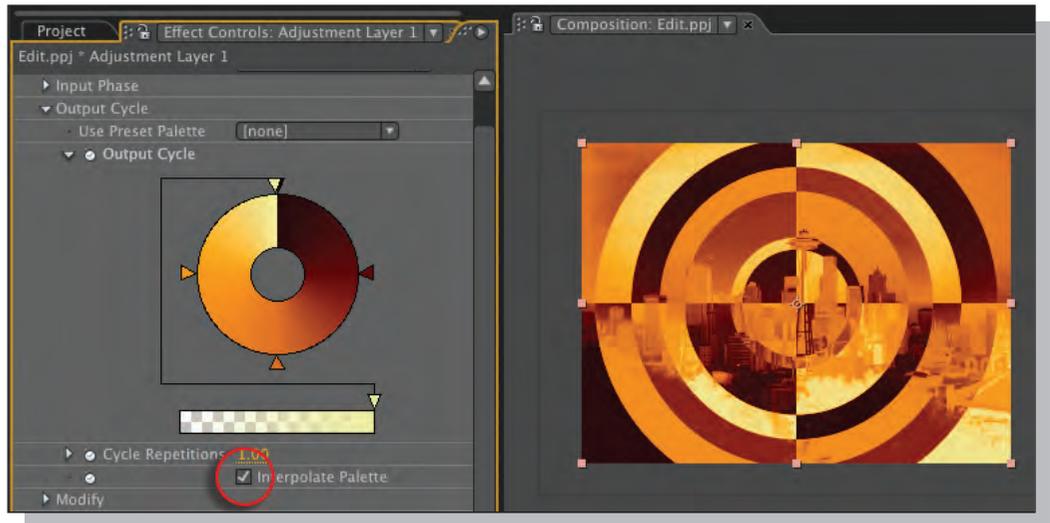


Fig. 7.25

Saving effect settings

After Effects gives you the ability to save your own custom Animation Presets. When you've set up an effect or series of effects that you like, and may want to use in a future project, you can save all of the effect settings, including any keyframes and/or expressions as an Animation Preset. This is a great way to work because Animation Presets are very small files which can be easily e-mailed to other AE workstations and can be applied across platforms.

Later in this chapter we'll take a closer look at Animation Presets but for now we'll use one to save the Colorama settings that we customized. Using this technique you can quickly build up a library of custom settings for your favorite plug-ins.

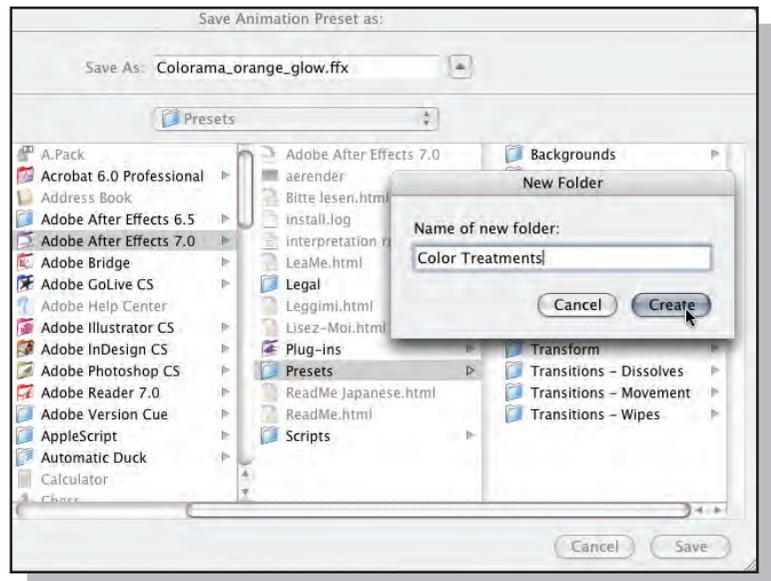


Fig. 7.26

21 Select the **Colorama** effect by clicking on its name in the **Effect Controls** panel and then go to **Animation > Save Animation Preset**.

22 In the **Save Animation Preset** as dialog box, After Effects should navigate automatically to your **Adobe After Effects 7 > Support files > Presets** folder. Within there, create a new folder and name it **Color Treatments** (Fig. 7.26).

