

ADOBE® AFTER EFFECTS® CS5



CLASSROOM IN A BOOK®

The official training workbook from Adobe Systems

DVD-ROM Included for Windows and Mac OS



Adobe® After Effects® CS5 Classroom in a Book®

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Adobe Press books are published by Peachpit, Berkeley, CA. To report errors, please send a note to errata@peachpit.com.

Printed and bound in the United States of America

ISBN-13: 978-0-321-70449-8

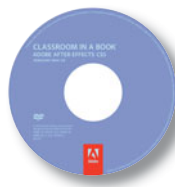
ISBN-10: 0-321-70449-5

9 8 7 6 5 4 3 2 1

CONTENTS

GETTING STARTED

1



About Classroom in a Book.	1
Prerequisites	1
Installing After Effects.	2
Optimizing performance.	2
Restoring default preferences	3
Copying the lesson files	3
How to use these lessons	4
Additional resources	5
Adobe certification	7

1 GETTING TO KNOW THE WORKFLOW

10



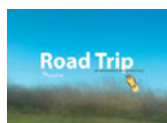
Lesson overview	10
Getting started	12
Creating a project and importing footage	12
Creating a composition and arranging layers	17
Adding effects and modifying layer properties	20
Animating the composition	26
Previewing your work.	33
Optimizing performance in After Effects	35
Rendering and exporting your composition	35
Customizing the workspace	36
Controlling the brightness of the user interface	37
Finding resources for using After Effects	38
Checking for updates	39
Review questions and answers	40

2 CREATING A BASIC ANIMATION USING EFFECTS AND PRESETS 42



Lesson overview	42
Getting started	44
Importing footage using Adobe Bridge	45
Creating the composition	47
Working with imported Illustrator layers	50
Applying effects to a layer	52
Applying an animation preset	54
Previewing the effects	57
Adding transparency	57
Rendering the composition	58
Review questions and answers	63

3 ANIMATING TEXT 64



Lesson overview	64
Getting started	66
About text layers	68
Creating and formatting point text	68
Using a text animation preset	71
Animating with scale keyframes	74
Animating using parenting	75
Animating imported Photoshop text	77
Animating text using a path animation preset	81
Animating type tracking	83
Animating text opacity	84
Using a text animator group	85
Cleaning up the path animation	89
Animating a nontext layer along a motion path	90
Adding motion blur	92
Exporting to Adobe Flash Professional CS5	93
Review questions and answers	94

4 WORKING WITH SHAPE LAYERS **96**



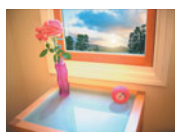
Lesson overview	96
Getting started	98
Adding a shape layer.....	100
Creating custom shapes	102
Creating stars.....	109
Incorporating video and audio layers.....	113
Applying a Cartoon effect	114
Adding a title bar	116
Using Brainstorm to experiment.....	119
Review questions and answers	122

5 ANIMATING A MULTIMEDIA PRESENTATION **124**



Lesson overview	124
Getting started	126
Animating the scenery using parenting.....	127
Adjusting an anchor point	131
Masking video using vector shapes.....	132
Keyframing a motion path	136
Animating additional elements.....	139
Applying an effect	143
Creating an animated slide show	147
Adding an audio track	152
Zooming in for a final close-up	154
Review questions and answers	156

6 ANIMATING LAYERS **158**



Lesson overview	158
Getting started	160
Simulating lighting changes	164
Duplicating an animation using the pick whip	166
Animating movement in the scenery	168
Adjusting the layers and creating a track matte	172
Animating the shadows.....	176
Adding a lens flare effect.....	178
Animating the clock	180

Retiming the composition	182
Review questions and answers	188

7 WORKING WITH MASKS 190



Lesson overview	190
About masks	192
Getting started	192
Creating a mask with the Pen tool	195
Editing a mask	196
Feathering the edges of a mask	200
Replacing the content of the mask	200
Adding a reflection	203
Creating a vignette	206
Adjusting the color	209
Review questions and answers	210

8 DISTORTING OBJECTS WITH THE PUPPET TOOLS 212



Lesson overview	212
Getting started	214
About the Puppet tools	217
Adding Deform pins	218
Defining areas of overlap	219
Stiffening an area	220
Animating pin positions	221
Recording animation	225
Review questions and answers	227

9 USING THE ROTO BRUSH TOOL 228



Lesson overview	228
About rotoscoping	230
Getting started	230
Creating a segmentation boundary	232
Fine-tuning the matte	237
Creating a transition from the full clip to the foreground	239
Creating the logo	240

Animating text	245
Adding a background image	247
Adding audio	248
Review questions and answers	249

10 PERFORMING COLOR CORRECTION 250



Lesson overview	250
Getting started	252
Adjusting color balance	255
Replacing the background	257
Removing unwanted elements	261
Correcting a range of colors	263
Warming colors with the Photo Filter effect	265
Review questions and answers	267

11 BUILDING 3D OBJECTS 268



Lesson overview	268
Getting started	270
Building a 3D object	272
Working with a null object	282
Working with 3D text	283
Creating a backdrop for 3D animation	287
Nesting a 3D composition	289
Adding a camera	290
Completing the scene	293
Review questions and answers	295

12 USING 3D FEATURES 296



Lesson overview	296
Getting started	298
Animating 3D objects	299
Adding reflections to 3D objects	300
Animating a camera	303
Adjusting layer timing	304
Using 3D lights	304
Adding effects	308
Adding motion blur	312

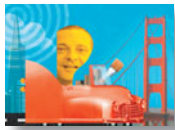
Previewing the entire animation	313
Review questions and answers	316

13 ADVANCED EDITING TECHNIQUES 318



Lesson overview	318
Getting started	320
Using motion stabilization	320
Using single-point motion tracking.....	328
Using multipoint tracking	333
Creating a particle simulation	337
Retiming playback using the Timewarp effect.....	347
Review questions and answers	352

14 RENDERING AND OUTPUTTING 354



Lesson overview	354
Getting started	356
Creating templates for the rendering process.....	357
Creating templates for output modules.....	361
Exporting to different output media.....	366
Review questions and answers	376

Appendix: Color Management in After Effects CS5.....	377
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INDEX 378

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GETTING STARTED

Adobe® After Effects® CS5 provides a comprehensive set of 2D and 3D tools for compositing, animation, and effects that motion-graphics professionals, visual effects artists, web designers, and film and video professionals need. After Effects is widely used for digital post-production of film, video, DVD, and the web. You can composite layers in various ways, apply and combine sophisticated visual and audio effects, and animate both objects and effects.

About Classroom in a Book

Adobe After Effects CS5 Classroom in a Book® is part of the official training series for Adobe graphics and publishing software, developed with the support of Adobe product experts. The lessons are designed to let you learn at your own pace. If you're new to Adobe After Effects, you'll learn the fundamental concepts and features you'll need to master the program. And if you've been using Adobe After Effects for a while, you'll find that Classroom in a Book teaches many advanced features, including tips and techniques for using the latest version.

Although each lesson provides step-by-step instructions for creating a specific project, there's room for exploration and experimentation. You can follow the book from start to finish, or do only the lessons that match your interests and needs. Each lesson concludes with a review section summarizing what you've covered.

Prerequisites

Before beginning to use *Adobe After Effects CS5 Classroom in a Book*, make sure that your system is set up correctly and that you've installed the required software and hardware. You should have a working knowledge of your computer and operating system. You should know how to use the mouse and standard menus and commands, and also how to open, save, and close files. If you need to review these techniques, see the printed or online documentation included with your Microsoft® Windows® or Apple® Mac® OS software.

Installing After Effects

You must purchase the Adobe After Effects CS5 software separately. For system requirements and complete instructions on installing the software, see the Adobe After Effects ReadMe.html file on the application DVD. Note that After Effects CS5 requires a 64-bit operating system. You must also have Apple QuickTime 7.6.2 or later installed on your system.

Install After Effects from the Adobe After Effects CS5 application DVD onto your hard disk; you cannot run the program from the DVD. Follow the onscreen instructions.

Make sure that your serial number is accessible before installing the application; you can find the serial number on the registration card or on the back of the DVD case.

Optimizing performance

Creating movies is memory-intensive work for a desktop computer. After Effects CS5 requires a minimum of 2GB of RAM. The more RAM that is available to After Effects, the faster the application will work for you.

OpenGL support

OpenGL is a set of standards for delivering high-performance 2D and 3D graphics for a wide variety of applications. Although After Effects can function without it, OpenGL accelerates various types of rendering, including rendering to the screen for previews.

To use OpenGL in After Effects, you'll need an OpenGL card that supports OpenGL 2.0 and has Shader support and support for NPOT (Non Power of Two) textures. When you first start After Effects, it will attempt to determine if your OpenGL card meets the requirements, and it will enable or disable OpenGL as appropriate.

To view information about your OpenGL card, as well as enable or disable OpenGL in After Effects, choose Edit > Preferences > Previews (Windows) or After Effects > Preferences > Previews (Mac OS). Select the Enable OpenGL option to enable OpenGL; click the OpenGL Info button to learn more about your card.

To learn more about OpenGL support in After Effects, see After Effects Help.

Color management

After Effects CS5 supports color management workflows. We encourage you to take advantage of the color management features in After Effects, especially for professional projects. For an introduction to color management, see the appendix, "Color Management in After Effects CS5."

Restoring default preferences

The preferences file controls the way the After Effects user interface appears on your screen. The instructions in this book assume that you see the default interface when they describe the appearance of tools, options, windows, panels, and so forth. Therefore, it's a good idea to restore the default preferences, especially if you are new to After Effects.

Each time you quit After Effects, the panel positions and certain command settings are recorded in the preferences file. To restore the original default settings, press Ctrl+Alt+Shift (Windows) or Command+Option+Shift (Mac OS) while starting After Effects. (After Effects creates a new preferences file if one doesn't already exist the next time you start the program.)

Restoring the default preferences can be especially helpful if someone has already customized After Effects on your computer. If your copy of After Effects hasn't been used yet, this file won't exist, so this procedure is unnecessary.

Important: If you want to save the current settings, you can rename the preferences file instead of deleting it. When you are ready to restore those settings, change the name back, and make sure that the file is located in the correct preferences folder.

- 1 Locate the After Effects preferences folder on your computer:
 - For Windows: .../AppData/Roaming/<username>/Adobe/AfterEffects/10.0.
 - For Mac OS: .../Users/<user name>/Library/Preferences/Adobe/After Effects/10.0
- 2 Rename any preferences file you want to preserve, and then restart After Effects.

Copying the lesson files

The lessons in *Adobe After Effects CS5 Classroom in a Book* use specific source files, such as image files created in Adobe Photoshop® and Adobe Illustrator®, audio files, and prepared QuickTime movies. To complete the lessons in this book, you must copy these files from the *Adobe After Effects CS5 Classroom in a Book* DVD (inside the back cover of this book) to your hard disk.

- 1 On your hard disk, create a new folder in a convenient location, and name it **AECS5_CIB**, following the standard procedure for your operating system:
 - Windows: In Explorer, select the folder or drive in which you want to create the new folder, and choose File > New > Folder. Then type the new name.
 - Mac OS: In the Finder, choose File > New Folder. Type the new name, and drag the folder to the location you want to use.

Now, you can copy the source files onto your hard disk.

- 2 Copy the Lessons folder (which contains folders named Lesson01, Lesson02, and so on) from the *Adobe After Effects CS5 Classroom in a Book* DVD onto your hard disk by dragging it to your new AECS5_CIB folder.

When you begin each lesson, you will navigate to the folder with that lesson number, where you will find all of the assets, sample movies, and other project files you need to complete the lesson.