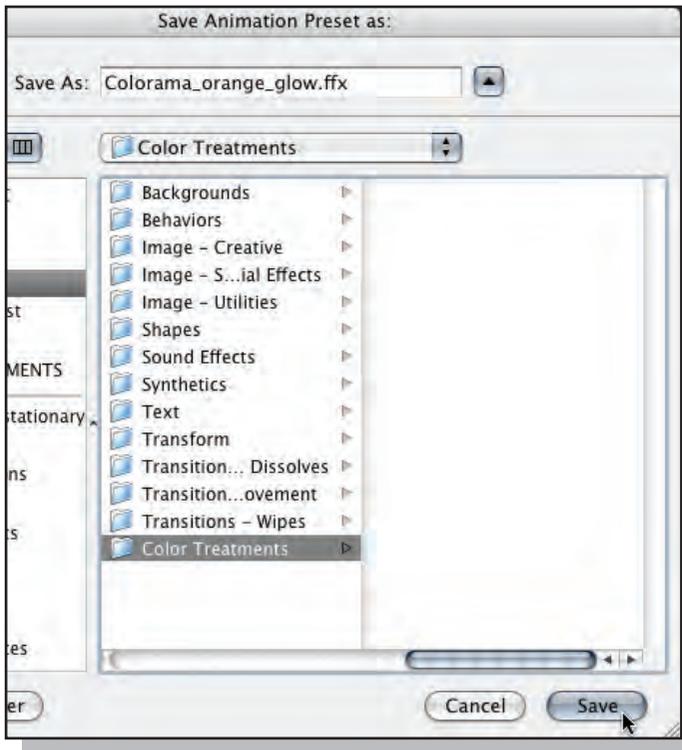


Fig. 7.27

On the Mac this should be in **OSX > Applications > Adobe After Effects 7 > Presets**. On Windows this should be in **(C:) > Program files > Adobe > Adobe After Effects 7 > Support Files > Presets** (Fig. 7.27).

23 Save the file into the new folder as **Colorama_Orange_Glow.ffx**

24 Once you are back inside your After Effects project, go to **File > Save As** and save your project to your **Work in Progress > 07_Effects** chapter folder as **SeattleNews04b.aep**.

Your new preset now appears in the **Effect Controls** panel's **Animation Presets** drop-down menu at the top of the panel. This appears in the menu alongside other presets that also use the **Colorama** effect. Different preset settings for an effect can be accessed either from this menu or from the **Effects & Presets** panel, we'll look at these options in a little more detail later in this chapter.

There are various other ways of adjusting the effect's Output Cycle:

- Move the Color Triangles around the Cycle to change the balance of color.
- **ctrl** – drag any of the Color Triangles to duplicate them, allowing you to create bigger blocks of color.
- Delete Color Triangles by simply dragging them off the sides of the panel.
- Create more triangles using the techniques we used in this lesson.
- Use the Input Phase settings to convert only to a selected channel of your image into grayscale before applying the effect such as Hue, Lightness, etc.
- Use the Modify settings to choose only to affect one channel of the final output.

There are also several animatable properties in the Colorama filter. Once you feel comfortable with the parameters, then you can start to experiment by animating their properties.

25 If you need more information on how this filter works, go to **Help > Effects Help** and then click on the hyperlink to the **Color Correction effects gallery**. Click on the hyperlink under the gallery example for more information.

Time effects

Cast your mind back to the animation chapter, remember we played around with the timing of our clips to make me dance in time with the music? Well, we're going to work some more on those sections with some more of After Effects built-in effects.

1 Open **MacDonna03.aep** from the **Training > Projects > 09_Effects** folder (Fig. 7.28).

2 RAM Preview the Finished Time Remap composition.

We need to work on the background and the foreground of this movie to make it more visually appealing. At the moment the colors are a bit dull and the keyed footage of me dancing looks a little ‘cut out’ from the rest of the shot. Let’s start with the foreground layer.

Echo

The Echo filter is another one of my favorites, it is one of the filters from the **Time** category and is available in both Standard and Professional versions of After Effects. It creates a visual echo effect by taking information from other frames at either side of the current frame to create a similar effect to shooting moving footage with slow shutter speed on your camera – anything that is moving in your footage will create motion trails as it moves. You can adjust the settings to control how much of this effect you want. It’s an effect that is often seen in music videos creating a dream-like effect.

3 Move the Timemarker to the beginning of the **Timeline** by hitting the **Home** key on the keyboard and then select the **MeDanceAlpha.mov** layer and go to **Effect > Time > Echo**.

Nothing appears to have changed in the Comp panel. This is because the Echo filters default setting takes information from the previous frame to create the echo. Because there are no previous frames before the first frame, it has nothing to sample from.

4 In the **Effect Controls** panel # change the **Echo Time** setting to **1** and notice that an echo has now appeared (Fig. 7.29).

Because we have entered a setting of 1, After Effects is taking the echo from the frame 1 second ahead from the current frame.



Fig. 7.28

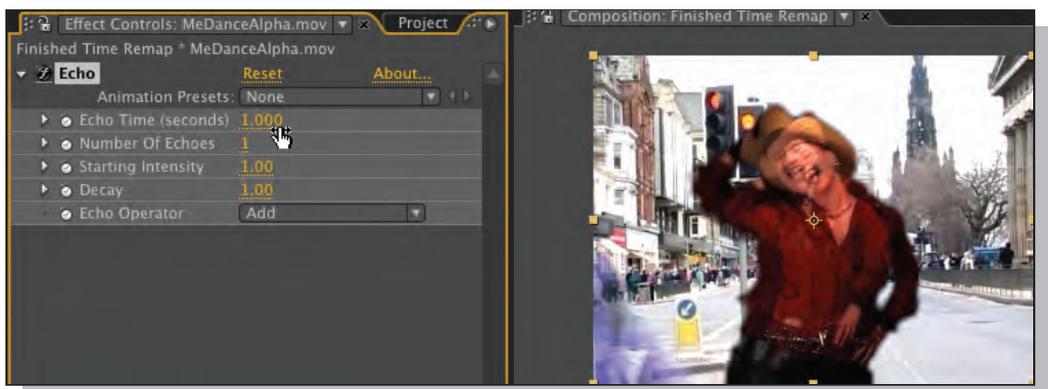


Fig. 7.29