If you have limited storage space on your computer, you can copy each lesson folder individually as you need it, and delete it afterward if desired. Some lessons build on preceding lessons; in those cases, a starting project file is provided for you for the second lesson or project. You do not have to save any finished project if you don't want to, or if you have limited hard disk space.

About copying the sample movies and projects

You will create and render one or more QuickTime movies in some lessons in this book. The files in the Sample_Movie folders are examples that you can use to see the end results of each lesson and to compare them with your own results. These files tend to be large, so you may not want to devote the storage space or time to copying all the sample movies before you begin. Instead, find the appropriate Sample_Movie folder on the book's DVD, and copy the file it contains onto your hard disk as you begin work on a lesson. (You cannot play movies from the DVD.) After you finish viewing the movie, you can delete it from your hard drive.

The files in the End_Project_File folders are samples of the completed project for each lesson. Use these files for reference if you want to compare your work in progress with the project files used to generate the sample movies. These end-project files vary in size from relatively small to a couple of megabytes, so you can either copy them all now if you have ample storage space, or copy just the end-project file for each lesson as needed, and then delete it when you finish that lesson.

How to use these lessons

Each lesson in this book provides step-by-step instructions for creating one or more specific elements of a real-world project. Some lessons build on projects created in preceding lessons; some stand alone. All of these lessons build on each other in terms of concepts and skills, so the best way to learn from this book is to proceed through the lessons in sequential order. In this book, some techniques and processes are explained and described in detail only the first few times you perform them.

Many aspects of the After Effects application can be controlled by multiple techniques, such as a menu command, a button, dragging, and a keyboard shortcut. Only one or two of the methods are described in any given procedure, so that you can learn different ways of working even when the task is one you've done before.

The organization of the lessons is also design-oriented rather than feature-oriented. That means, for example, that you'll work with layers and effects on real-world design projects over several lessons, rather than in just one lesson.

Additional resources

Adobe After Effects CS5 Classroom in a Book is not meant to replace documentation that comes with the program or to be a comprehensive reference for every feature. Only the commands and options used in the lessons are explained in this book. For comprehensive information about program features and tutorials refer to these resources:

Adobe Community Help: Community Help brings together active Adobe product users, Adobe product team members, authors, and experts to give you the most useful, relevant, and up-to-date information about Adobe products. Whether you're looking for a code sample or an answer to a problem, have a question about the software, or want to share a useful tip or recipe, you'll benefit from Community Help. Search results will show you not only content from Adobe, but also from the community.

With Adobe Community Help, you can:

- Access up-to-date definitive reference content online and offline.
- Find the most relevant content contributed by experts from the Adobe community, on and off Adobe.com.
- Comment on, rate, and contribute to content in the Adobe community.
- Download Help content directly to your desktop for offline use.
- Find related content with dynamic search and navigation tools.

To access Community Help: If you have any Adobe CS5 product, then you already have the Community Help application. To invoke Help, choose Help > After Effects Help. This companion application lets you search and browse Adobe and community content, plus you can comment on and rate any article just like you would in the browser. However, you can also download Adobe Help and language reference content for use offline. You can also subscribe to new content updates (which can be automatically downloaded) so that you'll always have the most up-to-date content for your Adobe product at all times. You can download the application from www.adobe.com/support/chc/index.html.

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See <http://community.adobe.com/help/profile/faq.html> for answers to frequently asked questions about Community Help.

Adobe After Effects Help and Support: www.adobe.com/support/aftereffects is where you can find and browse Help and Support content on adobe.com.

Adobe TV: <http://tv.adobe.com> is an online video resource for expert instruction and inspiration about Adobe products, including a How To channel to get you started with your product.

Adobe Design Center: www.adobe.com/designcenter offers thoughtful articles on design and design issues, a gallery showcasing the work of top-notch designers, tutorials, and more.

Adobe Developer Connection: www.adobe.com/devnet is your source for technical articles, code samples, and how-to videos that cover Adobe developer products and technologies.

Resources for educators: www.adobe.com/education includes three free curricula that use an integrated approach to teaching Adobe software and can be used to prepare for the Adobe Certified Associate exams.

Also check out these useful links:

Adobe Forums: <http://forums.adobe.com> lets you tap into peer-to-peer discussions, questions, and answers on Adobe products.

Adobe Marketplace & Exchange: www.adobe.com/cfusion/exchange is a central resource for finding tools, services, extensions, code samples, and more to supplement and extend your Adobe products.

Adobe After Effects CS5 product home page: www.adobe.com/products/aftereffects

Adobe Labs: <http://labs.adobe.com> gives you access to early builds of cutting-edge technology, as well as forums where you can interact with both the Adobe development teams building that technology and other like-minded members of the community.

Adobe certification

The Adobe training and certification programs are designed to help Adobe customers improve and promote their product-proficiency skills. There are four levels of certification:

- Adobe Certified Associate (ACA)
- Adobe Certified Expert (ACE)
- Adobe Certified Instructor (ACI)
- Adobe Authorized Training Center (AATC)

The Adobe Certified Associate (ACA) credential certifies that individuals have the entry-level skills to plan, design, build, and maintain effective communications using different forms of digital media.

The Adobe Certified Expert program is a way for expert users to upgrade their credentials. You can use Adobe certification as a catalyst for getting a raise, finding a job, or promoting your expertise.

If you are an ACE-level instructor, the Adobe Certified Instructor program takes your skills to the next level and gives you access to a wide range of Adobe resources.

Adobe Authorized Training Centers offer instructor-led courses and training on Adobe products, employing only Adobe Certified Instructors. A directory of AATCs is available at <http://partners.adobe.com>.

For information on the Adobe Certified programs, visit www.adobe.com/support/certification/main.html.

Accelerate your workflow with Adobe CS Live

Adobe CS Live is a set of online services that harness the connectivity of the web and integrate with Adobe Creative Suite 5 to simplify the creative review process, speed up website compatibility testing, deliver important web user intelligence, and more, allowing you to focus on creating your most impactful work. CS Live services are complimentary for a limited time* and can be accessed online or from within Creative Suite 5 applications.



Adobe BrowserLab is for web designers and developers who need to preview and test their web pages on multiple browsers and operating systems. Unlike other browser-compatibility solutions, BrowserLab renders screenshots virtually on demand with multiple viewing and diagnostic tools, and can be used with Dreamweaver CS5 to preview local content and different states of interactive pages. Being an online service, BrowserLab has fast development cycles, with greater flexibility for expanded browser support and updated functionality.



Adobe CS Review is for creative professionals who want a new level of efficiency in the creative review process. Unlike other services that offer online review of creative content, only CS Review lets you publish a review to the web directly from within InDesign, Photoshop, Photoshop Extended, and Illustrator and view reviewer comments back in the originating Creative Suite application.



Acrobat.com is for creative professionals who need to work with a cast of colleagues and clients in order to get a creative project from creative brief to final product. Acrobat.com is a set of online services that includes web conferencing, online file-sharing and workspaces. Unlike collaborating via email and attending time-consuming in-person meetings, Acrobat.com brings people to your work instead of sending files to people, so you can get the business side of the creative process done faster, together, from any location.



Adobe Story is for creative professionals, producers, and writers working on or with scripts. Story is a collaborative script-development tool that turns scripts into metadata that can be used with the Adobe CS5 Production Premium tools to streamline workflows and create video assets.



SiteCatalyst NetAverages is for web and mobile professionals who want to optimize their projects for wider audiences. NetAverages provides intelligence on how users are accessing the web, which helps reduce guesswork early in the creative process. You can access aggregate user data such as browser type, operating system, mobile device profile, screen resolution, and more, which can be shown over time. The data is derived from visitor activity to participating Omniture SiteCatalyst customer sites. Unlike other web intelligence solutions, NetAverages innovatively displays data using Flash, creating an engaging experience that is robust yet easy to follow.

You can access CS Live three different ways:

- 1 Set up access when you register your Creative Suite 5 products, and get complimentary access that includes all of the features and workflow benefits of using CS Live with Creative Suite 5.
- 2 Set up access by signing up online, and get complimentary access to CS Live services for a limited time. Note that this option does not give you access to the services from within your products.
- 3 Desktop product trials include a 30-day trial of CS Live services.

**CS Live services are complimentary for a limited time. See www.adobe.com/go/csllive for details.*

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4

WORKING WITH SHAPE LAYERS

Lesson overview

In this lesson, you'll learn how to do the following:

- Create custom shapes.
- Customize a shape's fill and stroke.
- Use path operations to transform shapes.
- Animate shapes.
- Repeat shapes.
- Explore design options with the Brainstorm feature.
- Add a Cartoon effect to a video layer for a distinctive look.
- Use Adobe After Effects in a DVD interface workflow.



This lesson will take approximately an hour to complete. Copy the Lesson04 folder into the Lessons folder that you created on your hard drive for these projects (or create it now), if you haven't already done so. As you work on this lesson, you'll preserve the start files. If you need to restore the start files, copy them from the *Adobe After Effects CS5 Classroom in a Book* DVD.



Shape layers make it easy to create expressive backgrounds and intriguing results. You can animate shapes, apply animation presets, and add Repeaters to intensify their impact.

Getting started

Shape layers are created automatically when you draw a shape with any of the drawing tools. You can customize and transform an individual shape or its entire layer to create interesting results. In this lesson, you will use shape layers to build a dynamic background for the introduction of a reality series called *DJ Quad Master*. You'll also use the Cartoon effect to change the overall look of the video. This effect performs best with video cards that support OpenGL. You may choose to skip the Cartoon effect exercise; if you do, you'll be able to finish the project, but it won't match the sample movie.

First, you'll preview the final movie and set up the project.

1 Make sure the following files are in the AECS5_CIB/Lessons/Lesson04 folder on your hard disk, or copy them from the *Adobe After Effects CS5 Classroom in a Book* DVD now:

- In the Assets folder: DJ.mov, gc_adobe_dj.mp3
- In the Sample_Movie folder: Lesson04.mov

2 Open and play the Lesson04.mov sample movie to see what you will create in this lesson. When you are done, quit QuickTime Player. You may delete this sample movie from your hard disk if you have limited storage space.

As you start After Effects, restore the default application settings. See “Restoring default preferences” on page 3.

3 Press Ctrl+Alt+Shift (Windows) or Command+Option+Shift (Mac OS) while starting After Effects. When asked whether you want to delete your preferences file, click OK.

4 Click Close to close the Welcome screen.

After Effects opens to display a blank, untitled project.

5 Choose File > Save As, and then navigate to the AECS5_CIB/Lessons/Lesson04/Finished_Project folder.

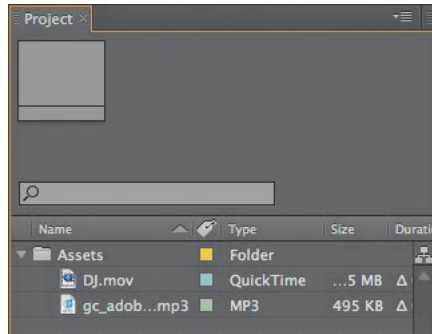
6 Name the project **Lesson04_Finished.aep**, and then click Save.

Creating the composition

Next, you'll import the files you need and create the composition.

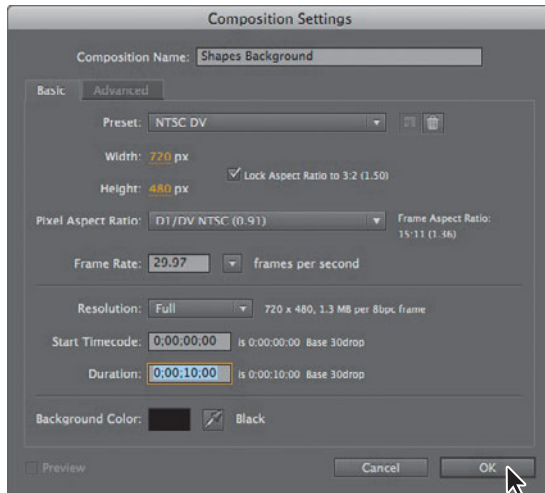
1 Double-click an empty area of the Project panel to open the Import File dialog box.

- 2 Navigate to the AECS5_CIB/Lessons/Lesson04/Assets folder on your hard disk, Shift-click to select the DJ.mov and gc_adobe_dj.mp3 files, and then click Open.
- 3 Choose File > New > New Folder to create a new folder in the Project panel.
- 4 Name the folder **Assets**, press Enter or Return to accept the name, and then drag the footage items you imported into the Assets folder.



- 5 Press Ctrl+N (Windows) or Command+N (Mac OS) to create a new composition.
- 6 In the Composition Settings dialog box, name the composition **Shapes Background**, select the NTSC DV preset, and set the Duration to **10:00**. Then click OK.

► **Tip:** To specify 10 seconds, type **10.** in the Duration box. The period indicates that there are no units in that position. To specify 10 minutes, type **10..** in the box.



After Effects opens the new composition in the Timeline and Composition panels.

Adding a shape layer

One advantage of using a shape layer, rather than a solid layer, is that you can use the Fill option to create a linear or radial gradient. You'll use the Rectangle tool to create a gradient background for the composition.

About shapes

After Effects includes five shape tools: Rectangle, Rounded Rectangle, Ellipse, Polygon, and Star. When you draw a shape directly in the Composition panel, After Effects adds a new shape layer to the composition. You can apply stroke and fill settings to a shape, modify its path, and apply animation presets. Shape attributes are all represented in the Timeline panel, and you can animate each setting over time.

The same drawing tools can create both shapes and masks. Masks are applied to layers to hide or reveal areas of an image, while shapes have their own layers. When you select a drawing tool, you can specify whether the tool draws a shape or a mask.

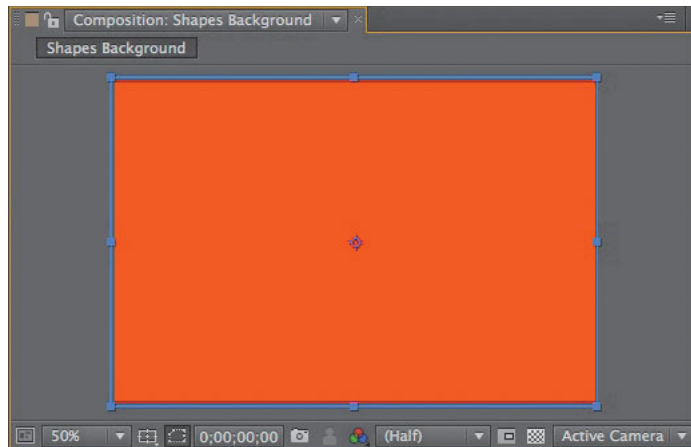
Drawing a shape

You'll begin by drawing the rectangle that will contain the gradient fill.

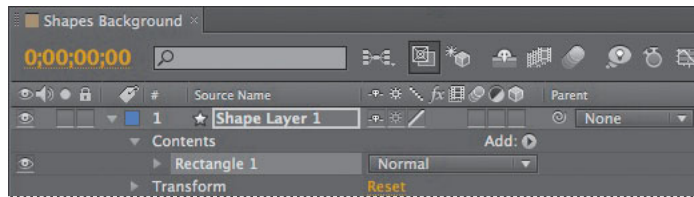
- 1 Select the Rectangle tool (■).



- 2 Choose 50% from the Magnification Ratio pop-up menu at the bottom of the Composition panel so that you can see the entire composition.
- 3 Click just outside the upper-left corner of the composition, and drag the tool to the area just outside the bottom-right corner, so that a rectangle covers the entire composition.



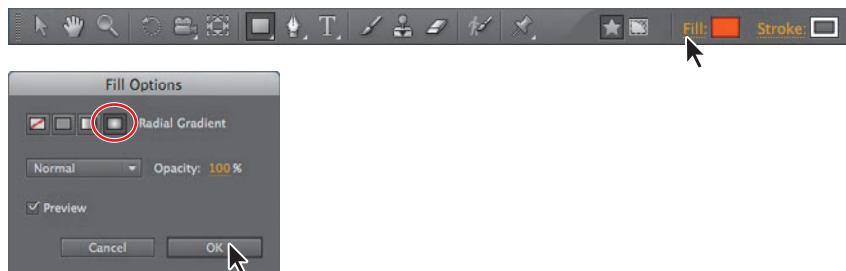
The shape appears in the Composition panel, and After Effects adds a shape layer named Shape Layer 1 to the Timeline panel.



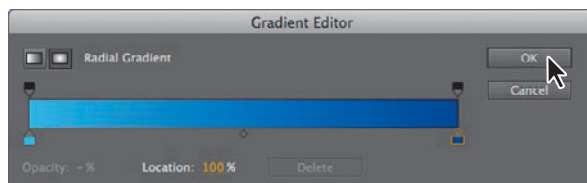
Applying a gradient fill

You can change the color of a shape by modifying its Fill settings in the Tools panel. Clicking the word *Fill* opens the Fill Options dialog box, where you can select the kind of fill, its blending mode, and its opacity. Clicking the Fill Color box opens the Adobe Color Picker if the fill is solid, or the Gradient Editor if the fill is a gradient.

- 1 Click the word *Fill* to open the Fill Options dialog box.
- 2 Select the Radial Gradient option (■), and click OK.



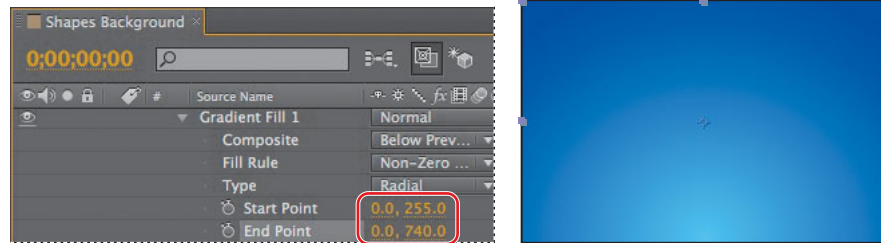
- 3 Click the Fill Color box (next to the word *Fill*) to open the Gradient Editor.
- 4 Select the white color stop (the left color stop below the gradient ramp), and select a light blue color. (We used R=100, G=185, B=240.)
- 5 Select the black color stop (the right color stop below the gradient ramp), and select a dark blue color. (We used R=10, G=25, B=150.)
- 6 Click OK to apply the new gradient colors.



Modifying gradient settings

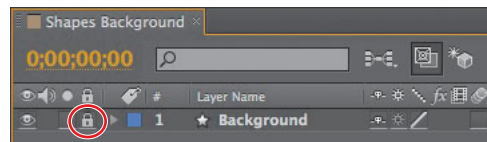
The gradient is a little small, and it falls off quickly. You'll adjust the settings for the shape layer to expand the gradient.

- 1 In the Timeline panel, expand Shape Layer 1 > Contents > Rectangle 1 > Gradient Fill 1.
- 2 Change the Start Point to **0, 225**, and the End Point to **0, 740**.



Now the gradient originates at the bottom of the screen and falls off near the top and edges of the composition.

- 3 Hide the Shape Layer 1 properties.
- 4 Select the layer name (Shape Layer 1), press Enter or Return, and type **Background**. Press Enter or Return to accept the new layer name.
- 5 Click the Lock column (🔒) for the Background layer so that you don't accidentally select it.



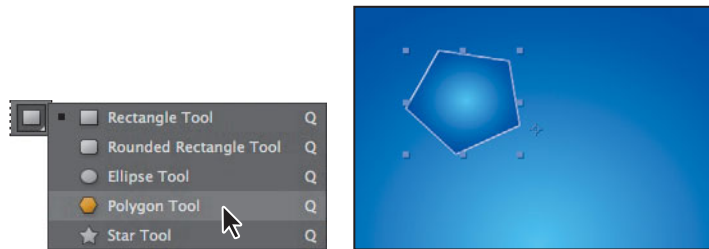
Creating custom shapes

Though there are only five shape tools, you can modify the paths you draw to create a wide variety of shapes. The Polygon tool, in particular, gives you great flexibility. You'll use it to create rotating sun shapes in the background.

Drawing a polygon

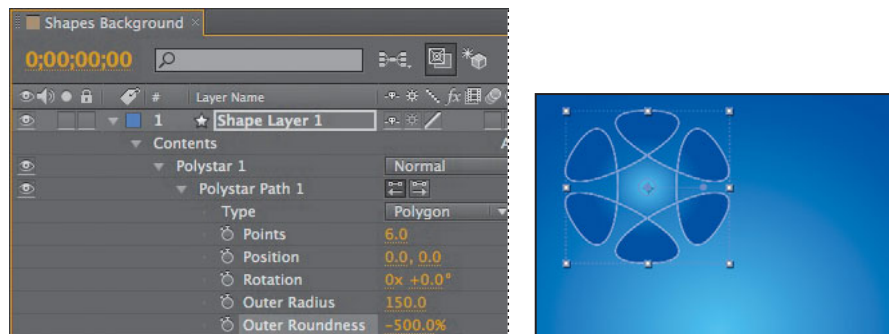
By default, the Polygon tool draws a shape using the settings of the last shape drawn with that tool. However, by adjusting the points, position, rotation, outer radius, outer roundness, and other values, you can dramatically alter the initial shape. You'll modify a simple polygon to create a much more interesting shape.

- 1 Select the Polygon tool (⬡), which is hidden behind the Rectangle tool (■).
- 2 Drag a polygon shape in the Composition area.



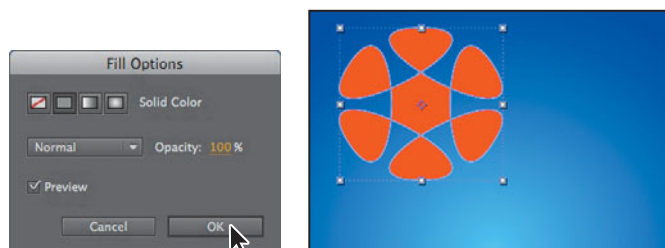
► **Tip:** While you're dragging the shape, you can press the spacebar to reposition the shape in the Composition panel.

- 3 In the Timeline panel, expand Shape Layer 1 > Polystar 1 > Polystar Path 1.
- 4 Change the Points to **6**, the Rotation to **0** degrees, and the Outer Radius to **150**.
- 5 Change the Outer Roundness to **-500%**.

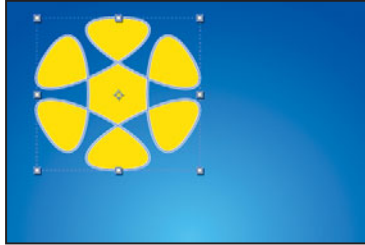


► **Tip:** You can change settings to values below 0 and above 100% for more dramatic results.

- 6 Hide the Polystar Path 1 properties.
- 7 Click the word *Fill* in the Tools panel to open the Fill Options dialog box. Select the Solid Color icon (■), and then click OK.



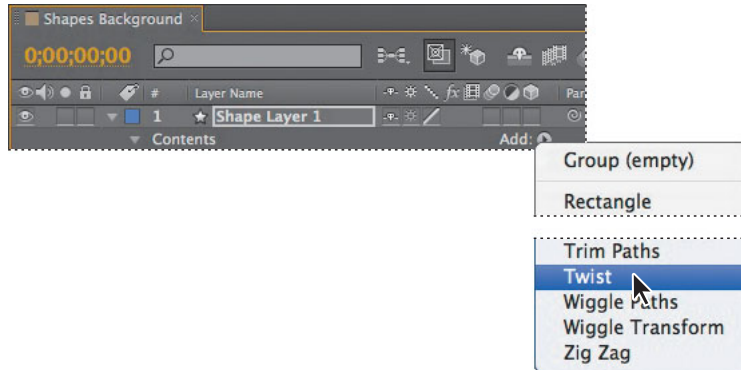
- 8 Click the Fill Color box, and select a bright yellow. (We used R= 250, G=250, B=0.) Click OK.
- 9 Click the Stroke Color box, and select a bright gray. (We used R=230, G=230, B=230.) Click OK.
- 10 Change the Stroke Width in the Tools panel to 5 pixels to emphasize the stroke.



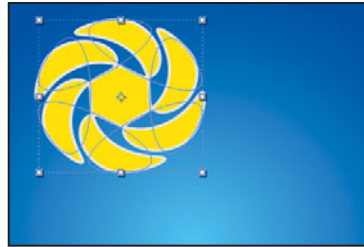
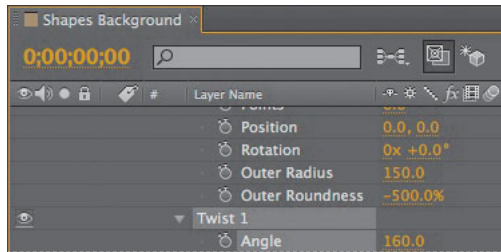
Twisting a shape

The Twist path operation rotates a path more sharply in the center than at the edges. Positive values twist clockwise; negative values twist counterclockwise. You'll use the Twist path operation to give the shape a little more definition.

- 1 In the Timeline panel, open the Add pop-up menu next to Contents in the Shape Layer 1 layer, and choose Twist.



- 2 Expand Twist 1.
- 3 Change the Angle to **160**.

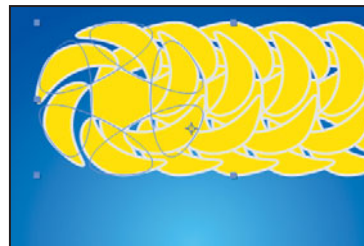
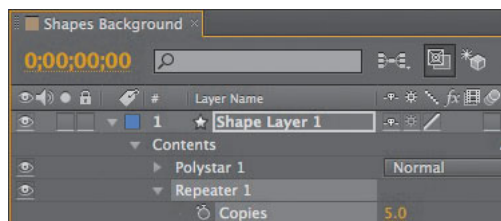


- 4 Hide the Polystar 1 properties.
- 5 Choose File > Save to save your work so far.

Repeating a shape

You've created the basic shape that you want to use in the background, but you need many more copies of it to fill the composition. You could duplicate the shape manually, but instead, you'll use the Repeater path operation to create multiple rows of suns.

- 1 Select Shape Layer 1. You're selecting the layer because you want to add the Repeater to the entire shape group, not just an individual shape.
- 2 Open the Add pop-up menu, and then choose Repeater.
- 3 Expand Repeater 1.
- 4 Change the number of copies to **5**.

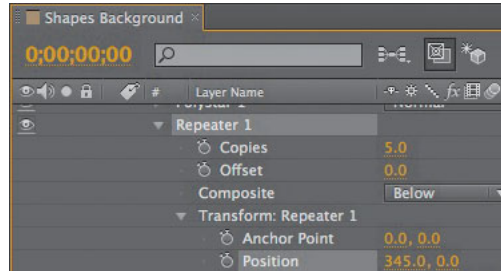


Note: There are multiple Transform properties in the Timeline panel, applying to different path operators. Make sure you're selecting the appropriate Transform property for the object or layer you want to affect. In this case, you want to affect only the Repeater.

The Repeater creates four copies of the shape, overlapping each other. You'll separate them next.

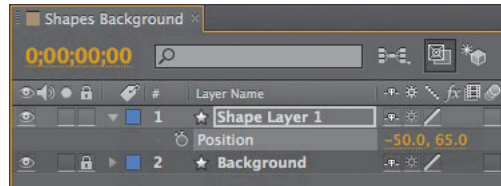
- 5 Expand Transform: Repeater 1.

- 6 Change the Position to **345,0**. The first value represents the x axis. To move the shapes closer together, use a smaller value for the x axis; to move them farther apart, use a larger value.



Now the shapes are farther apart. But you can't see them all at the same time. To move all of the shapes, you need to move the entire shape layer.

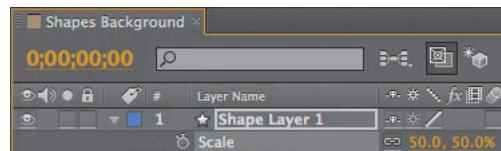
- 7 Hide the Transform: Repeater 1 properties.
- 8 Select Shape Layer 1, and then press P to display the Position property for the layer. Change the Position to **-50, 65**.



The shape layer is now in the upper-left corner of the composition. You'll scale the layer and then add more rows.

● **Note:** Because the horizontal and vertical values are linked, both values change when you change one.

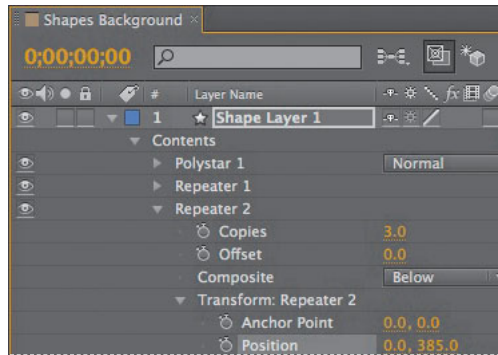
- 9 Select Shape Layer 1, and then press S to display the Scale property for the layer. Change the Scale to **50%**.



- 10 Press S to hide the Scale property for the layer.
- 11 Expand Shape Layer 1 > Contents.
- 12 Select Shape Layer 1, and then choose Repeater from the Add pop-up menu.

13 Expand Repeater 2 > Transform: Repeater 2.

14 Change the Position to **0, 385** so that there is vertical space between the rows.

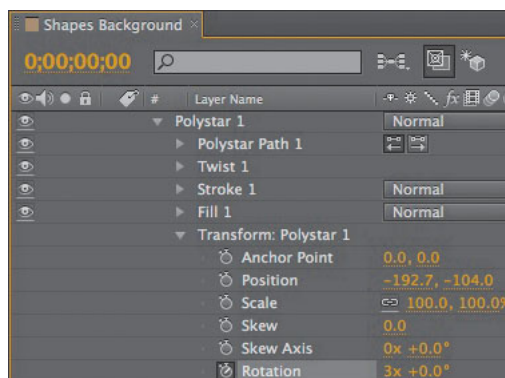


15 Hide the Repeater 2 properties.

Rotating shapes

The suns should rotate on the background. You'll animate the Rotation property for the original shape, and the changes will automatically apply to the duplicated shapes.

- 1** In the Timeline panel, expand Shape Layer 1 > Contents > Polystar 1 > Transform: Polystar 1.
- 2** Press the Home key, or drag the current-time indicator to the beginning of the timeline.
- 3** Click the stopwatch (⌚) next to the Rotation property to create an initial keyframe for the layer.
- 4** Press the End key, or drag the current-time indicator to the end of the timeline.
- 5** Change the Rotation to **3x+0** degrees. This setting causes the shape to rotate three times in 10 seconds.

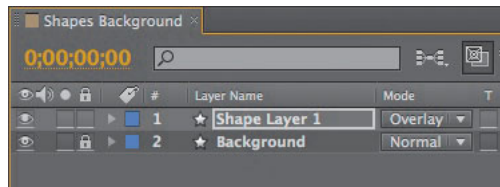


- 6 Hide the properties for Shape Layer 1.
- 7 Drag the current-time indicator across the timeline to preview the rotation.

Blending shapes with the background

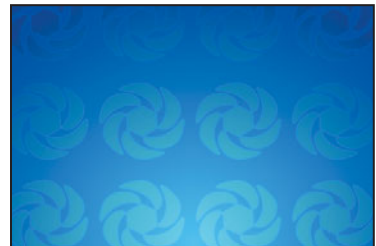
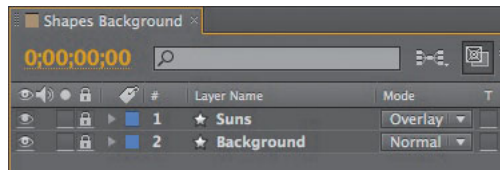
The rotating suns look good, but they contrast with the background too much. You want the character in the main video file to be the focus of attention. You'll change the blending mode and opacity for the shape layer to make the background more subtle.

- 1 Click Toggle Switches/Modes at the bottom of the Timeline panel.
- 2 Choose Overlay from the Mode pop-up menu for the Shape Layer 1 layer.



- 3 Select Shape Layer 1, and then press T to display the Opacity property for the layer.
- 4 Change the Opacity to 25%.
- 5 Press T to hide the Opacity property.
- 6 Select Shape Layer 1, press Enter or Return, and type **Suns** for the layer name. Press Enter or Return again to accept the new name.
- 7 Lock the layer to prevent accidental changes to it.

● **Note:** Instead of changing the opacity for the entire layer, you could change the opacity for the original shape. The value would apply to all the duplicates as well.



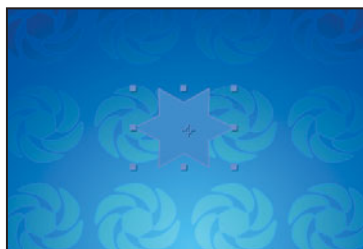
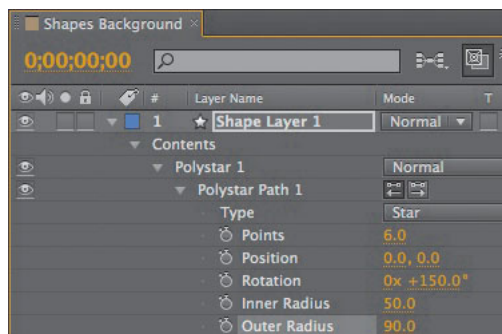
Creating stars

The Star tool is similar to the Polygon tool. A polygon is simply a star without an Inner Radius or Inner Roundness property; both tools create shapes called polystars. You'll use the Star tool to draw a star for the background, and then use the Pucker & Bloat operation to change the star's shape. Then you'll duplicate the star and rotate the stars around the layer's anchor point.

Drawing a star

The Star tool is grouped with the other shape tools. To draw a star, drag the Star tool in the Composition panel.

- 1 Select the Star tool (☆), which is hidden beneath the Polygon tool (⬡).
- 2 Change the fill and stroke settings for the shape before you draw the star:
 - Click the Fill Color box, and select a medium blue. (We used R=75, G=120, B=200.) Then click OK.
 - Click the word *Stroke*, and click None (☐) in the Stroke Options dialog box. Click OK.
- 3 Draw a star near the center of the composition. After Effects adds a shape layer named Shape Layer 1 to the Timeline panel.
- 4 In the Timeline panel, expand Shape Layer 1 > Polystar 1 > Polystar Path 1.
- 5 Change the Points to **6** and the Rotation to **150** degrees.
- 6 Change the Inner Radius to **50** and the Outer Radius to **90**. The radius values change the shape of the star.



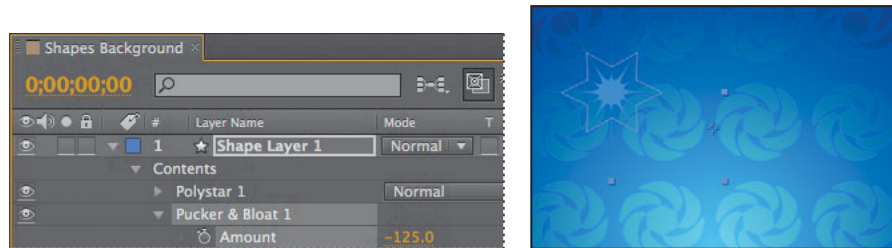
- 7 Expand the Transform: Polystar 1 properties.
- 8 Change the Position to **-180, -70**.
- 9 Collapse the Polystar 1 properties to hide them.

● **Note:** If you have trouble seeing the star in front of the background, you can temporarily hide the Suns and Background layers by clicking the video switches (eye icons) for the layers in the Timeline panel.

Applying Pucker & Bloat

After Effects includes a powerful path operation called Pucker & Bloat. You can pucker a shape by pulling the path's vertices outward while curving segments inward, or bloat a shape by pulling the vertices inward while curving segments outward. Negative values pucker a shape; positive values bloat it. You'll pucker the star to give it a distinctive look.

- 1 Select Shape Layer 1.
- 2 Choose Pucker & Bloat from the Add pop-up menu.
- 3 Expand Pucker & Bloat 1.
- 4 Change the Amount to **-125** to pucker the star.



This star shape will go well in the background. Now you can duplicate and animate it.

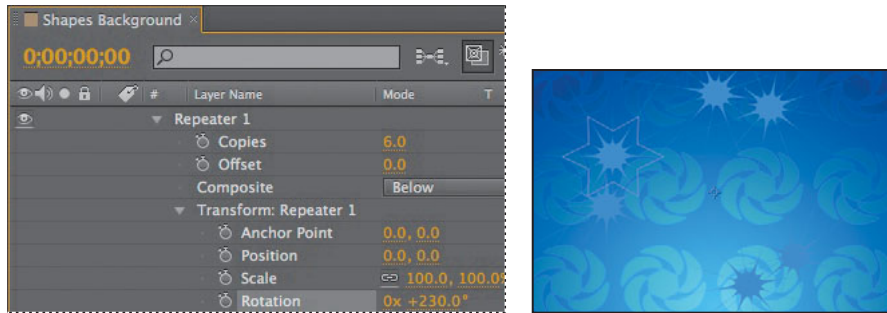
Duplicating shapes

You want to have multiple stars in slightly different sizes rotating around the screen. You'll use the Repeater path operation again, but this time you'll modify the Transform properties for the Repeater to get different results.

- 1 Select Shape Layer 1, and choose Repeater from the Add pop-up menu.
- 2 Expand Repeater 1, and change the number of copies to **6**.

Now there are six stars on the screen.

- 3 Expand Transform: Repeater 1.
- 4 Change the Position to **0, 0**, and the Rotation to **230** degrees.



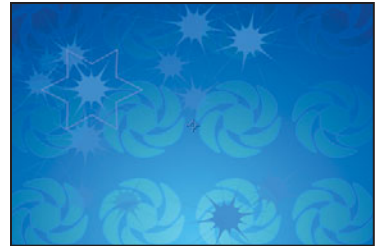
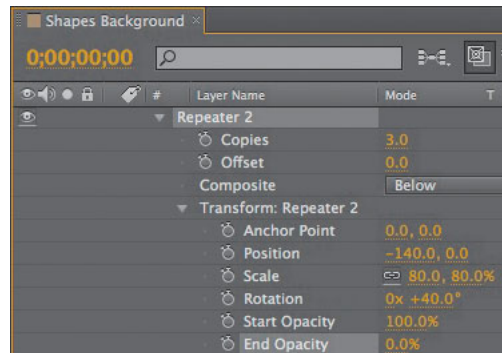
Because you applied the rotation to the Repeater, rather than the shape, each star rotated around the layer's anchor point to a different degree. When you change the Transform properties for the Repeater, the change is multiplied by the number of copies created. For example, if there are 10 copies of a shape and you change the Rotation value to 10 degrees, the first shape retains the original value of 0, the second shape rotates 10 degrees, the third shape rotates 20 degrees, and so on. The same concept applies to each of the Transform properties.

In this project, the anchor point for the layer differs from the position of the shapes, so the chain of stars begins to wrap in on itself.

- 5 Change the End Opacity to **65%**. Each star is more transparent than the one before it.
- 6 Hide the Repeater 1 properties.
- 7 Select the Shape Layer 1 layer, and choose Repeater from the Add pop-up menu again to add another Repeater.
- 8 Expand Repeater 2 > Transform: Repeater 2.
- 9 Change the Position to **-140, 0** and the Rotation to **40** degrees.
- 10 Change the Scale to **80%**.

Each duplicate star will be smaller than the one before it. Because there are three duplicates of the first group of stars, some will be 64% the size of the original.

11 Change the End Opacity to **0%**.



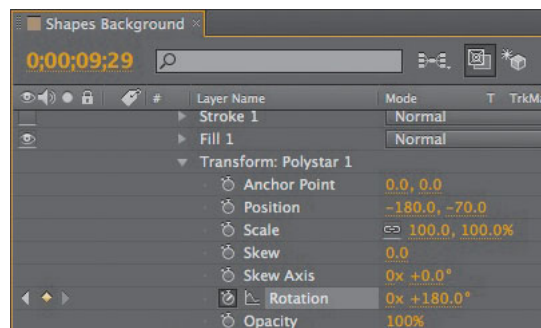
12 Collapse the Repeater 2 properties to hide them.

13 Choose File > Save.

Rotating shapes

You've rotated the stars around the anchor point for the layer. Now you want to animate each star to rotate around its own axis. To achieve this, you'll animate the Rotation property for the polystar shape itself, not the layer or the Repeater.

- 1** Expand Polystar 1 > Transform: Polystar 1.
- 2** Press the Home key, or drag the current-time indicator to the beginning of the timeline.
- 3** Click the stopwatch icon (⌚) for the Rotation property to create an initial keyframe.
- 4** Press the End key, or drag the current-time indicator to the end of the timeline.
- 5** Change the Rotation to **180** degrees.



- 6** Manually preview the composition by dragging the current-time indicator along the timeline. After you confirm that everything is rotating, collapse the layer.

- 7 Rename the Shape Layer 1 layer **Stars**, and press Enter or Return to accept the layer name.
- 8 Lock the Stars layer.

Incorporating video and audio layers

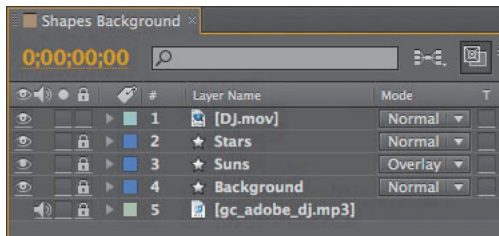
The background is in place. Now you can add the video of the DJ and the audio track that accompanies it.

Adding audio and video files

You imported files at the beginning of the lesson. Now you'll add them to the composition. The DJ.mov clip has no background and was rendered with a premultiplied alpha channel, so the underlying layers are visible. You'll learn about keying footage in Lesson 9, "Using the Roto Brush Tool"

- 1 Press Home, or drag the current-time indicator to the beginning of the composition.
- 2 Open the Assets folder in the Project panel.
- 3 Drag the DJ.mov footage item to the Timeline panel, placing it above the other layers.
- 4 Drag the gc_adobe_dj.mp3 item from the Project panel to the Timeline panel, placing it beneath the other layers.
- 5 Lock the audio layer that you just added to the Timeline panel so that you can't accidentally select and move it later. Then choose File > Save.

● **Note:** You can place an audio layer anywhere in the layer stack, but moving it to the bottom keeps it out of the way while you work.

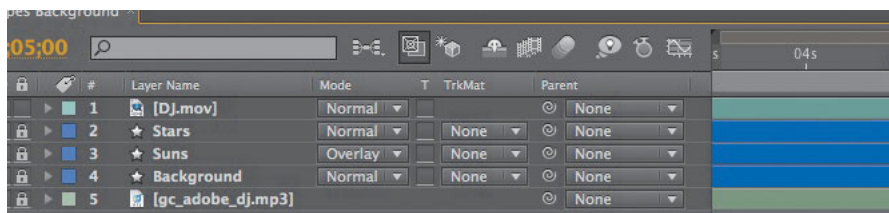


Trimming the work area

The DJ.mov clip is only 5 seconds long, but the composition is 10 seconds. If you rendered this movie now, the DJ would disappear halfway through the movie. To fix the problem, you'll move the work area end point to the 5-second mark. Then only the first 5 seconds will render.

● **Note:** Alternatively, if you do not want to keep the last five seconds of the composition, you can change the duration of the composition to 5 seconds. To do so, choose Composition > Composition Settings, and then type **5.00** in the Duration box.

- 1 Move the current-time indicator to the 5-second mark. You can drag the current-time indicator in the Timeline panel, or click the Current Time box and then type **500**.
- 2 Press N to move the work area end point to the current time.



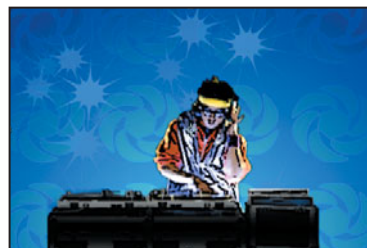
Applying a Cartoon effect

After Effects includes a Cartoon effect, which makes it easy to create a stylized look for your video. Since this intro for the *DJ Quad Master* reality series is very different from other reality series, the Cartoon effect will work perfectly here.

The Cartoon effect performs best on systems with video cards that support OpenGL. If you're not using OpenGL, you can choose to skip this exercise and continue with "Adding a title bar."

- 1 Select the DJ.mov layer in the Timeline panel.
- 2 Choose Effect > Stylize > Cartoon.

The Cartoon effect performs three operations on a layer. First, it smooths the layer, removing a great deal of detail. Therefore, it works best on video footage rather than a graphic layer, such as the background in this project. Next, the Cartoon effect emphasizes the edges of shapes, based on their brightness values. Finally, it simplifies the color in the layer.



The default settings do a pretty good job, but you'll fine-tune them in the Effect Controls panel.

- 3 In the Effect Controls panel, choose Fill from the Render pop-up menu.

► **Tip:** For interesting results, try changing the Cartoon Render options from Fill & Edges to Fill (for a color-only effect) or Edges (for black-and-white line art).

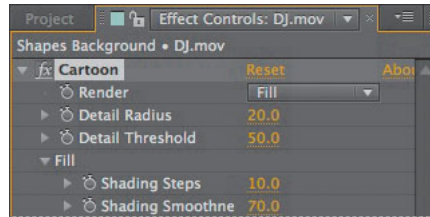
For this project, you're selecting Fill only temporarily so that you can more easily see the results of the Fill settings as you make adjustments.

- 4 Change the Detail Radius amount to **20** and the Detail Threshold amount to **50**.

These settings control how much detail is removed and how it is smoothed. Higher values remove more detail.

- 5 In the Fill area, change the Shading Steps value to **10**, and make sure the Shading Smoothness value is 70.

These settings determine how color is reduced and how gradients are preserved. In this project, changing these values reduces the number of colors in the DJ's shirt, creating a simpler design.

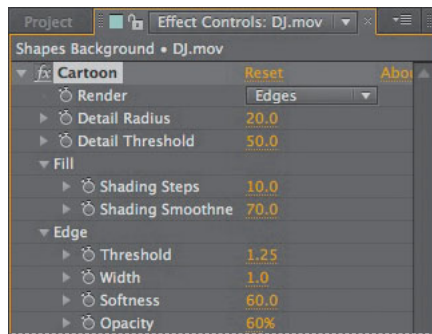


- 6 Choose Edges from the Render pop-up menu so you can focus on the edge controls. The layer becomes black and white temporarily.

- 7 In the Edge area, change the Threshold to **1.25** and the Width to **1**.

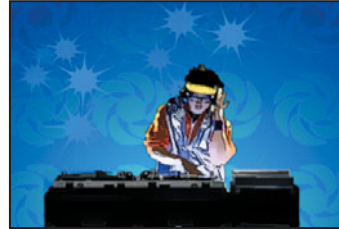
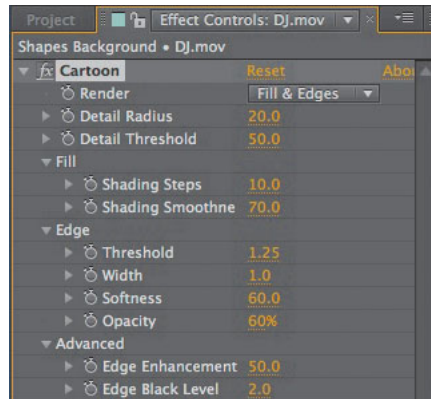
These settings reduce the number of black lines on the subject.

- 8 Leave the Softness value at its current setting (60), but lower the Opacity to **60%** to make the lines more subtle.



- 9 Choose Fill & Edges from the Render pop-up menu to restore the color.
- 10 Expand Advanced to see the advanced controls, which give you precise control over the edges.

- 11 Change the Edge Enhancement value to **50** to sharpen the edges of the layer.
- 12 Change the Edge Black Level to **2** to fill in more areas of the image with solid black. This makes the image even more cartoonish.





- 13 Lock the DJ.mov layer to ensure you don't accidentally make changes to it as you continue the project.

Adding a title bar

You've created an exciting background and added the video of the DJ and the audio track. The only thing missing is the title to identify the program. You'll use the Rectangle tool and path operations to create a dynamic shape, and then you'll add the text.

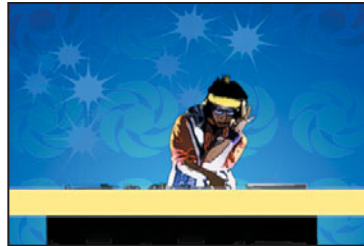
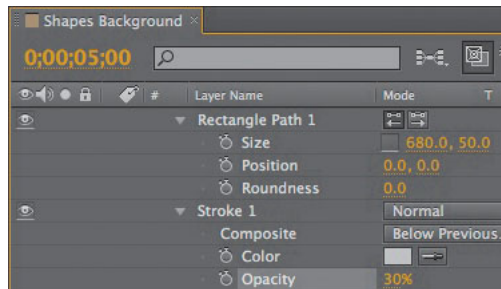
Creating a self-animating shape

Wiggle Paths turns a standard rectangle into a series of jagged peaks and valleys. You'll use it to create a shape that looks like a soundwave. Because the operation is self-animating, you only need to change a few properties for the entire shape to move on its own.

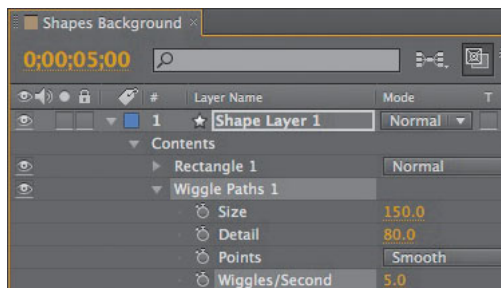
- 1 Select the Rectangle tool () , which is hidden under the Star tool ().
- 2 Click the Fill Color box, and select a light yellow. (We used R=255, G=255, B=130.) Click OK.
- 3 Click the word *Stroke*. In the Stroke Options dialog box, select Solid Color, and click OK.
- 4 Click the Stroke Color box, and select a light gray. (We used R=200, G=200, B=200.) Click OK.

- 5 Change the Stroke Width to **10** pixels.
- 6 Draw a rectangle across the composition—near the bottom and approximately 50 pixels high.
- 7 In the Timeline panel, expand Rectangle 1 > Rectangle Path 1.
- 8 Unlink the Size values, and then change them to **680, 50**.
- 9 Expand Stroke 1, and then change the Stroke Opacity to **30%**.

► **Tip:** If you need to reposition the rectangle, use the Selection tool to drag it into place in the Composition panel.



- 10 Hide the Rectangle 1 properties.
- 11 Select Shape Layer 1, and choose Wiggle Paths from the Add pop-up menu.
- 12 Expand Wiggle Paths 1. Then change the Size to **150** and the Detail to **80**.
- 13 Select Smooth from the Points menu to make the path less jagged.
- 14 Change Wiggles/Second to **5** to speed up the movement.

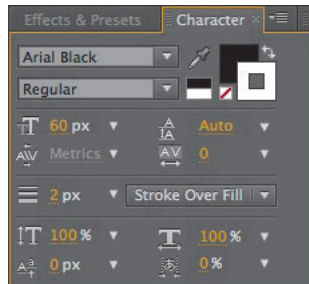


- 15 Move the current-time indicator across the timeline to see the shape move. It's not exactly an audio waveform, but it's a stylistic version of one.
- 16 Hide all the properties for the layer.
- 17 Rename the layer **Lower Third**, and then lock the layer.

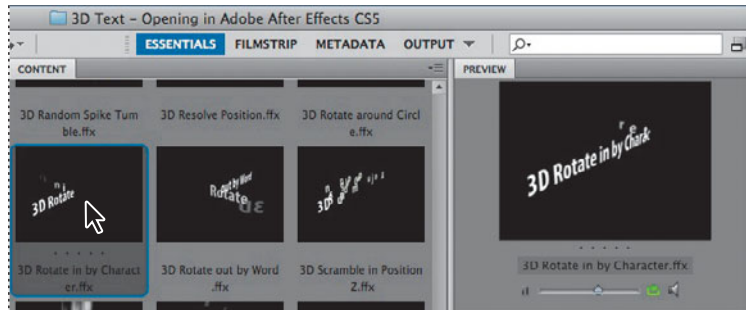
Adding text

All you need to do now is add the title of the program. You'll use an animation preset to make the text stand out.

- 1 Press Home, or move the current-time indicator to the beginning of the composition.
- 2 Select the Horizontal Type tool (T). In the Character panel, select a sans serif font, such as Arial Black, and specify a size of **60** pixels.
- 3 Click the Fill Color box in the Character panel, and select black (R=0, G=0, B=0). Then click the Stroke Color box, and select white (R=255, G=255, B=255).
- 4 Change the Stroke Width to **2** pixels.
- 5 Click an insertion point in the Composition panel, and type **DJ Quad Master**.
- 6 Select the Selection tool (V), and then reposition the text over the wave-form shape.



- 7 Select the text in the Composition panel, and choose Animation > Browse Presets. Adobe Bridge opens, displaying the available animation presets.
- 8 Navigate to the Text/3D Text folder, and then double-click the 3D Rotate In By Character thumbnail. After Effects applies the preset to the selected text.



- 9 Make a RAM preview to see your movie! Press the spacebar to stop the preview.



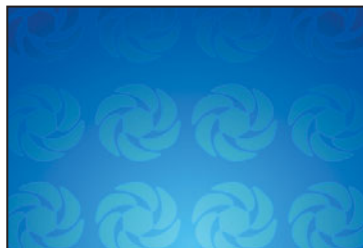
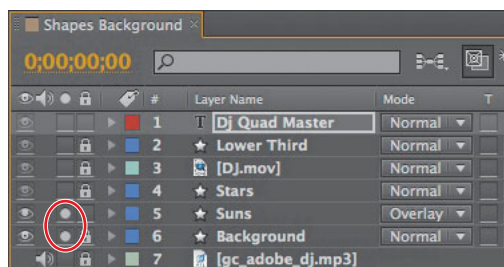
● **Note:** With the Cartoon effect in place, the RAM preview may take longer than usual to render and begin playing.

Using Brainstorm to experiment

The Brainstorm feature makes it easy to try different settings for effects, and to quickly apply the one you like. To use the Brainstorm feature, select the layer or properties you want to include, and then click the Brainstorm icon. The Brainstorm dialog box displays multiple variations of your image, based on randomized settings. You can save one or more of the variants, apply one to a composition, or redo the Brainstorm operation.

The Brainstorm feature works especially well with animation presets. You'll use it to explore possibilities for the Suns layer you created for this project.

- 1 Save the project, and then choose File > Save As. Name the new copy of the project **Brainstorm**, and save it in the Lesson04/Finished_Project folder.
- 2 Unlock the Suns layer in the Timeline panel.
- 3 Click the Solo switches (●) for the Suns and Background layers, so that you see only these two layers in the Composition panel.



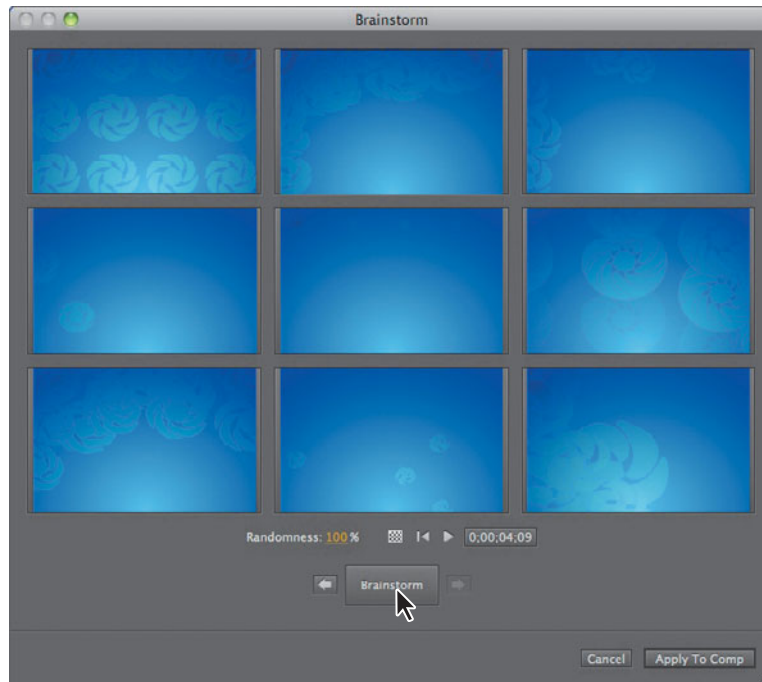
● **Note:** Selecting Contents selects all the properties for the layer, so that the Brainstorm feature includes them all in the operation. You can also use the Brainstorm feature to experiment with one or more specific properties.

You can isolate one or more layers for animating, previewing, or rendering by *soloing*. Soloing excludes all other layers of the same type from the Composition panel.

- 4 Expand the Suns layer, and then select Contents.
- 5 Click the Brainstorm icon (🧠) at the top of the Timeline panel to open the Brainstorm dialog box.

► **Tip:** To return to a previous variation, click the Back button. To see all the variants in action, click the Play button.

- 6 Select the level of randomness Brainstorm should apply to the layer properties. The default value is 25%; for drastic changes, try **100%**.
- 7 Click the Brainstorm button. The feature randomizes the properties and displays variants. You can click the Brainstorm button multiple times; each time, it randomizes the settings by the percentage you've selected.



- 8 When you find a variation you like, move the pointer over the variant, and then click the check mark icon to apply it to the composition.



Building a DVD menu

You can use After Effects to create buttons for a DVD menu you're designing in Adobe Encore®. When you select a group of layers to create an Encore button, After Effects precomposes the layers and names the precomposition according to the standards Encore uses for naming buttons.

After Effects includes template projects with entire DVD menus that you can use as the basis of your own menus. To preview them in Adobe Bridge, choose File > Browse Template Projects in After Effects.

- To create a button, select the layers you want to include, and choose Layer > Adobe Encore > Create Button. Name the button to match its function, such as Play Movie or Scene Selection. Then use the menus to assign up to three highlight layers and one video thumbnail layer.
- To assign a layer to a subpicture, select the layer, and choose Layer > Adobe Encore > Assign To Subpicture.
- To export the button, select the composition in the Project panel, and choose Composition > Save Frame As > Photoshop Layers.

Review questions

- 1 What is a shape layer, and how do you create one?
- 2 How can you quickly create multiple copies of a shape?
- 3 What is the advantage of using the Brainstorm feature?
- 4 What does the Pucker & Bloat path operation do?
- 5 How does the Cartoon effect work?

Review answers

- 1 A shape layer is simply a layer that contains a vector graphic called a shape. To create a shape layer, draw a shape directly in the Composition panel using any of the drawing tools or the Pen tool.
- 2 To quickly duplicate a shape multiple times, apply a Repeater operation to the shape layer. The Repeater path operation creates copies of all paths, strokes, and fills included in the layer.
- 3 The Brainstorm feature creates variants of your composition based on randomized settings in the properties you selected. The feature makes it possible to explore numerous possibilities quickly and easily, and to save or apply them with a single click.
- 4 The Pucker & Bloat operation pulls the path's vertices outward while curving segments inward (puckering), or pulls the vertices inward while curving segments outward (bloating). Negative values pucker a shape; positive values bloat it.
- 5 The Cartoon effect stylizes a layer by removing some details and emphasizing others, and by simplifying color. You can change settings in the Effect Controls panel to fine-tune the effect's behavior.

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INDEX

SYMBOLS

3D axis 273
3D compositions, nesting 289
3D floor, creating 272
3D images from Photoshop Extended 276
3D layers
 about 270
 camera layers 290
 creating 273
 light layers 206
 Orientation property 294
 positioning 276–278
 Position property 201
 replacing one with another 278
 rotating 202
 viewing 273
3D Layer switch 273
3D lights 206, 304
3D objects
 about 268
 adding reflections to 300
 adding solid layers to 280
 animating 299
 building 272
 rotating 294
3D Rotate In By Character animation
 preset 118
3D Rotation properties 273
3D text 283
 adding depth to 285
 creating 284
3D views 273

A

action-safe zones 33
Add/Remove Keyframe button 137
adjustment layers 266, 302
Adobe After Effects CS5 application
 compositions 12
 installing 2
 locating serial number for 2
 projects 12

 updating 39
 workflow 12
Adobe After Effects CS5 Classroom in a Book
 contents of the DVD iii
 lesson files 3
Adobe Authorized Training Centers 7
Adobe Bridge
 about 45
 browsing animation presets in 72
 importing files with 45
 navigating folders in 45
 previewing audio files in 152
 previewing images in 46
 preview panel 46
 workspaces 46
Adobe Certified Expert program 7
Adobe Community Help 5, 38
Adobe CS Live 8
Adobe Device Central CS4 374
Adobe Encore 121
Adobe Flash CS5 Professional, exporting to 93
Adobe Flash Professional CS5
 exporting files for 151
Adobe Illustrator files
 importing 49
 working with layers imported from 50
Adobe Photoshop Extended
 importing 3D images from 276
 importing text from 77
Adobe Photoshop files
 importing 162
 layered 161
 preparing layers in 162
 preserving layers in 161
 viewing layers in After Effects 161
Adobe Photoshop layer styles 163
Adobe Updater 39
Alpha Boundary view 233, 234
alpha channel, painting to refine a matte
 237–238
alpha track mattes
 adjusting 172
 using to constrain layers 134

- ambient lights, adding 307
- Analyze Forward button 325, 332
- anchor points
 - adjusting 131
 - for 3D layers 275
- animating
 - 3D objects 299
 - along a motion path 90
 - camera layers 303
 - layers , 161, vi
 - lighting 164, 175
 - lights 307
 - motion 168
 - opacity 84
 - Puppet tool pins 225
 - rotation 107
 - scale 74
 - shadows 176
 - slide shows 147
 - text 77, 66–95, 86, 245–246
 - using parenting 75
 - using the Puppet tools 217
 - walking cycles 221
- animation presets 29–30
 - 3D Rotate In By Character 118
 - applying 54, 83
 - applying from Adobe Bridge 72
 - browsing in Adobe Bridge 45, 72
 - Bullet Train 55
 - customizing 73
 - Dissolve - Vapor 56
 - Evaporate 72
 - Fade Up Characters 80
 - Increase Tracking 83
 - Pipes 81
 - text 71, 74
 - using with shape layers 134
- animations
 - about 26
 - easing 75, 142
 - motion paths for 129
- animator properties in text animator
 - groups 86
- application window 13
- audio file formats supported 153
- audio layers 113
- audio tracks
 - adding 152
 - looping 153
- Audio/Video Switches in the
 - Timeline panel 26
- Auto Levels effect 209, 260
- Auto-Orient command 91

B

- background, replacing 257–261
- base frames
 - adding with Roto Brush tool 235
 - creating with Roto Brush tool 232–234
- Bevel And Emboss effect 241
- Bezier curves
 - breaking direction handles for 198
 - using to create masks 197
- Bezier masks, creating 199
- blending modes
 - about 205
 - applying 205
 - applying to shapes 108
 - for masks 196
- Brainstorm feature 119
- Bridge. *See* Adobe Bridge
- brightness, changing in the user
 - interface 37
- Browse Presets command 72
- Brushes panel 238
- Brush tool 238
- Bullet Train animation preset 55

C

- cached frames in Roto Brush
 - span 234
- camera layers
 - about 290
 - adding 290
 - animating 303
 - setting the point of interest 292
- camera tools 279
- Cartoon effect 114
- Casts Shadows option 305
- CC Particle Systems II effect 337
 - properties 341
- Channel Blur effect 31–32
- Character panel 51, 69
 - opening 51
- child layers 76, 77, 127
- Classroom in a Book 1
- Clone Stamp tool 261
- codecs 366
- color
 - adjusting color balance 255
 - adjusting using the Photo Filter effect 265
 - color management 377
 - correcting a range of colors 262
 - correcting with Auto Levels effect 209

- color balance, adjusting 255
- color correction viii, 260
 - about 252
 - Auto Levels 209
 - for a range of colors 263
 - previewing accurately 254
- Color Emboss effect 54
- Color Finesse 3 264
- color management 2, 377
 - turning on 377
- Color Range effect 257–259
- Composition Mini-Flowchart 28
- Composition name 26
- Composition Navigator bar 28
- Composition panel
 - about 17
 - Toggle Transparency Grid button 241
 - typing in 68
 - viewing 3D layers in 274
- compositions
 - adding footage items to 18
 - After Effects 12
 - changing the resolution of 133
 - creating 17, 47, 67, 148
 - exporting for the web 60
 - fitting layers to 49
 - importing 15
 - moving current-time indicator to the beginning of 29
 - nesting 18
 - rendering 58, 180
 - retiming 182
 - swapping into a layer 135
- Composition Settings dialog box 47, 67
- compression 366
- converting 2D layers to 3D
 - layers 273
- Convert To Editable Text command 29, 79
- Convert Vertex tool 197, 198
- Corner Pin effect 176
- creating
 - compositions 17, 67
 - shape layers 96, 330
 - text 50
- CS Live. *See* Adobe CS Live
- current-time indicator 27
- current time in the Timeline
 - panel 26
- customizing
 - brightness of the user interface 37
 - preset paths 81
 - workspaces 37

D

- default preferences 3
- Deform pins
 - about 217
 - adding 218
 - customizing 219
- deselecting layers 19
- DigiEffects Freeform plug-in 314–315
- Directional Blur effect 302
- direction handles, breaking 198
- Dissolve - Vapor animation
 - preset 56
- docking panels 13
- drawing
 - circles 343
 - custom shapes 102
 - ellipses 207
 - polygons 102
 - rectangles 100
 - shapes 100
 - stars 109
- drawing tools 100
- drift, in motion tracking 332
- Drop Shadow effect 53
- drop zone 13
- duplicating
 - animations using pick whips 166
 - layers 20
 - shapes 110
- duration 99, 130
 - about 30
- DVD menus, building 121

E

- Easy Ease
 - about 31
 - adding 31, 75, 142
 - adjusting 186
 - in the Graph Editor 350
- Easy Ease Out 186
- editing
 - masks 196
 - text 78
- Effect Controls panel 22
 - about 53
 - hiding properties in 23
 - setting properties in 22, 31–32
 - using 22
- effects
 - about 20
 - applying 22, 52, 143
 - Auto Levels 209, 260
 - Bevel and Emboss 241

- CC Particle Systems II 337
- Channel Blur 31–32
- Color Emboss 54
- Color Range 257–258
- controlling 52
- Corner Pin 176
- Dissolve - Vapor animation
 - preset 56–57
- Drop Shadow 53
- Exposure 23
- Fade Up Lines animation
 - preset 246
- finding 22
- Grid 272
- Lens Flare 178, 345
- Matte Choker 258
- motion blur 92
- Photo Filter 265
- Radial Blur 21
- Radio Waves 145
- Ramp 344
- Roto Brush 238
- SA Color Finesse 3 264
- Timewarp 347
- Zoom-Bubble 30

- Effects & Presets panel 22, 30
- Ellipse tool 207, 343
 - using to create a mask 207
- erasing unwanted elements 261
- Evaporate animation preset 72
- Expand Or Collapse The In/Out/
Duration/Stretch Panes
button 144
- exporting
 - F4V files 152
 - FLV files 152
 - SWF files 370
 - to Adobe Flash Professional
CS5 93
 - XFL files 151
- Exposure effect 23
- expressions
 - about 166
 - adding 154
 - applying 166
 - using to add depth 285
 - working with 154

F

- F4V files, exporting 152
- Fade Up Characters animation
 - preset 80
- Fade Up Lines animation preset 246
- fading in images 150

- feature regions in motion
 - tracking 322
- Fill Color 104
- Fill Options dialog box 103
- fills, gradient 101
- FireWire 254
- First Margin value 91
- Fit To Comp command 49
- Fit To Comp Width command 70
- FLV files, exporting 152
- fonts, selecting 69
- footage items
 - about 14
 - importing 14, 16, 66
 - importing using Adobe Bridge 45
 - interpreting in After Effects 193
- Freeform plug-in 314–315
- Freeze button in the Layer panel 237
- Freeze Frame command 244

G

- Gradient Editor 101
- gradient fills 101
- gradients, modifying 102
- Graph Editor
 - about 184
 - in the Timeline panel 26
 - using to remap time 184, 350
- Grid effect 272
- grid layers for 3D objects 272
- grids
 - displaying 51, 70
 - hiding 51, 71
 - snapping to 70
- guide layers 274

H

- HDR (high dynamic range)
 - footage 347
- hiding properties 23
- Home key 29
- Horizontal Type tool 29, 50, 83

I

- IEEE 1394 254
- importing
 - Adobe Photoshop files 77
 - files from Adobe Bridge 47
 - footage 14, 16, 45, 66
 - multilayer Photoshop files 14
 - SWF files 151
 - text 77–78

- Increase Tracking animation
 - preset 83
- In point 26, 130
- installing After Effects 2
- Interpret Footage dialog box 193
- In value for a layer 145
- inverting masks 196
- iPod, rendering for 374

K

- keyframes
 - about 31
 - copying from one layer to another 142
- keyframing motion paths 136
- keying 257–258

L

- Layer Name 26
- layers
 - 3D 270
 - about 17, 19
 - adding light layers 304
 - adjusting timing 304
 - adjustment layers 266, 302
 - animating , 161, vi
 - audio 113
 - child 76, 77
 - copying keyframes from 142
 - deselecting 19
 - duplicating 20
 - expanding in the Timeline
 - panel 24
 - fitting to compositions 49
 - guide layers 274
 - importing in Photoshop files 161
 - locking 275
 - making visible in the Timeline
 - panel 33
 - modifying the In values for 145
 - naming in Photoshop 162
 - naming text layers 51
 - nesting 55
 - parent 76, 77
 - precomposing 55, 172, 244
 - rearranging in the Timeline
 - panel 19
 - renaming 21, 79
 - scaling 216, 326
 - shape 96, 100
 - solid 143, 242, 280
 - soloing 165
 - text 68
 - transforming properties 24

- trimming 130, 240
- video 113
- viewing in three dimensions 273
- viewing multiple properties 224
- layer styles 163
- Layer switches in the Timeline
 - panel 26
- Lens Flare effect 178, 345
- lesson files, copying from DVD 3
- lighting, simulating changes in 164
- light layers
 - adding ambient 307
 - animating 307
 - creating 304
 - in 3D compositions 304
 - point of interest 304
 - types of 304
- locking layers 275
- looping audio tracks 153

M

- Magnification Ratio pop-up menu 100
- mask layers 134
- mask modes 196
- mask properties, displaying 196
- masks
 - about 192
 - creating Bezier 197, 199
 - creating with the Pen tool 195
 - curved 197
 - drawing with the Ellipse tool 207
 - drawing with the Rectangle tool 207
- editing 196
- inverting 196
- modes for 196
- modifying with the Convert
 - Vertex tool 197
- replacing content of 200
- segments 192
- tips for creating 208
- using alpha mattes in 134
- using vector shapes 132
- vertices 192
- working with , vii

- mask shapes, copying 91
- Master Exposure (Exposure effect) 23
- Material Options properties 308
- Matte Choker effect 258
- mattes
 - about 230
 - about track mattes 173
 - about traveling mattes 173
 - creating a track matte 173

- refining 237–238
- meshes
 - adjusting the Triangle value 219
 - used with Puppet tools 218
- Mini-Flowchart 28
- mobile devices, preparing
 - compositions for 374
- mocha for After Effects 336
- modes, mask 196
- motion
 - animating 168
 - stabilizing 325
- motion blur
 - adding 92, 139, 174
 - adding to 3D objects 312
 - applying 130
- motion paths
 - about 137
 - animating nontext layers
 - along 90
 - hiding 33
 - keyframing 136
 - viewing in the Composition
 - panel 129
- Motion Source 331
- motion stabilization 320, 323
 - analyzing and applying 325
- Motion Target 331
- motion tracking 322
 - analyzing and applying 332, 336
 - drift 332
 - multipoint 333
 - single-point 328

N

- navigating folders in Adobe Bridge 45
- nesting
 - 3D compositions 289
 - compositions 18
 - layers 55
- nonsquare pixels 372
- null objects
 - about 282
 - creating 282

O

- opacity
 - animating 84, 150
 - modifying 25, 57
- OpenGL 2, 35, 365
- optimizing performance in After Effects 35
- Orbit Camera tool 279

- Orient Along Path option 91
- Orientation property in a 3D layer 294
- Out point 26, 130
- output module 361
 - options in the Render Queue panel 59
- output-module templates
 - creating 361
 - saving 363
- outputting projects 354
- overlap, defining areas of 219
- Overlap pins
 - about 217
 - customizing 220
- overscan, accounting for 33

P

- panel groups 13
- panel menus 27
- panels
 - docking 13
 - maximizing 14
 - rearranging in the application window 13
 - undocking 13
- Paragraph panel 51, 69
 - opening 51
- paragraph text 68
- parallel corner-pinning 333
- parenting 75, 127, 246
- parent layers 127
 - about 76, 77
 - animating 128
 - creating 136
- particle systems
 - creating 337, 339
 - customizing 340
- path preset, using to animate text 81
- Pen tool 195
- performance, optimizing 35
- perspective corner-pinning 333
- Photo Filter effect 265
- Photoshop layers
 - exporting a composition as 121
 - using in a DVD menu 121
- pick whips, using to duplicate animation 166
- Pipes animation preset 81
- pixel aspect ratio 271
- pixel aspect ratio correction 372
- point of interest
 - about 304
 - setting for a camera layer 292
- Point Of Interest property 292

- point text 68
- polygons, drawing 102
- Polygon tool 102
- Polystar properties 103, 107
- positioning 3D layers 276–278
- Position property
 - displaying in the Timeline panel 24
 - for a 3D layer 201
- Pre-compose dialog box 56
- precomposing layers 55, 56, 172, 244
- preferences, restoring defaults 3, 12
- preset paths, customizing 81
- presets
 - browsing in Adobe Bridge 72
 - finding 22
- previewing
 - audio files in Adobe Bridge 152
 - compositions 33, 58
 - images in Adobe Bridge 46
 - manual 55
 - RAM 34
 - spacebar 33
 - standard 33
 - using OpenGL 35
- Preview panel in Adobe Bridge 46
- Project panel 16
- projects
 - After Effects 12
 - saving 16
- properties
 - changing values for multiple layers 25
 - displaying in the Timeline panel 24
- PSD files, importing as 3D layers 276
- Pucker & Bloat 110
- Puppet Overlap tool
 - about 217
 - using 219
- Puppet Pin tool 217
- Puppet Sketch tool
 - about 225
 - using 225
- Puppet Starch tool
 - about 217
 - using 220
- Puppet tools 212
 - about 217
 - customizing Overlap pins 220
 - preparing artwork for use with 217
 - Puppet Sketch tool 225
 - recording animation with 225
 - settings for Starch pins 220
 - using the mesh 218

Q

- QuickTime 2

R

- Radial Blur effect 21
- Radial Gradient option 101
- Radio Waves effect 145
- Ramp effect 288, 344
- RAM previews 34, 35
- Rectangle tool 100, 207
- Reduce Chatter setting 238
- reflections, adding to 3D objects 300
- remap-time marker in the Source Time ruler 183
- removing unwanted elements 261–262
- renaming layers 21
- rendering
 - compositions 58, 181
 - for iPod 374
 - for mobile devices 374
 - movies 354
 - templates 357
 - test movies 366
 - using compression in 366
 - using multiple output modules 368
 - using the Render Queue panel 367
 - with OpenGL 365
- Render Queue panel 59, 181
 - adding compositions to 59
 - opening 59
- Render Settings options 59
- render-settings template
 - creating 357, 359
 - saving 359
- Repeaters 105, 110
- replacing 3D layers 278
- replacing content using a mask 200
- resizing layers 216, 326
- resources for learning After Effects 5–6
- restoring default preferences 12
- retiming
 - compositions 182
 - playback 347
- rotating
 - 3D layers 202
 - 3D objects 294
 - shapes 107, 112
- Rotation property, animating 107
- Roto Brush Alpha views 233
- Roto Brush effect 238

Roto Brush span 234–235
Roto Brush tool 228–249
 freezing the segmentation
 boundary 237
rotoscoping 230
Rounded Rectangle tool 240
Roving keyframes 225

S

SA Color Finesse 3 264
safe zones 33
saving projects 16
scale keyframes 74
scaling layers 216, 326
scrubbing to select values 22
segmentation boundaries
 about 232
 creating 232–237
 editing 234–235
 freezing 236–237
segments in a mask 192
selectors in text animator groups 86
serial number, After Effects 2
shape layers
 about 96, 98
 adding 100
 applying gradient fills to 101
 creating 134, 330
 using animation presets with 134
shapes
 about 100
 applying Repeaters to 110
 drawing 100, 102
 duplicating 110
 repeating 105
 rotating 107, 112
 twisting 104
 using as masks 132
shortcuts for Transform
 properties 24
shortening a movie 113
Shutter Angle
 about 175
 adjusting 175
Shutter Phase 175
skewing text 87
slide shows 147
Snap to Grid command 70
solid layers 242
 about 143
 adding to a 3D object 280
 creating 143
 using to create particle
 systems 339
soloing layers 165
Source Name column 19, 26
Source Time ruler in time
 remapping 183
spacebar preview 33
spotlights
 creating 304
 positioning 305
square pixels 271
stabilizing motion 320
standard preview 33
Starch pins
 about 217
 adding 220
 settings 220
stars
 creating 109
 modifying settings for 109
Star tool 109
Stroke Color 104
Stroke Options dialog box 109, 241
Stroke Width 104
SWF files
 exporting 62, 370
 importing 151
 supported by Flash Player 61
 SWF settings 62

T

templates
 output module 361
 rendering 357
text
 adding 118
 animating 77, 66–95, 80, 86,
 245–246
 animating tracking in 83
 animating using a path preset 81
 animation presets for 71
 converting to editable 79
 creating 50
 editing 78
 entering in the Composition
 panel 68
 formatting 118
 with the Character
 panel 69
 with the Paragraph
 panel 69
 imported from Photoshop 77
 naming layers 51
 point 68
 positioning 70
 skewing 87
 text animator groups 85
text animation presets 29–30
text animator groups 85
text layers 68
time
 current-time field 27
 current-time indicator 27
 measuring 222
 specifying in the Duration box 99
timecode 30
Time Controls panel 34
Time graph 26
Timeline panel
 about 26, 27
 displaying properties in 24
 displaying the Opacity property
 in 25
 expanding layers in 24
 renaming layers in 79
 Toggle Switches/Modes
 button 243
 TrkMat pop-up menu 243
 viewing multiple layer properties
 in 224
Time Remap keyframes 184
Time Remapping 153, 182
Time-Reverse Keyframes
 command 73
time ruler
 about 27
 in the Timeline panel 27
Time Stretch dialog box 145
Timewarp effect 347
timing, adjusting 304
title-safe zones 33
Toggle Alpha Boundary button 234
Toggle Alpha button 234
Toggle Alpha Overlay button 234
Toggle Switches/Modes button
 134, 243
Toggle Transparency Grid button
 241
Tools panel
 about 20
 selecting hidden tools in 20
tracing an object 230–249
Tracker Controls panel 323
tracking, animating 83
tracking motion 322
 multipoint 333
 single-point 328
tracking presets
 customizing 84
 using to animate text 83

- tracking using Mocha for After Effects 336
- Track Matte 242
- track mattes
 - about 173
 - creating 172, 173
- track points
 - about 322
 - moving and resizing 324
 - positioning 322, 330, 335
- Track Z Camera tool 279
- Transform properties 24
- transition effects 309
- transparency 57
- traveling mattes 173
- Triangle value for Puppet tools 219
- trimming
 - layers 130, 240
 - the work area 113
- TrkMat menu 134
- TrkMat pop-up menu in the Timeline panel 243
- twisting shapes 104
- Twist path operation 104

U

- undocking panels 13
- updates for the After Effects CS5 application 39
- User Interface Colors 37

V

- vertices
 - converting 197
 - in a mask 192
- video layers 113
- Video Preview 254
- video switch 33
 - in the Timeline panel 57
- viewing 3D layers 273
- vignette, applying 206

W

- walking cycle, animating 221
- web, exporting compositions for 60
- work area
 - brackets 27
 - trimming 113
- workflow 12
- workspaces
 - in Adobe Bridge 46
 - predefined 36
 - saving custom 37

X

- x axis 22
- XFL files, exporting 93, 151

Y

- y axis 22

Z

- z axis 270
- Zoom-Bubble effect 30